PRIORITIZATION OF RECREATIONAL TRAIL OPPORTUNITIES FOR THE STATE OF FLORIDA

A report by

Linda Conway Duever
Conway Conservation, Inc.
P.O. Box 949
10952 CR 320
Micanopy, FL 32667 USA
ph & fax: 352/466-4136
conwayconsrv@conway.com
http://www.conway.com/cconserv/

and

Jason Teisinger
GeoPlan Center
Margaret H. Carr
Department of Landscape Architecture and
College of Design, Construction and Planning
University of Florida
P.O. Box 115704
Gainesville, FL 32611-5704

for the

Office of Greenways and Trails
Florida Department of Environmental Protection
3900 Commonwealth Blvd
Tallahassee, FL 32399-3000

June , 2001

Table of Contents

List of Figures

List of Tables

Table of Contents

List of Figures

List of Tables

1 Introduction

1.1 Background

Planning Florida's system of greenways and trails has been a complex effort involving the participation of numerous organizations over many years. The evolution of the current programs and the context for this study are described in detail in Connecting Florida's Communities with Greenways and Trails: The Five Year Implementation Plan for the Florida Greenways and Trails System (DEP and FGCC 1998).

That greenways plan was accompanied by a map series showing potential recreational trails derived from University of Florida greenways model results and public comments. The routes shown on those maps of Hiking Trail Opportunities, Off-Road Bicycling Trail Opportunities, Equestrian Trail Opportunities, Multi-Use Trail Opportunities, and Paddling Trail Opportunities are the potential trail corridors that were prioritized in this study.

1.2 Objectives

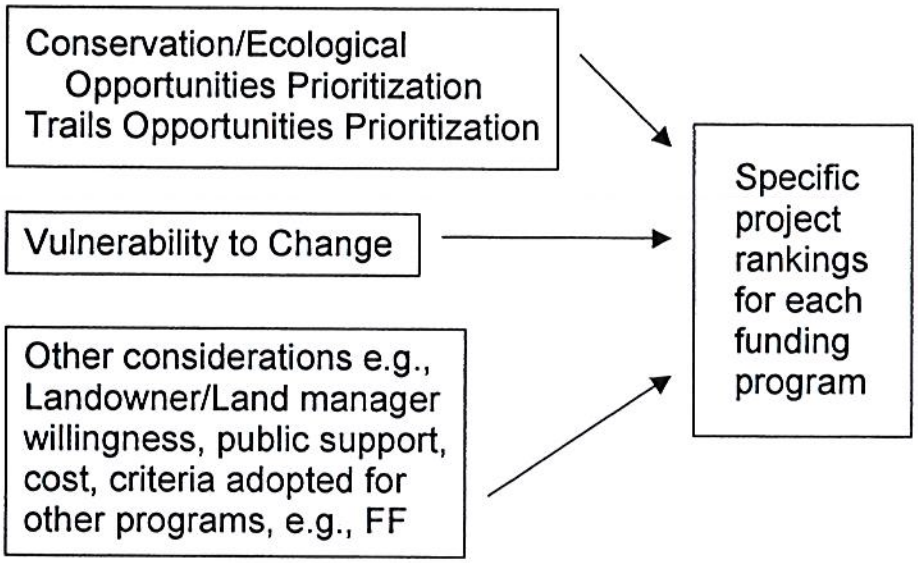
This project was designed to specifically address the requirement that the recreational/cultural features of the statewide greenways vision be prioritized as called for in Recommendation One of the greenways plan (DEP and FGCC 1998). Recommendation One reads: "Focus resources toward the most significant components of the Florida Greenways and Trails System." Under this recommendation, Strategy 1 calls for prioritizing "the ecological and recreational/cultural features found in the statewide vision" and Strategy 2 mandates identifying "the most critical linkages in the statewide system of greenways and trails".

Since the ecological prioritization had already been done, the sole purpose of this project was to accomplish one specific task: rank the opportunity segments shown on the greenways plan maps as high, medium, or low priority, based exclusively on recreational trail potential (which has been defined to include access to cultural features). It was understood that this would be done using a sound methodology that could be validly reapplied to revised opportunity maps as they are updated in the future.

Since it is so obvious that many factors beyond recreational potential must go into evaluation of a proposed greenway, it was initially very difficult for the project team, our expert advisors, and the FGTC members to remain focused on the very constrained scope of this study. Many of those we consulted suggested criteria that addressed issues of political support, ecological value, or project feasibility rather than recreational value. The distinction between this process of ranking potential trail opportunities versus the procedure for ranking specific proposed trail projects was particularly confusing.

In order to clarify how the rankings derived from this effort relate to project evaluations, we developed the diagram shown in Fig. 1.1. This shows how these recreational rankings must be integrated with information on development pressures and project viability in order to evaluate an actual trail or greenway proposal.

Fig. 1.1 Use of Prioritizations



1.3 Participants

The Office of Greenways and Trails funded this study through a contract to the University of Florida Department of Urban and Regional Planning. The project was conducted through a subcontract to Linda Duever of Conway Conservation, Inc. directed by Peggy Carr. Jason Teisinger of the University of Florida GeoPlan Center was responsible for the GIS work and Busy Shires of Conway Conservation, Inc. handled table formatting and report production.

Helen Koehler served as Chair of the Florida Greenways and Trails Council (FGTC) Recreational Priorities Committee that guided this effort. Other council members who served on this committee included Rick Bebout, Jorge Borelli, Mark Gluckman, and Bob Crim. Kent Wimmer participated as an outside member. Samantha Browne served as OGT's staff liaison.

The iterative process of developing, refining, and applying this GIS-based prioritization methodology was very much a team effort. Thoughtful consultation and cooperation from most of the people named above was involved practically every step of the way.

2 Methods

2.1 Strategy

Our strategy was based on assembling as comprehensive a toolbox of trail quality measures as possible, then selecting from those the best assembly of GIS-applicable criteria for consistently evaluating potential recreational trail corridors reflective of the Florida greenways vision. The idea behind this weighted criteria analysis was to examine the full range of significant factors, identify the measurable

concepts, then weave those into a weighted scoring system that would permit meaningful evaluations to be produced and reproduced through a systematic process.

2.1.1 Identification of Potential Criteria

In order to assure consideration of the full range of appropriate factors, we began by interviewing people experienced in evaluating greenway plans. We asked them to tell us what criteria were important, as well as to point out significant factors that we might overlook. We combined the recommended criteria with the list suggested in Appendix D of the greenways plan (DEP and FGCC 1998).

Since both these lists were "mixed bag" collections of a wide variety of different kinds of considerations, we then attempted to synthesize the idea represented and reduce them to potentially measurable concepts. This gave us a comprehensive preliminary list of over a hundred potential criteria. (see Appendix – Table 5.2.1)

2.1.2 GIS Application

Since the purpose of the recreational trail prioritization procedure was to compare the potential value of mapped corridor segments, it made sense to base the analysis on a GIS methodology that would facilitate replicable computerized rankings from map-based data. Therefore, the key requirement for a useful criterion had to be that it be possible to measure it in terms of geographic data. It had to be possible to find some way to relate a representative scale of values to a line, a corridor, a buffer, an area, or a collection of points on a map.

It also had to be possible to obtain digitized map data from which to compare segments. The budget and schedule did not permit new research. We had to rely on information that could readily be extracted from existing databases or reasonably and fairly determined on a statewide scale from efficient professional assessments.

2.2 Segment Delineation

Before we could prioritize the recreational trails opportunities mapped in the state greenway vision, we had to define the trail corridors to be compared. This was done by breaking the statewide network map into logical segments. In most cases, the segment ends were positioned at recommended trailheads, but in some cases road crossings or other termini made more sense.

Since separating trail sections at trailheads and roads created segments of varying lengths, scores for many of the evaluation criteria had to be normalized for segment length. Hence, many scores are expressed in terms like number per mile instead of simply stated as the number of features counted along the length of the segment.

2.3 Criteria Selection

In order to select the best measures from the long list of potential criteria, we examined each suggested parameter on the basis of relevance, effectiveness, and technical feasibility.

2.3.1 Relevance

We assessed a criterion's relevance based on whether or not it genuinely concerned an aspect of recreational potential that could be assessed in the early phases of trail planning.

Careful examination of the preliminary criteria revealed that most of them addressed some aspect of corridor merit other than recreational potential. We weeded out such political, ecological, or real estate parameters as inappropriate to the scope of our study, acknowledging that some of the criteria we kept have bearing on both the recreation experience and on other aspects of greenway selection. (For example, high quality natural vegetation suggests an enjoyable environment for recreation as well as inherent ecological value in the landscape).

Many more criteria had to be winnowed out because they could not be meaningfully applied at the opportunity evaluation phase of trail planning. These were measures based on specific information about project design and trail layout that have not yet been determined at the preliminary corridor planning stage.

2.3.2 Effectiveness

We then looked more closely at the criteria that appeared relevant and asked whether we could obtain data that would allow us to apply them meaningfully. We examined whether the data could actually serve as an index of the parameter we wanted to measure. Many criteria were rejected because there was no way to relate the concepts to available information on a measurable scale with any reasonable degree of validity and consistency.

For example, we tried to find a way to map ranchette land uses from tax parcel data to get at horse trail demand and prioritize equestrian trails in areas with lots of backyard horses. But, the fact that many horses are kept on lands zoned for future intensive residential use made it impossible to develop an informative correlation. We could have assembled GIS data on the number of horse farms or low-density residential units, but that would not have told us anything about local equestrian trail demand.

2.3.3 Technical Feasibility

This preliminary criteria selection left us with several dozen measures that seemed to address aspects of recreational trail quality in a way that might be meaningfully applied to mapped trail corridor segments. We then looked at whether GIS technology could be used to meaningfully compare segments on the basis of the actual data available.

Some things dropped out simply because consistent statewide statistics were not obtainable. We could not use future land use, for example, because such maps are available only at the county level and vary from county to county (unlike current land use maps, which are maintained by the water management districts in a form that can readily be converted into seamless statewide coverage).

Others were cut because the GIS analysis could not measure what we were really after. For example, we considered ranking paddling trails based on ideal distances between put-in/take-out points, but realized that road crossings per mile would not reflect that distribution.

This process left us with the criteria explained in Table [new table based on Level 3 Descriptions text file], all of which met the project requirements for relevance, effectiveness, and technical feasibility.

2.4 Criteria Organization

As we worked to develop and refine the criteria, it became obvious that they fell into logical groups addressing different aspects of potential trail value. We tried several ways of arranging and labeling flow charts to convey this before settling on the diagram shown in Fig. 2.1, which shows the process used to develop scores weighted according to the hierarchical scheme reflected in Table 2.1.

Fig. 2.1 The Recreational Trails Opportunity Ranking Process

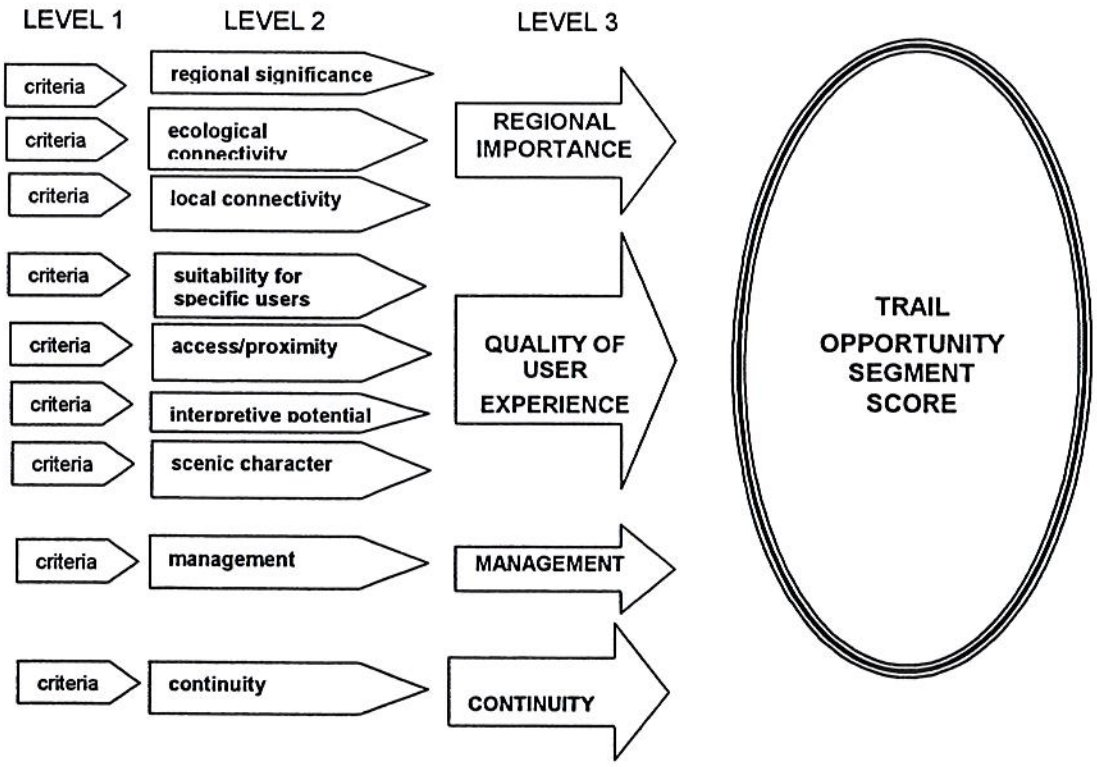


Table 2.1 Criteria Weights for Trail Prioritization

Level 1	Weight					Level 2	Weight					Level 3	Weight				
													H	B	E	M	P
							H	B	E	M	P	Regional Importance	.4	.3	.3	.4	.3
	H	B	E	M	P	Recreational Significance	.5	.3	.6	.5	.5						
Level of Regional Interest (from ranked maps)	.5	.5	.5	.5	.6												
Overlaps with other conservation/recreation plans	.2	.2	.2	.4	.2												
Multi-use potential	.1	.1	.1														
Land use suitability	.2	.2	.2	.1	.2												
						Ecological Connectivity	.3	.3	.2	.1	.5						
Overlaps with other conservation/recreation plans	.2	.2	2	.2	.4												
Road crossings	.2	.2	.2	.4													
Land use suitability	.4	.4	.4	.4	.6												
Ecological quality	.2	.2	.2														
						Local Connectivity	.2	.4	.2	.4							
Road crossings	.1	.1	.2	.2													
Trail linkages	.2	.2	.2	.5													
Land use suitability	.2	.2	.2	.2													
Water crossings	.3	.3	.2	.1													
Land ownership fragmentation	.2	.2	.2														

