

**Single Resource Ranking**  
**An Evaluation Method for Florida Forever Land Acquisition Projects**

**Documentation**

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## SINGLE RESOURCE RANKING METHODS

The Single Resource Ranking (SRR) is a project ranking analysis conducted by the Florida Natural Areas Inventory for the Florida Forever environmental land acquisition program. The single resource method evaluates how well a Florida Forever project protects a single resource, such as species or watersheds, relative to other projects on the list. The primary purpose of this analysis is to provide a straightforward method for comparing current and potential land acquisition projects based on specific resource goals of the Florida Forever program. The results of the SRR appear in summarized form in the Florida Forever Project Comparative Analysis prepared every six months for the Department of Environmental Protection and available on the FNAI website ([www.fnai.org](http://www.fnai.org)).

The SRR ranks projects for 10 different resource types: species, natural communities, landscapes, watersheds, wetlands, forestry, trails network, recharge, archaeological sites and historical resources.. These resources (with the exception of archaeological and historical) are represented by GIS data layers derived from the Florida Forever Conservation Needs Assessment (G. Knight et al. 2000; A. Knight and Oetting 2009) and each resource type is divided into several priority classes. The original Assessment data layers were combined into functional groups and in some cases re-prioritized for use in the SRR analysis. These decision support data layers are described in the Florida Forever Decision Support Data Documentation (Knight and Oetting 2009). These reports and other documents relating to the Florida Forever program are available on the FNAI website ([www.fnai.org](http://www.fnai.org)).

For most resource types we evaluated projects using a “weighted score” method. We consulted with statisticians at Florida State University to ensure that this method was statistically valid. For the weighted score, we calculated acres of each project in the different priority classes of each resource type. These acres were then multiplied by a weight factor corresponding to the priority class. Finally the weighted acres were summed and the sum was divided by acres of the project to eliminate size bias. This method is illustrated in Table 1. The score represents the average resource value per acre on a project.

**Table 1. Example of Weighted Score evaluation method.**

Project Acres	FF PROJECT	ACRES IN EACH PRIORITY CLASS					WEIGHTED ACRES (acres * weight factor)					SCORE		
		HIGH				LOW	10	8	6	4	2			
		PR 1	PR 2	PR 3	PR 4	PR 5	Acres *10	Acres *8	Acres *6	Acres *4	Acres *5	sum wted acres	sum wted acres/ project acres	
1,342	Project A	0	74	0	165	0	→	0	592	0	660	0	1,252	0.93
36,162	Project B	0	0	10,305	200	0	→	0	0	61,830	800	0	62,630	1.73

Alternatives to the weighted score method were used for Landscapes, Trails Network and Cultural Resources. The following section describes how projects were scored and/or ranked for each resource type. For the weighted score method, the weight factor for each priority class is shown. For some resource types a minimum area threshold was applied, i.e. to get credit for protecting the resource the project as a whole (not just remaining acres) must contain a minimum number of acres of that resource. Finally, we describe the criteria used to determine how well the projects meet each resource type (very high, high, medium, medium-low, low to none). The final project rankings for each resource are given in Appendix A.

**SPECIES**

**Method:** Weighted Score

**Weight Factor & Minimum Area**

<b>Priority Class</b>	Pr 1	Pr 2	Pr 3	Pr 4	Pr 5	Pr 6
<b>Weight Factor</b>	10	6	4	3	2	1
<b>Minimum Acres</b>	None	None	None	None	None	None

**Ranking Criteria:**

	<b>Very High</b>	<b>High</b>	<b>Medium</b>	<b>Medium-Low</b>	<b>Low to None</b>
<b>Weighted Score</b>	6.0+ with acres in Priority 1	5.0+	3.0+	1.0+ OR <1.0 with acres in Priorities 1 or 2	<1.0 with no acres on Priorities 1 of 2

The final project ranking for species is shown in Appendix A.