Level 1	Weight					Level 2	Weight					Level 3	Weight				
													H	B	E	M	P
							H	B	E	M	P	Quality of User Experience	.4	.5	.5	.3	.6
	H	B	E	M	P	Suitability for Specific User Types	.1	.5	.5	.4	.6						
Water crossings	.3	.3	.1														
Challenge potential	.1	.4	.1														
Access to recreation areas	.2	.1	.1	.1													
Land ownership fragmentation	.3	.1	.2														
Road crossings	.1	.1	.2														
Local demand: level of relevant equestrian activity			.3														
Local demand: bike accidents				.3													
Local demand: residential densities				.4													
Access to schools				.2													
Water quality					1.0												
						Access/ proximity	.2	.2	.2	.3	.1						
Special landscape features	.4	.4	.4	.4	.5												
Access to recreation areas	.4	.4	.4	.6	.5												
Highway access at termini	.2	.2	.2														
						Interpretive Potential	.2	.1	.1	.1	.1						
Rare habitat types	.3	.3	.3		.3												
Ecological quality	.4	.4	.4		.4												
Archaeological and historic sites	.3	.3	.3	.7	.3												
Scenic Roads				.3													
						Scenic character	.5	.2	.2	.2	.4						
Overlaps with other conservation/recreation plans	.1	.1	.1	.1	.4												
Road crossings	.1	.1	.1	.1													
Special landscape features	.2	.2	.2	.3	.2												
Scenic diversity	.3	.3	.3	.3													
Rare habitat types	.1	.1	.1														
Land use suitability	.2	.2	.2	.2	.4												

Level 1	Weight					Level 2	Weight					Level 3	Weight				
							H	B	E	M	P	Management Concerns	H .1	B .1	E .1	M .2	P .1
	H	B	E	M	P	Management Concerns	1.	1.	1.	1.	1.						
Overlaps with other conservation/recreation plans	.2	.2	.2	.2	.4												
Road crossings	.1	.1	.1	.1													
Rare habitat types	.1	.1	.1	.1	.3												
Land use suitability	.2	.2	.2		.3												
Challenge potential	.1	.2	.1														
Adaptability of existing trails and rights of way	.1	.1	.1	.5													
Water crossings	.2	.1	.2	.1													

Level 1	Weight					Level 2	Weight					Level 3	Weight				
							H	B	E	M	P	Contribution to Continuity	H .1	B .1	E .1	M .1	P
	H	B	E	M	P	Continuity	1.	1.	1.	1.							
Continuity	1.	1.	1.	1.													

2.5 Prioritization Goals by Trail Type

In the course of reviewing trails evaluation schemes, seeking input on potential criteria, and logically organizing the selected criteria, we developed a clear picture of the appropriate recreation trail prioritization goals. The FGTC committee later asked us to produce statements delineating these goals by trail type. These goals were incorporated onto the maps representing final results. Please refer to Fig. 3.1 – 3.5.

2.6 Data Sources

2.6.1 GIS Databases

The following are the GIS data layers used to develop criteria scores. The bulleted items represent the criteria and the following items are the GIS data layers and the source.

- **access to recreation areas**

-Points of Interest, University of Florida Geoplan Center
-USGS Geographic Names Information System, US Geological Survey
-Greenways Project Cultural and Historic Features, University of Florida Geoplan Center

- **access to schools**

-School Locations, Florida Department of Environmental Protection

- **adaptability of existing trails and rights of way**

-Existing Recreational Trails 2001, University of Florida Geoplan Center
-Railroad 1:100,000, US Geological Survey
-Roads 1:24,000, US Geological Survey
-Railroad Atlas of North America, Specialists Publications and Videos

- **archaeological and historical sites**

-Non-Sensitive Historical Structures, Florida Division of Historical Resources
-Non-Sensitive Archaeological Sites, Florida Division of Historical Resources
-Greenways Project Cultural and Historic Features, University of Florida Geoplan Center

- **challenge potential**

-USGS 1:250,000 Digital Elevation Model, US Geological Survey

- **continuity**

-Individual OGT Committee Member Response

- **ecological quality**

-Florida Potential Natural Areas, University of Florida Geoplan Center

- **highway access at termini**

-Major Roads, Florida Department of Transportation

- **land ownership fragmentation**

-Public Land Survey System, Florida Resources and Environmental Analysis Center
-FDOR Property Tax Data Records For 1999, Florida Department of Revenue

- **land use suitability**

-Water Management Land Use 1995, Five Florida Water Management Districts

- **level of regional interest**

- Individual OGT Committee Member Response

- **local demand: bike accidents**

-Florida Department of Transportation Bicycle Accident Totals By County

- **local demand: level of relevant equestrian activity**

-OGT Committee Member Helen Koehler

- **local demand: residential density**

-Public Land Survey System, Florida Resources and Environmental Analysis Center
-FDOR Property Tax Data Records For 1999, Florida Department of Revenue

- **multi-use potential**

-Existing Recreational Trails 2001, University of Florida Geoplan Center

- **overlaps with other conservation/recreation plans**

-FNAI Managed Areas, Florida Natural Areas Inventory
-Conservation Lands 1999, University of Florida Geoplan Center
-Greenways Project Priority Ecological Areas, University of Florida Geoplan Center
-Strategic Habitat Conservation Areas, Florida Fish & Wildlife Conservation Commission
-Florida National Scenic Trails Planning Area, United States Forest Service

- **rare habitat types**

-FNAI Conservation Areas Zones A and B, Florida Natural Areas Inventory
-FNAI Element Occurrence – 1999, Florida Natural Areas Inventory

- **road crossings**

-Roads 1:24,000, US Geological Survey

- **scenic diversity**

-Water Management Land Use 1995, Five Florida Water Management Districts

- **scenic roads**

-Florida Department of Transportation Website

- **special landscape features**

-Points of Interest, University of Florida Geoplan Center
-USGS Geographic Names Information System, US Geological Survey
-Greenways Project Cultural and Historic Features, University of Florida Geoplan Center
-St. Johns Spring Locations, St. Johns Water Management District
-Special Outstanding Florida Waters, Florida Department of Environmental Protection

- **trail linkages**

-Existing Recreational Trails 2001, University of Florida Geoplan Center
-Proposed Recreational Trails 2001, University of Florida Geoplan Center

- **water crossings**

-Hydrology 1:24,000, US Geological Survey

- **water quality**

-FDEP Watershed Planning and Coordination Water Quality Data, Florida Department of Environmental Protection

2.6.2 Expert Assessments

In some instances, the GIS data alone did not provide sufficient information to get at the parameters we were trying to evaluate and it was necessary for us to assign value ranges to certain mapped datasets.

For example, land use maps alone could not be translated into data on trail suitability. To get at this, we had to go through the FLUCCS land-use coding system and assign each cover type a rating as to whether it was unsuitable, marginal, suitable, or desirable for each trail type. Our evaluations of the compatibility of each FLUCCS cover type with each trail type are found in Appendix – Table 5.2.2.

2.6.3 Committee Input

There were a few situations where neither existing GIS data nor professional categorizations were adequate to supply critical information. These involved the importance of a given trail segment to the region and/or the user group. The FGTC committee was asked to share their knowledge and assist us in assigning scores for such rankings. These processes are described below.

2.6.3.1 Level of Regional Interest

To indicate level of regional interest, the committee members were asked to score each trail segment high, medium, or low based on the following considerations:

> 1) How important is this segment to the intended user type? This is not a measure of how critical or connected it is in terms of trail system function, but rather an assessment of how popular it (or the idea of creating it) is with the users. Are their clubs promoting it? Do they have special events in this area? Is it one of the best places for some aspect of their activity?
>
> 2) How important is this segment in terms of overall trail development in the surrounding counties? Are planners and economic development interests pushing it? Does it fit in with ecotourism planning? Has it captured the interest of the general public? Are there community groups promoting it? Does it exemplify the character of the region?

2.6.3.2 Local Demand

To develop an index of local demand for equestrian trails, committee members and others knowledgeable about Florida horse trails were asked to rank counties high, medium, or low based on the number of backyard horses and amount of trail riding activity originating from within that county. The objective was not to identify the places that are currently the most popular trail riding destinations, but to prioritize those areas where there are lots of horses and riders who would be likely to appreciate nearby

trails. Areas with high racing or show activity were not ranked high unless there was also a great deal of trail riding interest there.

2.6.3.3 Continuity

The committee members were also asked to rank each segment high, medium, or low in terms of its contribution to the continuity of the statewide trail system for that usertype.

2.7 Data Analysis

2.7.1 Scoring

Each opportunity segment was given a score for each pertinent criterion according to the following rationales and procedures.

2.7.1.1 BRIEF DESCRIPTION OF LEVEL 1 ANALYSES USED FOR PRIORITIZATIONS

(in alphabetical order)

- **access to recreation areas**

This addresses the likelihood that this trail segment will take people to places where they can enjoy other recreational experiences.

The evaluation is based on analysis of the occurrence of recreation sites within the corridor, using the GeoPlan Points of Interest Database, USGS Geographic Names Database (identifies cultural features) and the St. John's Water Management Springs Database. In scoring, the type of recreation area was ranked differently based on its value for each trail type. Scores for each point within the trail corridor were totaled and normalized by the length of the segment. The segments were ranked 1 – 10 based on 3 standard deviations above and 2 below the mean (1/4 divisions).

- **access to schools**

This addresses the likelihood that this trail segment will serve as a school commuter route and/or be readily accessible to students and parents.

The evaluation is based on analysis of the occurrence of school locations within the corridor, from the GeoPlan database. In scoring, access to schools attended by young children was considered minimally significant, whereas access to schools attended by teenagers and young adults was considered important. Access to schools was weighted much more heavily for multi-use trails than for hiking or mountain biking trails and was not treated as a meaningful factor for equestrian or paddling trails. Scores for each point within the trail corridor were totaled and normalized by the length of the segment (values per mile of segment). The segments were ranked 1 – 10 based on 3 standard deviations above and 2 below the mean (1/4 divisions)

- **adaptability of existing trails and rights of way**

This addresses the ease of trail development and management, as well as the likelihood that the route may already be used and valued as an informal trail.

The analysis was based on the presence of existing unpaved road/trail lengths/orientations within the trail corridor. Data were drawn from the GeoPlan trails database, a density analysis on the 1:24,000 maps of jeep trails and Class 5 roads in large ownership pine plantations, ranchlands, or natural areas and abandoned rail corridors.
Existing trails and abandoned rail corridors were given the highest value. Jeep trails and Class 5 roads were ranked on their density within a one-mile radius. The segments were ranked 1 – 10 based on 3 standard deviations above and 2 below the mean (1/4 divisions).

- **archaeological and historical sites**

This addresses the potential for historical interpretation along this trail.

The analysis was based on the presence of archaeological and historical features from the Florida Department of State database. Sites sensitive to public intrusion were excluded. Only registered historic sites were included. Scores for each point within the trail corridor were totaled and normalized by the length of the segment. The number of sites within each segment were totaled and then this total value was normalized by the length (points per mile of segment). The segments were ranked 1 – 10 based on 3 standard deviations above and 2 below the mean (1/4 divisions).

- **challenge potential**

This analysis was based on topographic relief using a slope analysis of USGS digital elevation models to identify hilly areas. It was presumed that hills are important to mountain bikers and, to a lesser degree, horseback riders, but only of moderate appeal to hikers. Hills were treated as undesirable for urban multiuse trails. They were weighted as a negative management factor since steeper slopes require more erosion control effort.

The analysis was based on the presence of patches of significant slope within the corridor. The segments were ranked 1 – 10 based on 3 standard deviations above and 2 below the mean (1/4 divisions).

- **continuity**

This addresses the contribution the trail segment would make to a continuous trail network on a statewide and/or regional scale.

FGTC Trails Prioritization Committee members qualitatively ranked the continuity value of each segment high, medium, or low. Trails viewed as key skeletal components of the state system were ranked higher, as were segments lacking alternative or redundant routes.

- **ecological quality**

This is used as a measure of the ecological quality of the trail segment corridor, that in turn, affects the quality of the user's experience and the potential for natural history interpretation. It is also an indicator of a recreational trail project's potential for facilitating development of a multi-functional greenway that enhances ecological connectivity.

Scoring was based on analysis of the percentage of the corridor mapped in ecologically valuable cover types according to water management districts' land use/land cover data.

- **highway access at termini**

This was used to suggest how accessible trailheads might be to users travelling to the trail by automobile.

Scoring was based on proximity of highway access points to segment ends.

- **land ownership fragmentation**

Land ownership density was used as an indicator of management and user hassles such as fence crossings, barking dogs, neighbor complaints, etc.

Scoring was based on the assumption that there are fences along most property lines and fence crossings are highly negative for urban multi-use or horse trails, moderately negative for mountain bikes, and slightly so for hiking. Parcels per section were calculated using the Public Land Survey System and the 1999 Department of Revenue Tax Parcel information. The segments were ranked 1 – 10 using ¼ divisions of values 3 standard deviations above and below the mean.

- **land use suitability**

This is a measure of the compatibility of land use within the trail segment corridor with the trail's purpose.

Analysis included first, a ranking of the relative suitability of any given cell for the trail type using water management districts' land use/land cover data and second, a 10 x 10 cell neighborhood comparison of the suitability rankings.

- **level of regional interest**

This is a qualitative assessment of the trail's importance to the region and to the user group.

Scores are based on FGTC Trails Prioritization Committee evaluations.

- **local demand: bike accidents**

The bicycle accident rate is primarily viewed as a measure of the degree of bicycling activity/demand in a local area, but also suggests that additional trails might improve bicycling safety problems.

County bicycle accident statistics were used. A bike accident/fatality index was created. This index was then normalized by the segment length and were ranked 1 – 10 based on 3 standard deviations above and 2 below the mean (1/4 divisions).

- **local demand: level of relevant equestrian activity**

This addresses the degree to which a trail segment for this usertype is in demand in a County. At this time, this analysis has been applied only to equestrian trails. Estimates of the level of trail riding interest were used to score counties high, medium, or low. In the future, ecotourism data may permit similar ranking of regional interest in equestrian and other types of trail activities.

Entire counties were ranked on their level of relevant equestrian activity over which the equestrian trail segments were overlaid.

- **local demand: residential density**

This is used as a measure of how easily users can access the trail from their homes. It was applied to multi-use trails only, on the assumption that direct access from home to trail is more important for urban trails used for regular commuting and exercise than for trails used for nature-based outings.

The number of residential parcels per section (TRS) were calculated from the 1999 Department of Revenue Tax Parcel tables for the segment corridor and normalized by segment length. The segments were ranked 1 – 10 using ¼ divisions of values 3 standard deviations above and below the mean.

- **multi-use potential**

This addresses whether a trail segment has the potential to meet the needs of multiple user groups. It is understood that multiple treads might be appropriate.

Scoring is based on whether the corridor of an existing or proposed multiuse trail falls within the trail segment corridor.

- **overlaps with other conservation/recreation plans**

This is viewed both as a measure of the inherent ecological and recreational quality of the trail segment corridor and an index of the likelihood of cooperative management.

Scores are based on whether the trail corridor overlaps conservation lands, ecological greenways, or Save our Rivers or CARL projects, with a high value for existing conservation lands and a medium value for proposed areas. Overlaps with the Florida Fish and Wildlife Conservation Commission's SHCAs are given a low value. Overlaps with the Florida National Scenic Trail planning area are given a high value for hiking trails and disregarded for other types.

- **rare habitat types**

This is a measure of scenic interest and interpretive potential, but is also used as a measure of ecological value. From a management perspective, rare habitats are scored as a negative because special effort may be needed to preserve such areas and protect them from visitor damage.

Scoring is based on the presence of Florida Natural Areas Inventory Element Occurrence data with occurrences ranked G2/S2 or rarer within the corridor ranked highest and Florida Natural Areas Inventory Areas of Conservation Interest A and Potential Natural Areas ranked lower.

- **road crossings**

This is a measure of the degree of difficulty expected to be involved in getting this trail segment and/or its users across roads.

Scoring is based on the number of limited access road crossings per mile of trail segment, normalized by segment length, and the density of lesser roads within the trail corridor, using road data from the FDOT Intrastate Highway Plan. Class 1 roads have the strongest influence on the density analysis with a reduction of influence for lesser Class roads. Higher road density is socred as highly negative for horse trails and moderately so for hiking, mountain biking and urban multi-use trails.

- **scenic diversity**

This is an assessment of the extent and variety of aesthetically pleasing landscape types within the trail segment corridor.

The analysis was based on neighborhood variety analysis of scenically categorized land use/land cover data from the water management districts.

- **scenic roads**

This is a both an indicator of the inherent beauty and interest of the landscape and a measure of the potential for cooperation between trail development and ecotourism programs.

Scoring is based on whether the corridor includes a stretch of road designated or under consideration for designation as a Florida Scenic Highway. This was applied to multi use trails only.

- **special landscape features**

This is used as an index of the trail segment's potential for offering access to and views of interesting landscape features.

Scoring is based on proximity and/or density of springs, sinkholes, lakes, beaches, hilltops and other landscape features from GeoPlan databases on springs and sinkholes, the sensitive shoreline database from Florida Marine Research Institute, and the USGS Geographic Names Database (excluding cultural features). Scores are normalized fro segment length.

- **trail linkages**

This addresses the extent to which the trail segment would provide access to other existing and proposed trails.

The existing and proposed trails database maintained by GeoPlan was used to develop scores based on the number of existing or proposed trails crossing or adjoining the trail corridor. Existing trails were valued higher than proposed trails in this local connectivity analysis. Trails were further ranked into three groups based on length. (0-1 ml, 1-10 ml, 10 ml +)

- **water crossings**

This is a measure of the probable difficulty of getting the trail segment and/or its users across major rivers and streams.

Scoring is based on the number of major river crossings per segment per mile, normalized by segment length and the density of lesser streams. Only streams that crossed the corridor were counted and small creeks were excluded. Major river crossings were scored as a negative for all trail types and extremely so for horses.

- **water quality**

Water quality data were used to reflect both health and aesthetic considerations. It was used as a measure of paddling trail quality only, since the water body is the trail itself.

Scoring is based on water quality data from the FDEP Watershed Planning and Coordination Water Quality Data.

2.7.2 Weighting

Weights were assigned to the criteria at each level in order to reflect the project team's assessment of the relative importance of the different aspects of potential trail value.

Table 2.1 shows the weights that were assigned to each Level 3 criterion, as well as the ways the Level 2 groups of criteria and the Level 1 categories were weighted.

2.7.3 Ranking

Trail segments were ranked by adding the weighted scores for all criteria for each segment, then grouping the scores for each trail type into four categories: Low Priority, Medium Priority, High Priority and Completed. When an entire segment was existing it was placed into the completed category. The remaining segments were then divided up into three groups based on their final scores with the completed segments removed. Each of the low priority, medium priority and high priority groups contained equal numbers of segments (i.e. the highest scoring third comprised the high priority group, the middle scoring third comprised the medium priority group, etc).

Because they have already been designated by statute, the Florida Saltwater Circumnavigational Trail and existing state canoe trails were automatically assigned a high rank, rather than evaluated through the same process as other paddling opportunities. Ch. 260.018, F.S. designated the Big Bend Historic Saltwater Paddling Trail from the St. Marks River to the Suwannee River as part of the Florida Greenways and Trails System and provided for FDEP to add segments to this trail to create a statewide saltwater circumnavigation trail.

The other canoe trails that were ranked high because they were already designated were: Alafia River, Aucilla River, Blackwater River, Blackwater River/Royal Palm Hammock Creek, Bulow Creek, Chipola River, Coldwater Creek, Econlockhatchee River, Econfina Creek, Estero River, Hickey Creek, Hillsborough River, Holmes Creek, Little Manatee River, Loxahatchee River, Manatee River (Upper), Ochlockonee River (Upper), Ochlockonee River (Lower), Peace River, Pellicer Creek, Perdido River, Pithlachascotee River, Santa Fe River, Shoal River, Sopchoppy River, Spruce Creek, St. Marys River, Suwannee River (Upper), Suwannee River (Lower), Sweetwater/Juniper Creeks, Tomoka River, Wacissa River, Wakulla River, Wekiva River/Rock Springs Run, Withlacoochee River (North), Withlacoochee River (South), and Yellow River.

3 Results

3.1 Multiuse Trails

There are two primary functions identified in the Five Year Greenways Implementation Plan for multiuse trails: to connect populated areas with other populated areas and connect populated areas to regional points of natural/historic interest. With this in mind we identified five primary city-to-city trail connections, six city to natural/historic points of interest connections, and have made some recommendations for creation of a statewide spine.

The criteria that were given the greatest weights and in turn had the greatest influence on the priorities for the multiuse trail type include Level of Regional Interest, Overlaps With Other Plans, Trail Linkages, Local Demand (based on residential densities), and Adaptability of Existing Trails and Rights of Way. The highly ranked segments, as a rule, scored relatively high for most of these criteria. The results are shown in Fig 3.1.

3.1.1 City to City Priority Segments

The five top city to city connections are:

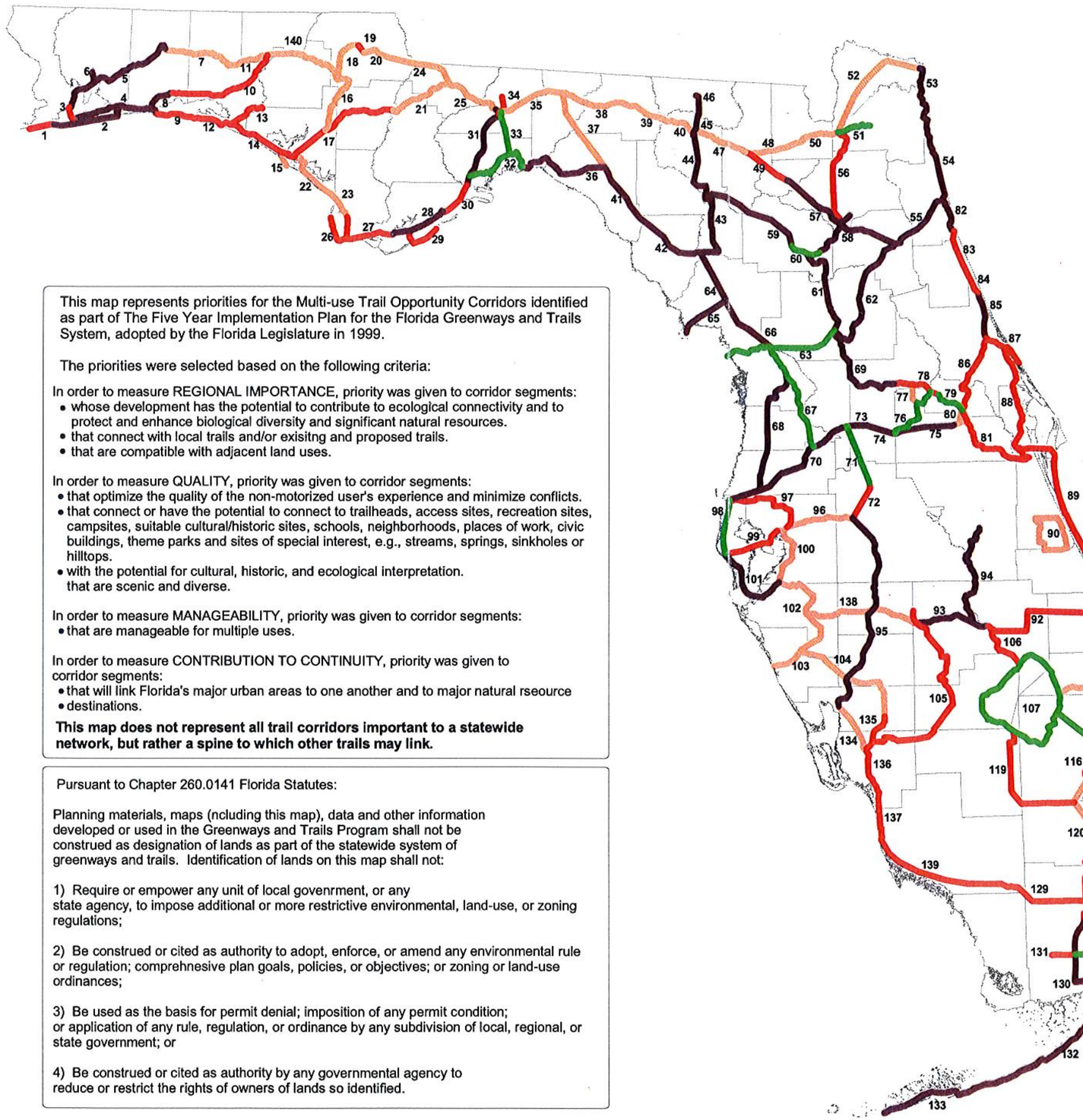
- Tampa to Orlando
- Juniper/North Palm Beach to Key West
- Tampa/Orlando to Tallahassee
- Tampa/Orlando to Jacksonville
- Pensacola to Crestview/Milton/Niceville

The Tampa to Orlando connection is perhaps the most critical for linking population centers and points of interest. Several ancillary connections such as the Sun Coast Parkway Trail, the Withlacoochee Trail and consequently the Cross-Florida Greenway and the Van Fleet Trail will be linked if this connection is made. Also, rapid growth within this area only furthers the need and immediacy of this connection. The Tampa to Orlando connection follows along this course: Ybor City Historic District (Crossing the Bay over the Friendship Trail), Pinellas Trailhead South, Pinellas Trailhead North, Van Fleet Trailhead North, Clearmont Trailhead at Lake Minneola Trail, County Line Station Trailhead at West Orange Trail, Wekiva Springs State Park, Black Hammock Trailhead, Sweet Water Creek Park. The corridor between Wekiva Springs State Park and Sweet Water Creek Park (through downtown Orlando) was also found to be of high priority but improbable due to the difficulty of creating a trail within a major metropolitan area, although the need is certainly there. The existing West Orange and Cross Seminole Trails are used to complete the connection. In the Tampa area, the Skyway Bridge segment was given a high priority. Creative engineering would be called for in crossing the Skyway Bridge and it is likely that a crossing on the Friendship (Old Gandy Bridge) Bridge Trail would be much more feasible.

The Juniper/North Palm Beach to Key West is another important connection, linking the densely populated South East Coast with the Keys. This area contains some of the most highly visited tourist destinations in the state and several trails within the identified alignment exist. Within the Keys, many trails have been completed utilizing the old railway/road grades connecting several individual keys such as Tom's Harbor Walkway and various other segments of the Overseas Trail. Also, the entire segment falls within the East Coast Greenway planning area (Maine to Florida trail). The Juniper/North Palm Beach to Key West connection follows along this course: Carlin Park, Kreusler Park, Red Reef Park, Hugh Taylor Birch SRA, West Lake Park, Oleta River SRA, Miami-Homestead Rail-Trail North Trailhead, Gold Coast Railroad Museum, John Pennekamp Coral Reef State Park, Pigeon Key Historic District, Fort Zachary Taylor State Historic District.

MULTIUSE OPPORTUNITIES TRAIL SEGMENT RANKINGS

As Approved By
Florida Greenways and Trails Council
May, 2001



This map represents priorities for the Multi-use Trail Opportunity Corridors identified as part of The Five Year Implementation Plan for the Florida Greenways and Trails System, adopted by the Florida Legislature in 1999.

The priorities were selected based on the following criteria:

In order to measure REGIONAL IMPORTANCE, priority was given to corridor segments:
- whose development has the potential to contribute to ecological connectivity and to protect and enhance biological diversity and significant natural resources.
- that connect with local trails and/or exisitng and proposed trails.
- that are compatible with adjacent land uses.

In order to measure QUALITY, priority was given to corridor segments:
- that optimize the quality of the non-motorized user's experience and minimize conflicts.
- that connect or have the potential to connect to trailheads, access sites, recreation sites, campsites, suitable cultural/historic sites, schools, neighborhoods, places of work, civic buildings, theme parks and sites of special interest, e.g., streams, springs, sinkholes or hilltops.
- with the potential for cultural, historic, and ecological interpretation. that are scenic and diverse.

In order to measure MANAGEABILITY, priority was given to corridor segments:
- that are manageable for multiple uses.

In order to measure CONTRIBUTION TO CONTINUITY, priority was given to corridor segments:
- that will link Florida's major urban areas to one another and to major natural rseource
- destinations.

This map does not represent all trail corridors important to a statewide network, but rather a spine to which other trails may link.

Pursuant to Chapter 260.0141 Florida Statutes:

Planning materials, maps (ncluding this map), data and other information developed or used in the Greenways and Trails Program shall not be construed as designation of lands as part of the statewide system of greenways and trails. Identification of lands on this map shall not:

1) Require or empower any unit of local govenrment, or any state agency, to impose additional or more restrictive environmental, land-use, or zoning regulations;

2) Be construed or cited as authority to adopt, enforce, or amend any environmental rule or regulation; comprehnesive plan goals, policies, or objectives; or zoning or land-use ordinances;

3) Be used as the basis for permit denial; imposition of any permit condition; or application of any rule, regulation, or ordinance by any subdivision of local, regional, or state government; or

4) Be construed or cited as authority by any governmental agency to reduce or restrict the rights of owners of lands so identified.