**NATURAL COMMUNITIES**

**Method:** Weighted Score

**Weight Factor & Minimum Area:**

<b>Priority Class (GRANK)</b>	Pr 1	Pr 2	Pr 3	Pr 4	Pr 5
<b>Weight Factor</b>	10	8	6	3	1
<b>Minimum Acres</b>	None	None	None	50	50

**Ranking Criteria:**

	<b>Very High</b>	<b>High</b>	<b>Medium</b>	<b>Medium-Low</b>	<b>Low to None</b>
<b>Weighted Score</b>	3.5+ with acres in Priorities 1, 2 or 3	2.0+	1.0+	0.25+ OR <0.25 with acres in Priorities 1, 2 or 3	<0.25 with no acres in Priorities 1, 2 or 3

The final project ranking for natural communities is shown in Appendix A.

**LANDSCAPES**

**Method:** Florida Forever Projects were scored based on 1) whether the project makes an actual connection between two core managed areas (determined by visual inspection); 2) the percentage of the Florida Forever project that overlaps with the Greenway corridor (GW) or Landscape (LS); and 3) actual acres of the GW or LS contained in the project.

**Ranking Criteria:**

<b>VERY HIGH</b>	
	Remaining FFBOT Project area makes a connection via "Critical Linkage 1 or 2" between 2+ Core Conservation Areas. <i>Core Conservation Area (CCA) = 10,000+ acres of contiguous FLMA polys</i> <i>Connection = CCAs are not otherwise connected; single connection via multiple FFBOT Projects counts for all projects if no one project makes connection alone</i>
<b>II</b>	<b>AND EITHER:</b>
	<b>A</b> 50% <b>AND</b> 2,000 acres of the remaining FFBOT project overlaps with the Critical Linkage 1 <b>OR</b>
	<b>B</b> 33% <b>AND</b> 10,000 acres of the remaining FFBOT project overlaps with the Critical Linkage 1 <b>OR</b>
	<b>C</b> 75% <b>AND</b> 4,000 acres of the remaining FFBOT project overlaps with the Critical Linkage 2 <b>OR</b>
	<b>D</b> 50% <b>AND</b> 20,000 acres of the remaining FFBOT project overlaps with the Critical Linkage 2
<b>HIGH</b>	
<b>I</b>	25% <b>AND</b> 2,000 acres of the remaining FFBOT project overlap with a Critical Linkage 1 or 2 <b>OR</b>
<b>II</b>	25,000 acres of the remaining FFBOT project overlap with a Critical Linkage 1 or 2
<b>MEDIUM</b>	
<b>I</b>	25% <b>AND</b> 2,000 acres of the remaining FFBOT project overlap with a GW Priority 1-3 <b>OR</b>
<b>II</b>	25% <b>AND</b> 2,000 acres of the remaining FFBOT project overlap with a LS Priority 1 or 2
<b>MEDIUM LOW</b>	
<b>I</b>	500+ acres of remaining FFBOT Project boundary overlap with Greenways Priority 1-6 <b>OR</b>
<b>II</b>	500+ acres of remaining FFBOT Project boundary overlap with Large Landscape Priority 1-3
<b>LOW</b>	
	Did not meet any of the above criteria.

The final project ranking for landscapes is shown in Appendix A.

### HIGH QUALITY WATERSHEDS

**Method:** Weighted Score

**Weight Factor & Minimum Area:**

<b>Priority Class</b>	Pr 1	Pr 2	Pr 3	Pr 4	Pr 5	Pr6	Pr7
<b>Weight Factor</b>	10	9	7	5	4	2	1
<b>Minimum Acres</b>	500	500	500	1,000	1,000	1,000	1,000

**Ranking Criteria:**

	<b>Very High</b>	<b>High</b>	<b>Medium</b>	<b>Medium-Low</b>	<b>Low to None</b>
<b>Weighted Score</b>	7.0+ with 5,000+ acres in Priorities 1 - 3 combined	6.0+	3.0+	1.0+ OR <1.0 with acres in Priorities 1 or 2	<1.0 with no acres in Priorities 1 of 2

The final project ranking for watersheds is shown in Appendix A.