Segment Rankings

- **Low**
- **Medium**
- **High**
- **Existing**

University of Florida
Geoplan Center

Fig. 3.1

The Tampa/Orlando to Tallahassee connection links one or both of these major metropolitan areas to the State Capitol. The discussion for these is combined because the corridor between Dunnellon and Tallahassee is the same for either. The route after Dunellon follows along a Seaboard Coast Line Railroad grade, through the Nature Coast Trail Greenway to the St. Mark's Historic Railroad State Trail. The trailheads it passes through include: Dunnellon, Goethe State Forest, Otter Springs, Fanning Springs, Tennille, St. Mark's National Wildlife Reserve, ending at the San Luis Mission. The connection from Tampa has two possible routes. Both follow up the Pinellas Trail then east to just south of the Starkey Wilderness Park where the first meets up with the Sun Coast Parkway Trail to the Withlacoochee State Forest. From here it turns west, through the Forest, to meet up with the Withlacoochee State Trail and then on to the Dunellon. The second route travels from the Pinellas Trail North Trailhead to the southern extent of the Withlacoochee State Trail where it then travels the length of the trail to the Dunnellon Trailhead. Both routes are substantially completed. The route from Orlando to Dunnellon follows from Wekiva Springs State Park to Rock Springs Run State Reserve where it turns west to the Mount Dora Trailhead. From here it travels through North Lake County to Sharpes Ferry Road Trailhead and then west along the Cross-Florida Greenway to Dunnellon.

The Tampa/Orlando to Jacksonville connection links one or both of these major metropolitan areas to the Greater Jacksonville Area. Both connections also link many urban points of interest with many natural sites. As in the previous connection, the discussion for these is combined because the corridor between the Sharpes Ferry Road Trailhead and the Fernandina Beach Historic District is the same for either city. From the Sharpes Ferry Road Trailhead, the corridor runs northeast through the Ocala National Forest to the St. Augustine Historic District and then north to the Hanna Park Trailhead and finally to the Fernandina Beach Historic District. The route from Tampa follows the same route as in the Tampa to Tallahassee Trail as far as Dunnellon. From Dunnellon the corridor travels via the Cross-Florida Greenway to the Sharpes Ferry Road Trailhead. The Orlando route follows the same corridor to the Sharpes Ferry Road Trailhead as it did when connecting to Tallahassee.

The Pensacola to Niceville/Milton connection follows from Milton, across Escambia Bay (Possibly on the CSX Railbridge) along US 90 (a designated scenic highway) to the Pensacola Historic District. From Pensacola, the corridor crosses over Pensacola Bay to the Gulf Islands National Seashore Trailhead on US 98. From the Gulf Islands National Seashore Trailhead, the corridor follows along Santa Rosa Island crossing over to the mainland at Navarre. From Navarre, the corridor travels east through the south side of Elgin Airforce Base near Niceville.

3.1.2 City to Natural/Historic Points of Interest Priority Segments

The six city to nature/historic points of interest connections are:

- Ocala to Branford
- Highlands Hammock State Park/Sebring to Three Lakes WMA
- Cedar Key to Jasper
- Goldhead Branch State Park to Palatka/Gainesville/Lake Butler
- Tallahassee to St. Joe Peninsula State Park
- Lakeland to the Peace River/Charlotte Harbor

The Ocala to Branford piece follows from the Sharpes Ferry Road Trailhead, passing near the Majorie Kinnings Rawlings House to the Gainesville to Hawthorne Trail. From there it turns west to Boulware Springs, through Gainesville to High Springs and on to Branford.

The Highlands Hammock State Park to the Three Lakes WMA connection follows from the Highlands Hammock State Park Trailhead east, through Sebring to the Kissimmee River. From there it travels north adjacent to the river ending in the Three Lakes Wildlife Management Area. The fifty-mile long segment that runs north, parallel to the Kissimmee River, falls almost entirely within public lands.

The connection that links Cedar Key with Jasper follows from Cedar Key to Otter Springs. From there it travels north through Chiefland, connecting to the Nature Coast Trail Greenway, and follows on to Fanning Springs. From Fanning Springs, it follows to Branford, then to Suwannee Springs, and ends at Jasper.

The Goldhead Branch State Park connection to the cities of Palatka, Gainesville, and Lake Butler follows primarily along abandoned railroad lines. The Gainesville connection follows from Boulware Springs along the Gainesville-Hawthorne Trail, through Hawthorne to Goldhead Branch State Park. The Palatka connection follows northwest along the Norfolk Southern Corporation railroad easement to Goldhead Branch State Park while the Lake Butler connection follows southeast along the same rail easement to the Park. The segments forming the connections for Lake Butler and Palatka are in the planning stages and it is likely that this piece will be completed.

The Tallahassee to Apalachicola follows from Tallahassee south along the proposed Gopher, Frog and Alligator Trail to the Oclocknee River State Park Trailhead. From there it travels to Carabelle then to Apalachicola.

The Lakeland to Charlotte Harbor connection follows from the Peace River Trailhead located just south of Lakeland to the Punta Gorda Historic District. The segment follows almost entirely through the Peace River SOR project boundaries.

3.1.3 Segments for Completing a Statewide Spine

Starting at Fort Zachary Taylor Historic District the proposed statewide spine would follow up the Key West to Juniper/North Palm Beach connection up to Deerfield Beach. From here it turns east passing through the Quiet Waters County Park to the Loxahatchee Refuge Trail where it turns north, running all the way to the Okeechobee Multiuse Trail. The spine then circles the lake and follows northwest from Okeetantie to the Pearce Lockett Trailhead. From here it travels west to the Peace River were it turns north and follows the river up to Florida Southern College and on through to the Van Fleet Trail North Trailhead. It turns west and travels to the Withlacoochee Multiuse Trail where it turns north, following the Tampa/Orlando to Tallahassee connection all the way to the St. Marks National Wildlife Refuge. From there it follows the coast all the way to the Gulf Islands National Seashore.

3.2 Hiking Trails

The criteria that were given the greatest weights and in turn had the greatest influence on the priorities for the hiking trail type include Level of Regional Interest, Overlaps with Other Plans,

Landuse Suitability, Scenic Diversity, River Crossings and Land Ownership Fragmentation. The highly ranked segments, as a rule, scored relatively high for most of these criteria. The results are shown in Fig 3.2.

3.2.1 Priority Segments

The five segments identified in central Florida include the two segments between Dunnellon and the Croom Trailhead, the segment between the Seminole State Forest and the Little Big Econ State Forest, the segment between the Bull Creek Wildlife Management Area and the Three Lakes Wildlife Management Area, and the segment between the Three Lakes Wildlife Management Area and the northern edge of the KICCO Wildlife Management Area.

3.2.2 Segments for Completing a Statewide Spine

The proposed and existing hiking trail opportunities follow a rather narrow course through the state that is very similar to the US Forest Service and the Florida Trail Association (FTA) plans for the Florida National Scenic Trail. At only one point does the trail split. The split occurs at the Alexandria Springs Trailhead and gives three options. The route to the east is considered an alternate route by the FTA and of the three it is the least likely to be used. The central route follows south to the Seminole Ranch Trailhead and is substantially completed. The western option follows west through the Ocala National Forest to the Sharpes Ferry Road Trailhead where it meets up with the Cross-Florida Greenway. From here it follows the Greenway and then turns south to eventually meet up with the central route at the Three Lakes Wildlife Management Area. Both the central and western options are substantially completed. The FTA appears to be set on completing both options. The priority option for completing a statewide spine will likely be the one that is lent the greatest support by the FTA.

3.3 Equestrian Trails

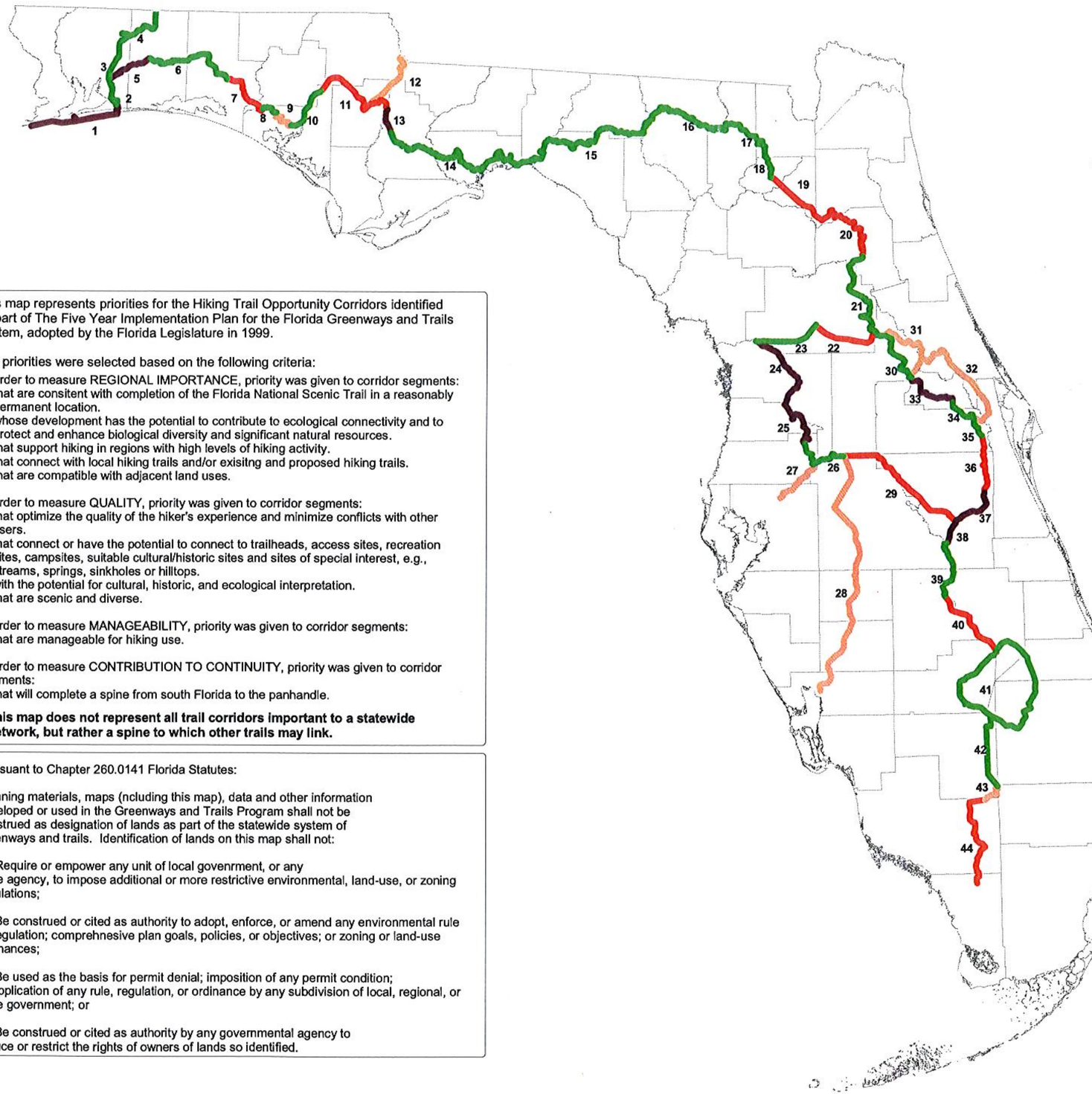
When discussing the results of the prioritization for the equestrian trail type we must first discuss the concept of a statewide equestrian trail network. The range of equestrian trail use is severely limited by the lack of supporting facilities. Without adequate feeding and housing facilities at regular intervals a long, linear equestrian trail becomes unusable because the user will be forced to return to the trailer at the end of the day. Since the infrastructure to make a statewide equestrian trail does not exist, completing a statewide spine was given less emphasis for equestrian segments than for other terrestrial trail types.

The criteria that were given the greatest weights and in turn had the greatest influence on the priorities for the equestrian trail segments include Level of Regional Interest, Overlaps with Other Plans, Landuse Suitability, Local Demand, River Crossings and Road Crossings. The highly ranked segments, as a rule, scored relatively high for most of these criteria. The results are shown in Fig 3.3.

3.3.1 Priority Segments

All but two segments within the panhandle were given a high priority. These low ranking segments are adjacent and are between the Porter Lake and the Vinzant Trailheads and between the Vinzant Trailhead and the segment between the Porter Lake Trailhead and the St. Marks National

HIKING OPPORTUNITIES
TRAIL SEGMENT RANKINGS



This map represents priorities for the Hiking Trail Opportunity Corridors identified as part of The Five Year Implementation Plan for the Florida Greenways and Trails System, adopted by the Florida Legislature in 1999.

The priorities were selected based on the following criteria:

In order to measure REGIONAL IMPORTANCE, priority was given to corridor segments:
- that are consitent with completion of the Florida National Scenic Trail in a reasonably permanent location.
- whose development has the potential to contribute to ecological connectivity and to protect and enhance biological diversity and significant natural resources.
- that support hiking in regions with high levels of hiking activity.
- that connect with local hiking trails and/or exisitng and proposed hiking trails.
- that are compatible with adjacent land uses.

In order to measure QUALITY, priority was given to corridor segments:
- that optimize the quality of the hiker's experience and minimize conflicts with other users.
- that connect or have the potential to connect to trailheads, access sites, recreation sites, campsites, suitable cultural/historic sites and sites of special interest, e.g., streams, springs, sinkholes or hilltops.
- with the potential for cultural, historic, and ecological interpretation.
- that are scenic and diverse.

In order to measure MANAGEABILITY, priority was given to corridor segments:
- that are manageable for hiking use.

In order to measure CONTRIBUTION TO CONTINUITY, priority was given to corridor segments:
- that will complete a spine from south Florida to the panhandle.

This map does not represent all trail corridors important to a statewide network, but rather a spine to which other trails may link.

Pursuant to Chapter 260.0141 Florida Statutes:

Planning materials, maps (ncluding this map), data and other information developed or used in the Greenways and Trails Program shall not be construed as designation of lands as part of the statewide system of greenways and trails. Identification of lands on this map shall not:

1) Require or empower any unit of local govenrment, or any state agency, to impose additional or more restrictive environmental, land-use, or zoning regulations;

2) Be construed or cited as authority to adopt, enforce, or amend any environmental rule or regulation; comprehnesive plan goals, policies, or objectives; or zoning or land-use ordinances;

3) Be used as the basis for permit denial; imposition of any permit condition; or application of any rule, regulation, or ordinance by any subdivision of local, regional, or state government; or

4) Be construed or cited as authority by any governmental agency to reduce or restrict the rights of owners of lands so identified.

As Approved By
Florida Greenways and Trails Council
May, 2001

Segment Rankings

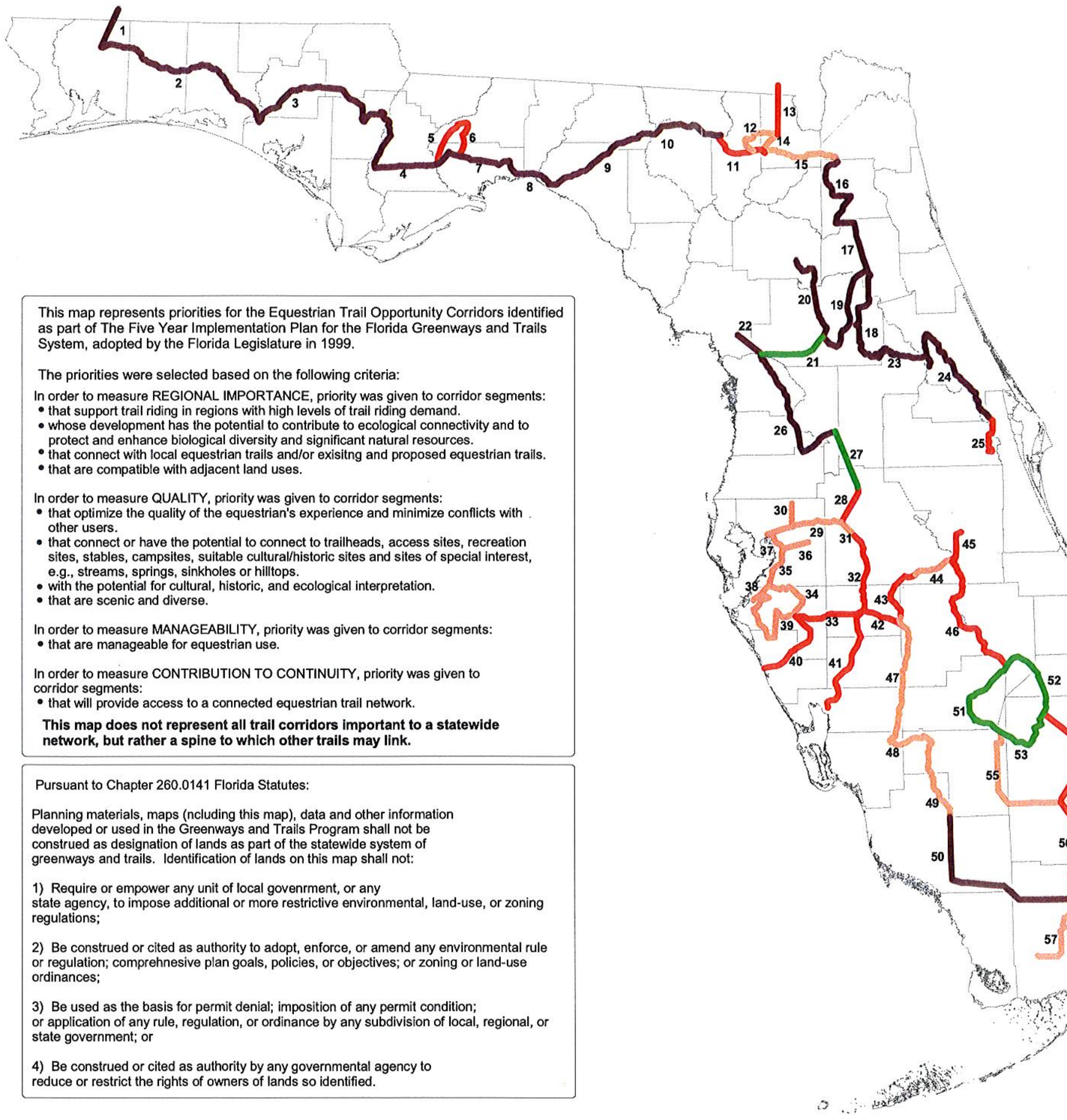
- **Low**
- **Medium**
- **High**
- **Existing**

University of Florida
Geoplan Center

Fig. 3.2

EQUESTRIAN OPPORTUNITIES TRAIL SEGMENT RANKINGS

As Approved By
Florida Greenways and Trails Council
May, 2001



This map represents priorities for the Equestrian Trail Opportunity Corridors identified as part of The Five Year Implementation Plan for the Florida Greenways and Trails System, adopted by the Florida Legislature in 1999.

The priorities were selected based on the following criteria:

In order to measure REGIONAL IMPORTANCE, priority was given to corridor segments:
- that support trail riding in regions with high levels of trail riding demand.
- whose development has the potential to contribute to ecological connectivity and to protect and enhance biological diversity and significant natural resources.
- that connect with local equestrian trails and/or exisitng and proposed equestrian trails.
- that are compatible with adjacent land uses.

In order to measure QUALITY, priority was given to corridor segments:
- that optimize the quality of the equestrian's experience and minimize conflicts with other users.
- that connect or have the potential to connect to trailheads, access sites, recreation sites, stables, campsites, suitable cultural/historic sites and sites of special interest, e.g., streams, springs, sinkholes or hilltops.
- with the potential for cultural, historic, and ecological interpretation.
- that are scenic and diverse.

In order to measure MANAGEABILITY, priority was given to corridor segments:
- that are manageable for equestrian use.

In order to measure CONTRIBUTION TO CONTINUITY, priority was given to corridor segments:
- that will provide access to a connected equestrian trail network.

This map does not represent all trail corridors important to a statewide network, but rather a spine to which other trails may link.

Segment Rankings

- Low
- Medium
- High
- Existing

University of Florida
Geoplan Center

Fig. 3.3

Wildlife Refuge. All of the segments south of Jennings State Forest and the southern terminus of the Van Fleet Trail received high priorities with the exception of the small piece between the Seminole Ranch Trailhead and the Tosohatchee State Preserve. This segment received a medium rank primarily because of low scores in the Level of Regional Interest, Landuse Suitability, and Road Crossing Categories.

One piece that must be recognized is the proposed trail between the southern terminus of the Withlacoochee Trail and the northern terminus of the Van Fleet Trail. Completion of this piece results in over 100 miles of continuous trail. Completion of this segment as a multiuse trail would also greatly aid in the completion of the Tampa to Orlando multiuse connection. Also, the terminal spur that starts at the Dunnellon Trailhead and ends in the Goethe State Forest is given a high priority. This segment is important because it connects Goethe, a popular equestrian destination with the Cross-Florida Greenway.

The segment in the Everglades between the Bear Island Trailhead and Central Dade County was given a high priority. It received high scores in the Level of Regional Interest, Overlaps with Other Plans, River Crossings and Road Crossings categories. It did however receive a low score in both the Landuse Suitability and Local demand categories. The value of this segment may be debatable on the basis that the relatively treeless and marshy terrain within the Everglades may be unsuitable for an equestrian trail. However, it should be noted that the committee members gave this segment a high score in the Level of Regional Interest category.

3.3.2 Segments for Completing a Statewide Spine

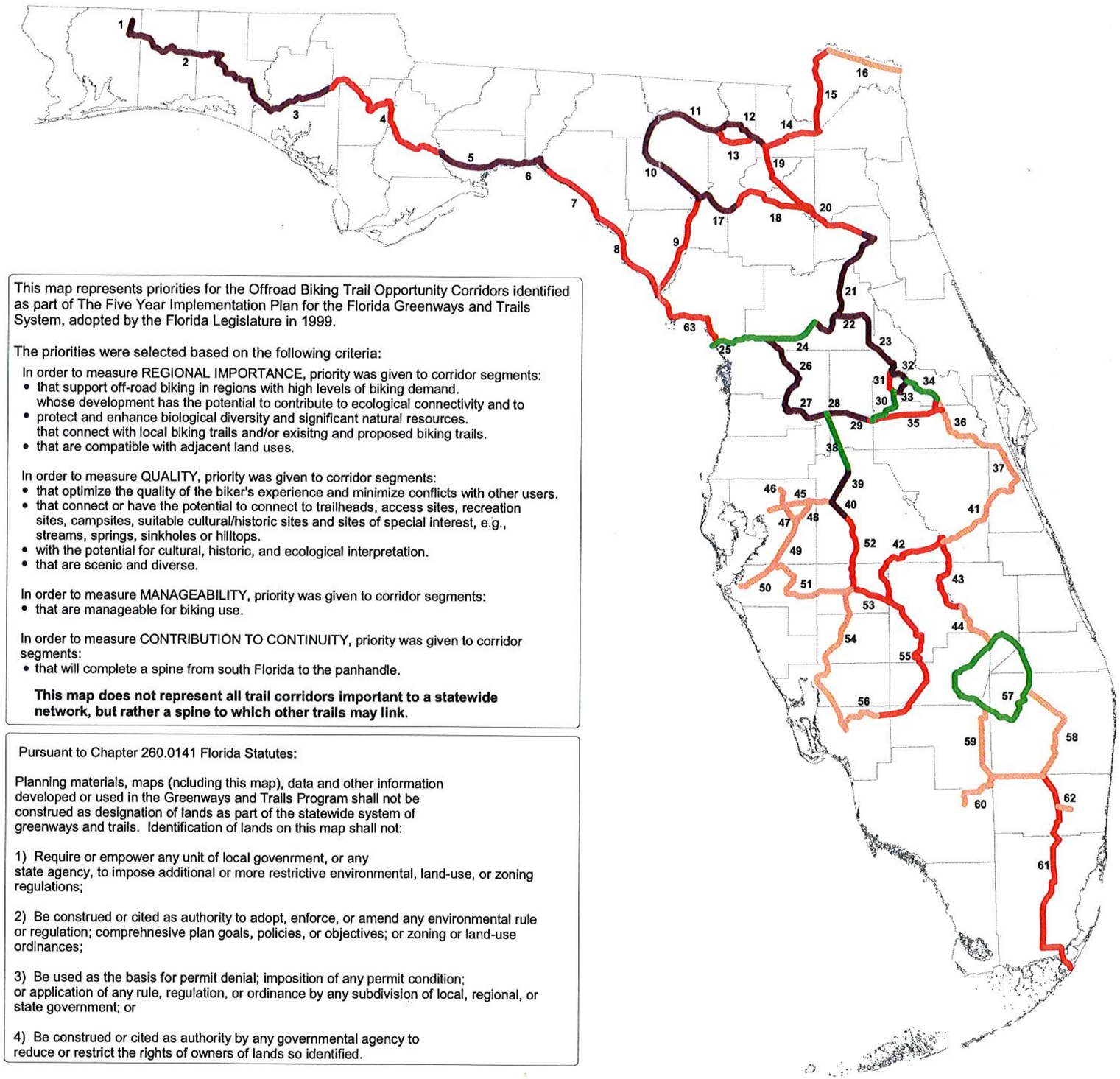
The results do identify a spine of sorts. While most of the corridors south of the Van Fleet Trail come up low, there is a fairly continuous spine of highly ranked segments north and west across the panhandle all the way to the Blackwater River State Forest Trailhead and north into Alabama. The only break comes between the Steven Foster State Park Trailhead and the Jennings State Forest Trailhead. The segment between the Steven Foster State Park Trailhead and the Ocean Pond Trailhead scored at the break between medium and high priority and should still be considered important. The piece between the Ocean Pond Trailhead and the Jennings State Forest Trailhead is ranked low because it scored rather low in five of the six important categories as well as low in several other categories. These include the Level of Regional Interest, Overlaps with Other Plans, Landuse Suitability, Road Crossings and Local Demand categories.

3.4 Offroad Biking Trails

The criteria that were given the greatest weights and in turn had the greatest influence on the priorities for the offroad biking trail type include Level of Regional Interest, Landuse Suitability, River Crossings and Challenge Potential. The highly ranked segments, as a rule, scored relatively high for most of these criteria. The results are shown in Fig 3.4.

OFFROAD BIKING OPPORTUNITIES TRAIL SEGMENT RANKINGS

As Approved By
Florida Greenways and Trails Council
May, 2001



This map represents priorities for the Offroad Biking Trail Opportunity Corridors identified as part of The Five Year Implementation Plan for the Florida Greenways and Trails System, adopted by the Florida Legislature in 1999.

The priorities were selected based on the following criteria:

In order to measure REGIONAL IMPORTANCE, priority was given to corridor segments:
- that support off-road biking in regions with high levels of biking demand. whose development has the potential to contribute to ecological connectivity and to
- protect and enhance biological diversity and significant natural resources. that connect with local biking trails and/or exisitng and proposed biking trails.
- that are compatible with adjacent land uses.

In order to measure QUALITY, priority was given to corridor segments:
- that optimize the quality of the biker's experience and minimize conflicts with other users.
- that connect or have the potential to connect to trailheads, access sites, recreation sites, campsites, suitable cultural/historic sites and sites of special interest, e.g., streams, springs, sinkholes or hilltops.
- with the potential for cultural, historic, and ecological interpretation.
- that are scenic and diverse.

In order to measure MANAGEABILITY, priority was given to corridor segments:
- that are manageable for biking use.

In order to measure CONTRIBUTION TO CONTINUITY, priority was given to corridor segments:
- that will complete a spine from south Florida to the panhandle.

This map does not represent all trail corridors important to a statewide network, but rather a spine to which other trails may link.

Pursuant to Chapter 260.0141 Florida Statutes:

Planning materials, maps (ncluding this map), data and other information developed or used in the Greenways and Trails Program shall not be construed as designation of lands as part of the statewide system of greenways and trails. Identification of lands on this map shall not:

1) Require or empower any unit of local govenrment, or any state agency, to impose additional or more restrictive environmental, land-use, or zoning regulations;

2) Be construed or cited as authority to adopt, enforce, or amend any environmental rule or regulation; comprehnesive plan goals, policies, or objectives; or zoning or land-use ordinances;

3) Be used as the basis for permit denial; imposition of any permit condition; or application of any rule, regulation, or ordinance by any subdivision of local, regional, or state government; or

4) Be construed or cited as authority by any governmental agency to reduce or restrict the rights of owners of lands so identified.

Segment Rankings

- Low
- Medium
- High
- Existing

University of Florida
Geoplan Center

Fig. 3.4

3.4.1 Priority Segments

Three continuous segments between the Blackwater River State Forest and the Econfina Creek Trailhead were give high priority. It should be noted that these segments received the highest value for the Challenge Potential category for all Offroad Biking Trails due to the hilly terrain with this area. Also within the panhandle, the segments between the Porter Lake Trailhead and the Econofina River State Park were given high priority.

The segments in north central Florida received a high priority primarily due to high scores in the Level of Regional Interest, Land use Suitability, and River Crossings categories. These include the segments between Oleno State Park and the Suwannee River State Park, the Suwannee River State Park and Steven Foster State Park, and the northern segment between Steven Foster State Park and the Olustee Battlefield Trailhead. The segment between Palatka and the Sharpes Ferry Road Trailhead was given a high priority due to high scores in the Level of Regional Interest, Landuse Suitability, and River Crossings categories. The majority of the segment is located within the Ocala National Forest, which led to high scores in several other categories.