### FUNCTIONAL WETLANDS

**Method:** Weighted Score

**Weights Factor & Minimum Area:**

<b>Priority Class</b>	Pr 1	Pr 2	Pr 3	Pr 4
<b>Weight Factor</b>	10	5	3	1
<b>Minimum Acres</b>	None	None	None	None

**Ranking Criteria:**

	<b>Very High</b>	<b>High</b>	<b>Medium</b>	<b>Medium-Low</b>	<b>Low to None</b>
<b>Weighted Score</b>	6.0+ with acres in Priority 1	5.0+	3.0+	1.0+ OR <1.0 with acres in Priority 1	<1.0 with no acres in Priority 1

The final project ranking for wetlands is shown in Appendix A.

### FORESTRY

**Method:** Weighted Score

**Weights Factor & Minimum Area:**

<b>Priority Class</b>	Pr 1	Pr 2	Pr 3	Pr 4	Pr 5
<b>Weight Factor</b>	10	8	5	3	1
<b>Minimum Acres</b>	500	1,000	1,000	1,000	1,000

**Ranking Criteria:**

	<b>Very High</b>	<b>High</b>	<b>Medium</b>	<b>Medium-Low</b>	<b>Low to None</b>
<b>Weighted Score</b>	6.0+ with 500+ acres in Priority 1	4.0+	2.0+	1.0+ OR <1.0 with acres in Priorities 1-4	<1.0 with no acres in Priorities 1-4

The final project ranking for forestry is shown in Appendix A.

**TRAILS NETWORK**

**Method:** Project scores based on how many linear km of potential trail corridor are contained in the project and percentage of the project that contains a potential trail corridor.

**Ranking Criteria:**

	<b>Very High</b>	<b>High</b>	<b>Medium</b>	<b>Medium-Low</b>	<b>Low to None</b>
<b>Linear km &amp; % of project</b>	10 km of Priority 1 AND 25% of project has Priority 1	5 km of Priority 1 AND 15% of project has Priority 1	5 km of Priorities 1 & 2 combined AND 10% of project has Priorities 1 & 2 combined	3 km of Priorities 1,2 & 3 combined	Projects that do not meet previous criteria

The final project ranking for trails is shown in Appendix A.

**RECHARGE**

**Method:** Weighted Score

**Weight Factor & Minimum Area:**

<b>Priority Class</b>	Pr 1	Pr 2	Pr 3	Pr 4	Pr 5	Pr 6
<b>Weight Factor</b>	10	8	6	4	2	1
<b>Minimum Acres</b>	none	none	none	none	none	none

**Ranking Criteria:**

	<b>Very High</b>	<b>High</b>	<b>Medium</b>	<b>Medium-Low</b>	<b>Low to None</b>
<b>Weighted Score</b>	7.0+ with 1,000+ acres in Priority 1	5.0+ with 500+ acres in Priorities 1 or 2	3.0+	2.0+ OR <2.0 if 500+ acres in Priorities 1 & 2 combined	<2.0

The final project ranking for watersheds is shown in Appendix A.

**CULTURAL RESOURCES**

**Method:** The Florida Department of State/Division of Historical Resources provides a ranking of projects based on cultural resources.

**Ranking Criteria:**

<b>Very High</b>	Project could be considered a stand alone Florida Forever Project based solely on its archaeological or historic value.
<b>High</b>	Project exceeds satisfying objective for archaeological or historic resources.
<b>Medium</b>	Project will likely satisfy objective for archaeological or historic resources.
<b>Medium-Low</b>	Project most likely will not satisfy objective for archaeological or historic resources.
<b>Low to None</b>	Project does not satisfy objective for archaeological or historic resources.

## **REFERENCES**

Knight, G., J. Oetting, and A. Knight. 2000. Florida Forever Conservation Needs Assessment Summary Report. Florida Natural Areas Inventory. Tallahassee, Florida.

Knight, A. and J. Oetting. 2009. Florida Forever Conservation Needs Assessment Technical Report, Version 3.2. Florida Natural Areas Inventory. Tallahassee, Florida.

Knight, A. and J. Oetting. 2009. Florida Forever Decision Support Data Documentation. Florida Natural Areas Inventory. Tallahassee, Florida.