The two segments between the southern terminus of the Van Fleet Trail and the Peace River Trailhead were given a high priority due to a high score in the Water Crossing criteria along with very high scores in several of the criteria of lesser weight. This is the only instance in the Offroad Biking Trails prioritization where the lower weighted criteria elevated segments to a high prioritization.

Finally, the remaining high priority segments form the Central Florida Loop. Starting from the Sharpes Ferry Road Trailhead, the corridor follows west along the Cross-Florida Greenway to Dunnellon. From there the corridor follows south to the Croom Trailhead and then east to the Van Fleet Trail North Trailhead, Clermont and the County Line Station Trailhead at the southern terminus of the West Orange Trail. The corridor travels north along the West Orange Trail to the northeast corner of Rock Springs Run State Reserve where it turns west to the southwest corner of the Seminole State Forest. It then turns north through the Seminole State Forest and the Ocala National Forest to Juniper Springs. From the Juniper Springs Trailhead the corridor runs west to complete the loop at the Sharpes Ferry Road Trailhead. Two additional corridors were given high priority. The first follows from Palataka south through the Ocala National Forest to the Sharpes Ferry Road Trailhead. The second follows from the Peace River Trailhead north to Florida Southern College and continues north along the Van Fleet Trail to the Van Fleet Trail North Trailhead. Both of the previous corridors serve to connect the Central Florida Loop with areas to the north and south.

3.4.2 Segments for Completing a Statewide Spine

The priority results do not clearly identify a statewide spine. A spine would have to travel north from the John Pennekamp Coral Reef State Park Trailhead to the Terrytown Trailhead. From there the corridor forks west and northeast. As both of these sections have a low priority and both end at the Okeechobee Multiuse Trail, either could be used within the spine. Once on the Okeechobee Multiuse Trail, the corridor runs north from the Okeetantie Trailhead to the KICCO Water Management Area. The corridor then runs west to the Highlands Hammock State Park and continues west to the Peace River. The corridor turns north, following the Peace River to the Peace River Trailhead and continues

all the way to the Van Fleet Trail North Trailhead. Here it turns west through the Croom State Forest to Dunnellon. From Dunnellon, the proposed spine would run west along the Big Bend into the panhandle to the Blackwater River State Forest.

3.5 Paddling Trails

In reality, most of the popular and highly scenic paddling trails have been designated or identified through statute, like the Florida Circumnavigational Trail. Prioritization of the remaining trails was conducted using an analytical approach comparable to the approach used for the terrestrial trail types.

The criteria that were given the greatest weights and in turn had the greatest influence on the priorities for the paddling trail type include Level of Regional Interest, Overlaps With Other Plans, Landuse Suitability, and Water Quality. The highly ranked segments, as a rule, had to score relatively high in most of these criteria. The results are shown in Fig 3.5.

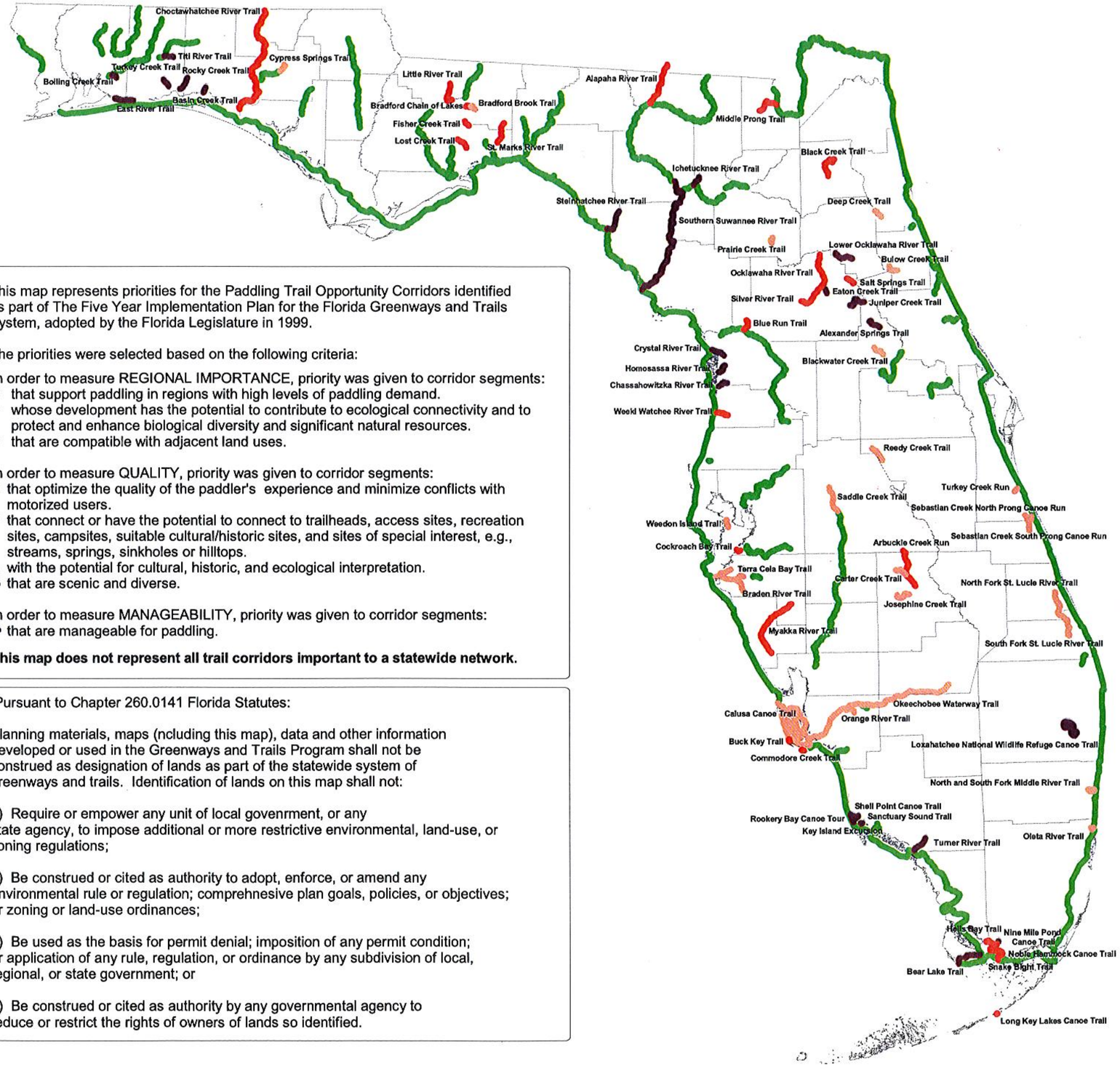
3.5.1 High Priority Segments

Following is a list of the high priority segments.

- Alexander Springs Trail
- Basin Creek Trail
- Bear Lake Trail
- Boiling Creek Trail
- Chassahowitzka River Trail
- Crystal River Trail
- East River Trail
- Eaton Creek Trail
- Homosassa River Trail
- Ichetucknee River Trail
- Juniper Creek Trail
- Key Island Excursion
- Lower Ocklawaha River Trail
- Loxahatchee National Wildlife Refuge Canoe Trail
- Nine Mile Pond Canoe Trail
- Rocky Creek Trail
- Rookery Bay Canoe Tour
- Sanctuary Sound Trail
- Shell Point Canoe Trail
- Southern Suwannee River Trail
- Steinhatchee River Trail
- Titi River Trail
- Turkey Creek Trail
- Turner River Trail

PADDLING OPPORTUNITIES
TRAIL SEGMENT RANKINGS

As Approved By
Florida Greenways and Trails Council
May, 2001



This map represents priorities for the Paddling Trail Opportunity Corridors identified as part of The Five Year Implementation Plan for the Florida Greenways and Trails System, adopted by the Florida Legislature in 1999.

The priorities were selected based on the following criteria:

In order to measure REGIONAL IMPORTANCE, priority was given to corridor segments:
- that support paddling in regions with high levels of paddling demand.
- whose development has the potential to contribute to ecological connectivity and to protect and enhance biological diversity and significant natural resources.
- that are compatible with adjacent land uses.

In order to measure QUALITY, priority was given to corridor segments:
- that optimize the quality of the paddler's experience and minimize conflicts with motorized users.
- that connect or have the potential to connect to trailheads, access sites, recreation sites, campsites, suitable cultural/historic sites, and sites of special interest, e.g., streams, springs, sinkholes or hilltops.
- with the potential for cultural, historic, and ecological interpretation.
- that are scenic and diverse.

In order to measure MANAGEABILITY, priority was given to corridor segments:
- that are manageable for paddling.

This map does not represent all trail corridors important to a statewide network.

Pursuant to Chapter 260.0141 Florida Statutes:

Planning materials, maps (ncluding this map), data and other information developed or used in the Greenways and Trails Program shall not be construed as designation of lands as part of the statewide system of greenways and trails. Identification of lands on this map shall not:

1) Require or empower any unit of local govenrment, or any state agency, to impose additional or more restrictive environmental, land-use, or zoning regulations;

2) Be construed or cited as authority to adopt, enforce, or amend any environmental rule or regulation; comprehnesive plan goals, policies, or objectives; or zoning or land-use ordinances;

3) Be used as the basis for permit denial; imposition of any permit condition; or application of any rule, regulation, or ordinance by any subdivision of local, regional, or state government; or

4) Be construed or cited as authority by any governmental agency to reduce or restrict the rights of owners of lands so identified.

Segment Rankings

- **Low**
- **Medium**
- **High**
- **Existing**

University of Florida
Geoplan Center

Fig. 3.5

4 Recommendations

- The Recreational Trail Segment Opportunity maps should be updated and reprioritized regularly. The greenways plan (DEP and FGCC 1998) calls for "annual identification of the most critical linkages in the state system". This cannot be meaningfully accomplished unless the opportunity maps are also updated annually to assure that all components of the current greenways vision are included within the set of trail segments assessed to determine the most critical linkages.

- The trail segment opportunity maps should be updated based upon a systematic evaluation of user needs and trail opportunities. Input derived from comments volunteered at public meetings has proven insufficient to identify key components of the trails vision. (This is most obvious in regards to equestrian opportunities, but may also affect other trail types.)

- OGT should adopt specific definitions and policies differentiating the heavily used urban/paved type of multiuse trail that serves commuters, joggers, road bicyclists, skateboarders, baby strollers, etc. from the more lightly used rural/natural type where hikers and/or horses/ and/or mountain bikers share a dirt tread.

- This recreational trail evaluation process should be consistently and logically meshed with other Florida recreational trail evaluation procedures and the way they relate should be clearly explained to greenway decisionmakers and the public.

- OGT should initiate projects to complete high priority trail segments.

5 Appendices

5.1 Glossary

The following definitions explain how selected terms are used in this report. These words and phrases may be applied somewhat differently or more generally elsewhere in the greenways literature.

- *Connectivity* is defined in the greenways plan (DEP and FGCC 1998) as "the ability to create functionally contiguous blocks of land or water through linkage of similar ecosystems or native landscapes; the linking of trails, communities and other human features".

- *Continuity* means the degree to which a trail segment contributes to a user's ability to move throughout the state and beyond.

- *Corridor* is the term used for the swath of land along each segment. The line mapped as the route for the opportunity segment in the greenways plan (DEP and FGCC 1998) was buffered with a 2-km border on each side to create the 4-km-wide corridors we compared in the analyses.

- *Multi-use Trail* is defined as a "non-motorized trail shared by more than one user group" in the greenways plan (DEP and FGCC 1998). We found this definition too ambiguous to permit meaningful assessment of the appropriateness of a trail in many situations. We therefore based our analyses on the assumption that a multi-use trail would be an urban-type paved trail (perhaps with an unpaved equestrian lane or parallel paddling stream) suitable for heavy two-way traffic of bicyclists (including those on road types as well as mountain bikes), walkers, joggers, roller-bladers, baby carriage-pushers, wheelchair users, etc., presuming that these trail users would be at least as interested in exercise and access to commuting and recreation destinations as in enjoying the natural scenery. It was recognized that similar high-traffic multi-use trails would also serve to link urban areas with major natural destinations and other types of trails. These dual functions were captured in our analysis of multi-use trail opportunities. It is important to acknowledge that there is another type of multi-use trail that is not addressed in these analyses: the rural unpaved type that receives light shared use by hikers, equestrians, and mountain bikers. These two types of multi-use trails are suited to different landscape situations.

- *Opportunities* is what the greenways plan (DEP and FGCC 1998) calls the potential trails mapped in the Five Year Implementation Plan.

- *Segments* are the trail opportunity sections we defined for comparison. Most segment ends were positioned at recommended trailheads, but in some cases road crossings or trail intersections or other termini were used.

5.2 Tables

Table 5.2.1 Potential Trail Opportunity Evaluation Criteria

Criterion	Concept
access to camping	Will campgrounds be accessible at appropriate intervals?
access to lodging	Will hotels, motels, etc. be accessible at appropriate intervals?
access to recreational areas	Does this trail go to places where people can enjoy playgrounds or other active recreation facilities, visit theme parks, go swimming or fishing, and/or rent canoes, horses, bicycles or the like for alternative trail experiences?
access to RV hookups	Will RV camping be available at convenient access points?
access to shelter/assistance	How accessible will shelter and assistance be?
access to stables	Will stabling for horses be available?
access to swimming	Would this trail provide access to swimming areas?
access to water for horses	Will drinking water for horses be available and consistently/safely accessible at appropriate intervals?
accessibility to the disabled	Will the trail include readily accessible loops, spurs, and/or segments accessible to the disabled?
adaptability of existing trails	Are there existing jeep roads or informal trails that could be adapted to create a trail system here? Are there trails on parks or other managed lands that could constitute portions of this segment without significant additional acquisition and/or management costs?
agency cooperation agreements	Have the appropriate agencies signed an agreement pledging cooperation in developing this greenway?
alternative routes to corridor	Is there another way to make this connection? Does it work for both recreational and ecological connections?
appropriateness to local area	How appropriate is this trail to the local area? Does it meet appropriate recreational or economic development needs?

Criterion	Concept
archaeological and historical features	Does the landscape include features of archaeological or historical interest?
availability of matching funds	How likely is it that a project here could get matching funds from another source?
availability of restrooms	Will restrooms be available at appropriate intervals?
availability of food and drink	Will users be able to get to restaurants and convenience stores and the like where they can purchase food and beverages?
buffer potential	To what extent might compatible land uses insulate the trail from incompatible land uses?
challenge potential	Will this trail (or loops/alternatives thereof) offer challenges and training opportunities to advanced/adventurous users?
citizen support	Does the public want this trail?
co-location with other ROWs	Are there existing or planned linear features/facilities along this corridor that might be utilized cooperatively? Are there rail-trail opportunities here?
community association involvement	Has a community association been involved in planning this greenway?
community partnerships	Are there local organizations willing to cooperate on developing a trail here?
compatibility of future land uses	Does the trail fit in with future land uses?
compatibility of existing land uses	Does the trail fit in with existing land uses?
conservation/recreation easement potential	Would landowners be amenable to easements rather than fee-simple acquisition?
construction access	How feasible would it be to get the appropriate construction equipment into this area?

Criterion	Concept
continuity	Does this trail link to other trails that connect to regional, state, and national trails accessible to the same user type?
cooperation re ORV recreation	Does this greenway have the potential to provide compatible ORV recreation opportunities?
cooperation re road bike transportation/recreation	Would this greenway provide or facilitate opportunities for bicycling?
cooperation re skating/skateboarding recreation	Would this greenway provide opportunities for skating or skateboarding?
coordination with scenic highways	Will this trail be integrated with tourism development efforts? Will the landscape character be preserved over the longterm? How easy will it be to get funding for projects associated with the trail? Will DOTcooperate re trailhead access and road crossings?
corridor width	How wide a corridor is potentially available for this greenway? How wide an area of suitable landcover/landuse is available to site the trail? (This addresses many concerns including landuse compatibility, trail design options, scenic potential, longterm viability, and ecological connectivity value.)
crime potential	How likely is community opposition to trail due to exaggerated fears re crime hazards? How vulnerable to crime will users be? How expensive will security be?
CSO involvement	Is there a Citizen Support Organization prepared to take on sponsorship of this trail and provide volunteer construction and management assistance?
culturally significant landscapes	Is the corridor or area historically/culturally important? Would the trail offer interesting views of historically or regionally important agricultural lands or economic activities?
degree to which it is a state vs. local concern	To what degree does this trail address state vs. local needs/concerns?
ease of acquisition	How time-consuming and expensive will it be to secure titles and/or easements on the necessary lands?

Criterion	Concept
ecological condition	Will the landscape include attractive and representative natural scenery? Will the landscape offer ecological interpretation opportunities? How difficult will it be to manage natural habitats along the corridor?
ecological quality	Does the corridor provide good wildlife habitat? Does it incorporate exemplary natural communities? Will the landscape include attractive and representative natural scenery? Will this route offer the opportunity to display and interpret historic vegetation and natural community management goals?
ecological restoration potential	How viable/restorable is the landscape? How difficult/expensive will it be to exercise good environmental stewardship in managing the habitats along the corridor? Would the trail offer special interpretive opportunities re ecological changes?
economic development opportunities	Will development of this trail appropriately enhance local economic development efforts?
education opportunities	Does the trail have potential for educational use in cooperation with schools, nature centers, or the like? Does it have special features that would make it an appropriate location for focused user education or trail development/maintenance training?
eligibility for funding programs	Would a trail along this corridor be eligible for funding programs?
eligibility for incentive programs	Would a trail along this corridor be eligible for incentive programs?
emergency access	How easily could an ambulance reach an injured user on this trail? How quickly could they get a person to a hospital?
exotic species	To what extent will exotic species pose a land management problem? Will the presence or absence of exotic species create special interpretive opportunities?
feasibility of security	How difficult will it be to prevent crime along this trail?
fence crossings	How many fences would the trail have to cross?
fishing opportunities	Will users have access to fishing opportunities?

Criterion	Concept
flagship/keystone value	How important is this greenway as a keystone or flagship greenways development effort for the region or community?
highway access	How easy will it be for users to get to the trail via automobile?
historical resources	Is this a historic landscape with general nostalgic and interpretive values apart from specific historical/sites?
instigation/initiation/ incubator value	How valuable would this greenway be in spawning complementary conservation, recreation, and/or economic development projects?
land cost	How expensive is the land?
landowner attitude	Are landowners likely to be supportive/cooperative re development of this trail?
likelihood of alternative funding	How likely would it be that other entities would fund development of this trail if OGT did not?
likelihood of completion	How likely is it that this trail would actually be completed?
litter/trash controllability	How big/manageable a problem will littering and trash-related maintenance be?
local/regional government recognition	Is there local/regional government support for development of this trail?
longterm benefits	Are there special longterm benefits to developing this greenway?
longterm viability of ecological features	Will the ecological features along this trail be maintained over the longterm?
manageability of habitat	How viable/sustainable is the landscape? How difficult/expensive will it be to manage the habitats along the corridor?
manageability of trail	How difficult will it be to manage this trail?
motorized traffic	Is motorized traffic along this route likely to interfere with trail user safety and enjoyment?

Criterion	Concept
multi-use potential (multiple treads)	Would the corridor accommodate several types of trails on separate treads?
multi-use potential (single tread)	Would soil conditions permit multiple user types to share a single trail here?
navigable waterway	Is this proposed paddling route considered a navigable waterway?
negative impacts of providing trail access	Would building this trail cause any significant foreseeable problems?
number of landowners	How many landowners would you have to deal with in developing this trail?
overlaps with other conservation/ recreation plans	How well does this trail/greenway support the plans of other agencies?
permanence of commitment	How permanently would the lands/facilities on this greenway be protected/maintained?
phase of trail development effort	What phase of trail development effort is needed here?
potential for ecotourism critical mass	Does the region this greenway goes through have the critical mass of ecotoursim development to assure substantial use of the trail? Within what timeframe is this likely?
public involvement	Has a public involvement program been conducted to get input on developing this greenway?
rail/trail potential	Are there unused railroad corridors which could efficiently be converted into trails?
rare habitat types	Does this route have unusual and interesting scenery with special ecological interpretive potential? Especially sensitive habitats?
reconstruction of damaged trails	Would development of this greenway facilitate reconstruction of damaged trails?
recreation advisory board involvement	Has a recreation advisory board been involved in planning this greenway?

Criterion	Concept
regional character	Does this trail pass through a landscape that reflects the character of this part of Florida?
regional priority	How high a priority is this greenway within its region?
regional significance	How important is this trail to the region?
road crossings	How many roads would the trail have to cross? How wide and heavily traveled would they be? How much opportunity will there be for unauthorized vehicular access?
safety hazards	Are there inherent site-related safety hazards in this area beyond those generally associated with trail use of this type?
scenic diversity	How varied is the scenery?
scenic quality	What is the aesthetic quality of the scenery? How beautiful is it?
shortterm benefits	Are there special shortterm benefits to developing this greenway?
special landscape features	Does the landscape include special natural features of aesthetic and recreational interest?
special status/recognition	Has this trail received any special status or recognition?
statewide significance	How important is this trail from a state perspective?
structurally suitable tread	Would sandy or mucky soil types be unpleasant for the user? Would they require more trail construction, maintenance, and monitoring effort?
supports FGTP	Does this greenway address a FGTP goal or issue?
supports SCORP	Does this greenway address a SCORP plan goal or issue?
trail connectivity	Does the trail link to other trails? Does this trail directly link to an existing or planned network(s) of trails offering a wide variety of loops, difficulties, and experiences within a relatively small area?

Criterion	Concept
trail design options	Could a trail here be designed with alternatives and loops and the like? How wide a suitable corridor is available to allow for creativity in designing the actual footprint of the trail?
trail traffic manageability	How much traffic will this trail get? How difficult will it be to manage this level/type of traffic? Will the trail create traffic problems in relation to other transportation routes/modes?
user group interest	How much user group support is there for this trail?
vulnerability to development	How likely is this trail corridor to undergo development that will make it substantially more difficult/expensive to secure or design properly in the future? How soon is that likely to happen?
vulnerability to flood damage	How likely would this trail be to be damaged or made temporarily or permanently unusable due to flooding?
vulnerability to hurricane damage	How vulnerable would this greenway be to hurricane damage?
vulnerability to rising sea levels	How likely is this trail to be damaged or destroyed by rising sea levels? Within what timeframe?
water crossings	How many streams would this trail have to across? How much of it would go through wetlands? How available/feasible are suitable bridges and fords?
water quality	Is there clean water in the streams and lakes? Will paddling in this water be a healthy and aesthetically rewarding experience?
wildlife hazards	How dangerous will wild animals be to people here?
wildlife protection	How dangerous will people be to wildlife here?
wildlife viewing opportunities	How likely is the user to see interesting wildlife?
youth service corps support	Will youth service corps workers be available to construct and/or maintain this greenway?

Table 5.2.2
Land Use Suitability for Individual Trail Types based on FLUCCS Level II

Code	Category	Urban Multi-Use	Hiking	Equestrian	Mountain Biking	Paddling	Recreation Aesthetics
110	Residential, Low Density	1	0	1	0	1	1
120	Residential, Medium Density	1	0	0	0	0	0
130	Residential, High Density	0	0	0	0	0	0
140	Commercial and Services	0	0	0	0	0	0
150	Industrial	0	0	0	0	0	0
160	Extractive	0	0	0	0	-1	0
170	Institutional	1	0	0	0	1	1
180	Recreational	2	1	1	1	1	1
190	Open Land	1	1	1	1	1	1
210	Cropland and Pastureland	1	1	1	1	1	1
220	Tree Crops	1	0	0	0	1	1
230	Feeding Operations	0	0	0	0	-1	0
240	Nurseries and Vineyards	0	0	0	0	1	1
250	Specialty Farms	0	0	0	0	1	1
260	Other Open Lands	1	1	1	1	1	1
310	Herbaceous	2	2	2	2	2	2

-1 = unsuitable; 0 = low; 1 = medium; 2 = high

Code	Category	Urban Multi-Use	Hiking	Equestrian	Mountain Biking	Paddling	Recreation Aesthetics
320	Shrub and Brushland	2	1	1	1	1	1
330	Mixed Rangeland	1	2	2	2	1	2
410	Upland Coniferous Forests	2	2	2	2	1	2
420	Upland Hardwood Forests	2	2	2	2	1	2
430	Upland Hardwood Forests Continued	2	2	2	2	2	2
440	Tree Plantations	1	1	2	1	1	2
510	Streams and Waterways	-1	-1	-1	-1	2	2
520	Lakes	0	0	0	0	2	2
550	Major Springs	-1	-1	-1	-1	2	2
560	Slough Waters	-1	-1	-1	-1	2	2
610	Wetland Hardwood Forests	0	0	0	0	2	2
620	Wetland Coniferous Forests	0	0	0	-1	2	2
630	Wetland Forested Mixed	0	0	0	0	2	2
640	Vegetated Non-Forested Wetlands	0	0	0	-1	2	2
650	Non-Vegetated	-1	0	0	-1	1	1
660	Cutover Wetlands	0	0	0	0	1	0
690	Wetland Shrub	0	0	0	-1	1	1

-1 = unsuitable; 0 = low; 1 = medium; 2 = high

Code	Category	Urban Multi-Use	Hiking	Equestrian	Mountain Biking	Paddling	Recreation Aesthetics
710	Beaches Other Than Swimming Beaches	1	1	1	0	1	2
720	Sand Other Than Beaches	0	1	1	0	1	0
730	Exposed Rock	2	1	0	1	1	1
740	Disturbed Lands	2	1	1	2	1	0
810	Transportation	1	0	0	0	0	0
820	Communications	0	0	0	0	0	0
830	Utilities	1	0	0	0	0	0
910	Vegetative	1	1	1	1	1	1

-1 = unsuitable; 0 = low; 1 = medium; 2 = high

Table 5.2.3
Land Use Suitability for Individual Trail Types based on FLUCCS Level III

Code	Category	Urban Multi-Use	Hiking	Equestrian	Mountain Biking	Paddling	Recreation Aesthetics
111	Fixed Single Family Units	0	0	0	0	0	0
112	Mobile Home Units	0	0	0	0	0	0
113	Mixed Units	0	0	0	0	0	0
114	Ranchettes - Fixed Single Family Units	0	0	2	0	1	0

-1 = unsuitable; 0 = low; 1 = medium; 2 = high

Code	Category	Urban Multi-Use	Hiking	Equestrian	Mountain Biking	Paddling	Recreation Aesthetics
115	Ranchettes - Mobile Units	0	0	2	0	1	0
116	Ranchettes - Mixed Units	0	0	2	0	0	0
119	Low Density Under Construction	1	1	1	1	0	1
121	Fixed Single Family Units	0	0	0	0	0	0
122	Mobile Home Units	0	0	0	0	0	0
123	Mixed Units	0	0	0	0	0	0
129	Medium Density Under Construction	0	0	0	0	0	0
131	Fixed Single Family Units	0	0	0	0	0	0
132	Mobile Home Units	-1	-1	-1	-1	-1	-1
133	Multiple Dwelling Units, Low Rise	0	0	0	0	0	0
134	Multiple Dwelling Units, High Rise	0	0	0	0	0	0
135	Mixed Units	0	0	0	0	0	0
139	High Density Under Construction	0	0	0	0	0	0
141	Retail Sales and Services	1	0	-1	0	0	0
142	Wholesale Sales and Services	0	0	-1	0	0	0
143	Professional Sevices	1	0	0	0	0	0

-1 = unsuitable; 0 = low; 1 = medium; 2 = high

Code	Category	Urban Multi-Use	Hiking	Equestrian	Mountain Biking	Paddling	Recreation Aesthetics
144	Cultural and Entertainment	1	1	0	0	0	0
145	Tourist Services	1	1	0	1	1	0
146	Oil and Gas Storage	0	0	-1	0	0	0
147	Mixed Commercial and Services	0	0	0	0	0	0
148	Cemeteries	1	1	-1	-1	1	1
149	Commercial and Services Under Construction	0	0	0	0	0	0
151	Food Processing	0	0	0	0	0	0
152	Timber Processing	0	0	0	0	-1	0
153	Mineral Processing	0	-1	-1	0	-1	0
154	Oil and Gas Processing	0	0	-1	0	-1	0
155	Other Light Industrial	0	0	0	0	0	0
156	Other Heavy Industrial	0	0	-1	0	-1	0
159	Industrial Under Construction	0	0	0	0	0	0
161	Strip Mines	1	0	1	1	0	0
162	Sand and Gravel Pits	0	0	1	1	0	0
163	Rock Quarries	1	1	1	1	0	1

-1 = unsuitable; 0 = low; 1 = medium; 2 = high

Code	Category	Urban Multi-Use	Hiking	Equestrian	Mountain Biking	Paddling	Recreation Aesthetics
164	Oil and Gas Fields	1	1	1	1	0	0
165	Reclaimed Land	2	1	2	2	1	1
166	Holding Ponds	-1	-1	-1	-1	-1	-1
171	Educational Facilities	2	1	0	0	1	1
172	Religious	1	1	0	0	1	1
173	Military	1	1	1	1	1	1
174	Medical and Health Care	1	0	0	0	1	0
175	Governmental	2	1	0	0	1	1
176	Correctional	0	0	0	0	0	0
177	Other Institutional	1	1	0	0	0	0
178	Commercial Child Care	0	0	0	0	0	0
181	Swimming Beach	2	2	0	1	1	2
182	Golf Courses	2	1	0	0	1	1
183	Race Tracks	0	0	0	0	0	0
184	Marinas and Fish Camps	1	1	0	1	1	1
185	Parks and Zoos	2	2	1	1	0	2

-1 = unsuitable; 0 = low; 1 = medium; 2 = high

Code	Category	Urban Multi-Use	Hiking	Equestrian	Mountain Biking	Paddling	Recreation Aesthetics
186	Community Recreational Facilities	2	2	1	1	1	1
187	Stadiums	0	0	0	0	0	0
188	Historical Sites	2	2	1	1	2	2
189	Other Recreational	1	1	1	1	0	1
191	Undeveloped Land	2	2	1	2	1	1
192	Inactive Land	1	1	1	1	1	1
193	Urban Land in Transition	1	1	0	0	1	1
194	Other Open Land	1	1	1	1	1	1
211	Improved Pastures	2	0	1	0	1	1
212	Unimproved Pastures	2	1	2	2	1	1
213	Woodland Pastures	2	1	2	2	1	1
214	Row Crops	0	0	1	0	1	1
215	Field Crops	1	0	1	0	1	1
221	Citrus Groves	1	1	1	1	1	1
222	Fruit Orchards	1	1	1	1	1	1
223	Other Groves	1	1	1	0	1	1
231	Cattle Feeding Operations	0	0	0	0	-1	0

-1 = unsuitable; 0 = low; 1 = medium; 2 = high

Code	Category	Urban Multi-Use	Hiking	Equestrian	Mountain Biking	Paddling	Recreation Aesthetics
232	Poultry Feeding Operations	-1	-1	-1	-1	-1	0
233	Swine Feeding Operations	-1	-1	-1	-1	-1	-1
241	Tree Nurseries	0	0	0	0	1	1
242	Sod Farms	1	1	1	0	0	1
243	Ornamentals	0	0	0	0	1	1
244	Vineyards	1	1	1	1	1	1
245	Floriculture	0	0	0	0	1	1
246	Timber Nurseries	0	0	0	0	0	0
251	Horse Farms	1	1	2	0	1	1
252	Dairies	0	0	0	0	-1	1
253	Kennels	0	0	0	0	0	0
254	Aquaculture	0	0	0	0	0	0
259	Other	1	1	1	1	1	1
261	Fallow Crop Land	1	0	1	0	1	0
321	Palmetto Prairies	1	2	2	1	1	2
322	Coastal Scrub	1	2	1	1	2	2

-1 = unsuitable; 0 = low; 1 = medium; 2 = high

Code	Category	Urban Multi-Use	Hiking	Equestrian	Mountain Biking	Paddling	Recreation Aesthetics
329	Other Shrubs and Brush	2	1	1	1	1	1
411	Pine Flatwoods	2	2	2	2	2	2
412	Longleaf Pine-Xeric Oak	1	2	2	2	2	2
413	Sand Pine	1	2	1	1	2	2
414	Pine-Mesic Oak	2	2	2	2	2	2
419	Other Pines	2	2	2	2	2	2
421	Xeric Oak	2	2	2	1	2	2
422	Brazilian Pepper	2	1	1	1	1	1
423	Oak - Pine - Hickory	2	2	2	2	2	2
424	Melaleuca	2	1	1	1	1	1
425	Temperate Hardwood	2	2	2	2	2	2
426	Tropical Hardwoods	0	2	1	1	2	2
427	Live Oak	2	2	2	2	2	2
428	Cabbage Palm	2	2	2	2	2	2
429	Wax Myrtle-Willow	1	0	0	0	1	1
431	Beech-Magnolia	1	2	2	2	2	2
432	Sand Live Oak	1	2	1	1	2	2

-1 = unsuitable; 0 = low; 1 = medium; 2 = high

Code	Category	Urban Multi-Use	Hiking	Equestrian	Mountain Biking	Paddling	Recreation Aesthetics
433	Western Everglades Hardwoods	0	0	1	0	2	2
434	Hardwood - Conifer Mixed	2	2	2	2	2	2
435	Dead Trees	0	0	0	0	0	0
437	Australian Pine	2	2	2	2	2	2
438	Mixed Hardwoods	2	2	2	2	2	2
439	Other Hardwoods	2	2	2	2	2	2
441	Coniferous Plantations	2	1	2	1	1	1
442	Hardwood Plantations	2	2	2	2	1	1
443	Forest Regeneration Areas	1	1	1	1	1	1
444	Experimental Tree Plots	0	0	0	0	1	1
445	Seed Plantations	2	2	2	1	2	2
521	Lakes larger than 500 acres	-1	-1	-1	-1	1	2
522	Lakes larger than 100 acres, but less than 500	-1	-1	-1	-1	2	2
523	Lakes larger than 10 acres, but less than 100	-1	-1	-1	-1	2	2
524	Lakes less than 10 acres	-1	-1	-1	-1	2	2
531	Reservoirs larger than 500 acres	0	0	0	0	1	2

-1 = unsuitable; 0 = low; 1 = medium; 2 = high

Code	Category	Urban Multi-Use	Hiking	Equestrian	Mountain Biking	Paddling	Recreation Aesthetics
532	Reservoirs larger than 100 acres, but less than 500	-1	-1	-1	-1	2	2
533	Reservoirs larger than 10 acres, but less than 100	-1	-1	-1	-1	2	2
534	Reservoirs less than 10 acres	-1	-1	-1	-1	2	2
541	Embayments opening directly into the Gulf of Mexico or the Atlantic Ocean	-1	-1	-1	-1	1	2
542	Embayments not opening directly into the Gulf of Mexico or the Atlantic Ocean	-1	-1	-1	-1	2	2
611	Bay Swamps	0	0	0	0	2	2
612	Mangrove Swamps	0	0	0	0	2	2
613	Gum Swamps	0	0	0	-1	2	2
614	Titi Swamps	0	0	0	0	1	1
615	Stream and Lake Swamps (Bottomland)	0	0	0	0	2	2
616	Inland Ponds and Sloughs	0	0	0	0	2	2
617	Mixed Wetland Hardwoods	0	0	0	0	2	2
621	Cypress	0	0	0	0	2	2
622	Pond Pine	0	0	0	0	2	2
623	Atlantic White Cedar	0	0	0	0	2	2
624	Cypress-Pine-Cabbage Palm	1	0	1	0	2	2

-1 = unsuitable; 0 = low; 1 = medium; 2 = high

Code	Category	Urban Multi-Use	Hiking	Equestrian	Mountain Biking	Paddling	Recreation Aesthetics
631	Hydric Hammock	0	0	0	0	2	2
632	Tidal Swamp	0	0	0	0	2	2
641	Freshwater Marshes	0	0	0	-1	2	2
642	Saltwater Marshes	0	0	0	0	2	2
643	Wet Prairies	0	0	1	0	1	2
644	Emergent Aquatic Vegetation	0	0	0	0	2	2
645	Submergent Aquatic Vegetation	-1	-1	-1	-1	2	2
651	Tidal Flats	-1	-1	-1	-1	1	1
652	Shorelines	1	1	1	0	2	2
653	Intermittent Ponds	0	0	0	0	2	2
654	Oyster Bars	-1	-1	-1	-1	1	2
731	Exposed Rock with Marsh Grasses	0	0	0	0	1	2
741	Rural Land in Transition	1	1	1	1	1	1
742	Borrow Areas	0	0	0	0	1	0
743	Spoil Areas	2	1	1	1	1	1
744	Fill Areas	2	1	1	1	1	1

-1 = unsuitable; 0 = low; 1 = medium; 2 = high

Code	Category	Urban Multi-Use	Hiking	Equestrian	Mountain Biking	Paddling	Recreation Aesthetics
745	Burned Areas	1	1	1	1	1	1
811	Airports	1	0	0	0	0	0
812	Railroads	0	0	-1	0	1	0
813	Bus and Truck Terminals	0	-1	-1	-1	0	0
814	Roads and Highways	1	0	0	0	0	0
815	Port Facilities	1	0	-1	-1	-1	0
816	Canals and Locks	0	0	0	0	1	1
817	Oil, Water or Gas Long Distance Transmission Lines	2	0	1	0	1	0
818	Auto Parking Facilities	0	0	0	0	0	0
819	Transportation Facilities Under Construction	0	0	0	0	0	0
821	Transmission Towers	0	0	0	0	0	0
822	Communication Facilities	0	0	0	0	0	0
829	Communication Facilities Under Construction	0	0	0	0	0	0
831	Electrical Power Facilities	0	0	0	0	0	0
832	Electrical Power Transmission Lines	2	0	1	0	0	0

-1 = unsuitable; 0 = low; 1 = medium; 2 = high

Code	Category	Urban Multi-Use	Hiking	Equestrian	Mountain Biking	Paddling	Recreation Aesthetics
833	Water Supply Plants	0	0	0	0	0	0
834	Sewage Treatment	-1	-1	-1	-1	-1	-1
835	Solid Waste Disposal	-1	-1	-1	-1	-1	-1
839	Utilities Under Construction	0	0	0	0	0	0
911	Sea Grass	0	0	0	0	2	2

-1 = unsuitable; 0 = low; 1 = medium; 2 = high

5.3 Contacts

Throughout the development of this process and results, the researchers from the University of Florida and the Conway Conservation worked closely with the **Recreation Priorities Committee** of the Florida Greenways and Trails Council. The committee members are:

Mark Gluckman
Development Advisory Services, Inc.
Bell, FL

Helen F. Koehler, President
The Goethe Trail, Inc.
Morriston, FL

Rick Bebout
Keystone Heights, FL

Jorge A. Borrelli
Landscape Architect
Winter Park, FL

Bob Crim
Florida Department of Transportation
Tallahassee, FL

Kent Wimmer
USDA Forest Service
Tallahassee FL

Office of Greenways and Trails **Staff Member to the Committee** is: Samantha Browne. These individuals were critical to the development of a sound process and satisfactory results.

Following is a list of the **Florida Greenways and Trails Council Members** who served during the development of this prioritization process and its application.

Bob Ballard
Deputy Secretary, Land and Recreation
Florida Department of
Environmental Protection

Brian Barnett, Assistant Director
Office of Environmental Services
Fish and Wildlife Conservation Commission

Rick Bebout
Keystone Heights, FL

Jorge A. Borrelli
Winter Park, FL

Janice Browning
Florida Department of Community Affairs

Ken Bryan
Rails to Trails Conservancy
Tallahassee, FL

Margaret S. Dyer
The Dyer Group
Riverview, FL

Mark Gluckman
Development Advisory Services, Inc.
Bell, FL

C. Leroy Irwin
Florida Department of Transportation

Alvin B. Jackson, Jr.
Lake County Deputy County Manager
Tavares, FL

Marsha Kearney, Forest Supervisor
USDA, Forest Service

Helen F. Koehler, President
The Goethe Trail, Inc.
Morriston, FL

R. Douglas Leonard
Central Florida Regional Planning Council
Bartow, FL

Ed McAdam
Parrish, FL

Dr. Janet Snyder Matthews, Director
Division of Historical Resources
Florida Department of State

J. Sherwin Odum
Foley Timber & Land Company
Perry, FL

Ruth Stanbridge
Indian River County
Board of County Commissioners
Vero Beach, FL

Sylvia Tatum
Suwannee River Water Management District
Lawtey, FL

Sally Thompson
Southwest Florida Water Management District

Noah Valenstein
Tallahassee, FL

John C. Waldron
Division of Forestry
Florida Department of Agriculture and
Consumer Services

Michael S. Weiner
Weiner & Aronson, P.A.
Delray Beach, FL

Staff of the Office of Greenways and Trails who participated in the development of this process and its applications are as follows:

Debbie Parrish, Director

Suzanne Walker, Deputy Director

Jim Wood, Planning Manager

Dianne Redd, Public Info. Administrator

Marsha Rickman, Staff to Council

Others who assisted us and to whom we are grateful are:

Dave Bowman
Office of Greenways and Trails

Gwen Beatty
DEP, Waste Management

Lys Burden
Florida Off-Road Bicycle Association

Vernon Compton
The Nature Conservancy

Jeanne Cornell
Sunshine State Horse Council

Margaret Cunningham
Pensacola Bike Coalition

Pam Gluck
American Trails

Rob Hamlin
Ecotones

David Henderson
Miami Dade MPO

Mark Horowitz
Broward County

Butch Horn
Paddling Associations

Joe Jacob
Rock Rest Adventures

Terry Joseph
West Florida Regional Planning Council

Michael Kelley
International Mountain Biking Association

Mary Anne Koos
Department of Transportation

Barbara Meyer
Brevard County MPO

Edwin McCook
Office of Greenways and Trails and Suwannee River Water Management District

Howard Pardue
Florida Trail Association

Carol Pulley
West Florida Regional Planning Council

Marcie Stenmark
Hillsborough County Planning

Christopher Stoll
Geoplan Center
University of Florida

Steve Ovenden
Faller, Davis and Associates

John Paul Schneider
Spirit of the Suwannee

Dwayne Stutzman
Division of Parks and Recreation
North Carolina Department of Environment and Natural Resources

5.4 References

Myers, Ronald L. and John J. Ewel. Ecosystems of Florida. Orlando. University of Central Florida Press. 1990.

Oswald, Tom. Bicycling in Florida: The Cyclist's Road and Off-Road Guide. Sarasota, Fl. Pineapple Press. 1999.

Florida Bicycle 2000: The State of the State of Bicycling in Florida Report. Bike Florida. Kissimmee, Fl. 2000.

Cell-based Modeling with Grid. Environmental Systems Research Institute, Inc. Redlands, Ca. 1994

Planning Trails with Wildlife in Mind: A Handbook for Trails with Wildlife in Mind. Trails and Wildlife Task Force, Colorado State Parks, Hellmund and Associates. Denver, Co. 1998.

Hoctor, Tom, University of Florida Geoplan Center Principle Investigator. Informal Interview. January 2001 and March 2001, Gainesville, Fl. University of Florida Geoplan Center, Gainesville, Fl.

Zwick, Paul, University of Florida Geoplan Center Director. Informal Interview. January 2001, March 2001 and May 2001, Gainesville, Fl. University of Florida Geoplan Center, Gainesville, Fl.

Florida Atlas and Gazetteer. Delorme, Freeport, Me. 1997.