

**APPENDIX D**  
**CHOOSING BY ADVANTAGES SUMMARY**



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## APPENDIX D CHOOSING BY ADVANTAGES - SUMMARY

The National Park Service uses a decision-making system called Choosing by Advantages to select a preferred alternative in a general management plan/environmental impact statement. Choosing by Advantages was originally developed by Jim Suhr, author of *The Choosing by Advantages Decisionmaking System*. This decision-making system is based on determining the advantages of different alternatives for a variety of factors. The fundamental rule in this decision-making system is that sound decisions must be based on the importance of advantages.

One of the greatest strengths of the Choosing by Advantages system is its fundamental philosophy: decisions must be anchored in relevant facts. This minimizes the subjectivity in the decision-making process and makes the decision as objective as possible. For example, the question “Is it more important to protect natural resources or cultural resources?” is “unanchored”; it has no relevant facts on which to make a decision. Without such facts, it is impossible to make a defensible decision.

The Choosing by Advantages process instead asks us to decide which alternative gives the greatest advantage in protecting natural resources and cultural resources. To answer this question, relevant facts would be used to determine the advantages that the alternatives provide for both kinds of resources. For example, we may have facts that show that two alternatives disturb or restore equal amounts of vegetation, so neither alternative would be more advantageous than the other in protecting natural resources. On the other hand, we may have relevant facts that show that one alternative would disturb five known archeological sites, while the other alternative would disturb only one. This alternative, then, would be more advantageous since it provides natural resource protection (equal to the other alternative) and also provides the greatest advantage for cultural resources.

This process is a rational way to perform this complicated task which engages participants, and involves discussion and consensus building. It could be used to allocate capital funding or prioritize planning efforts. Its benefits include providing corporate memory and consistency, along with buy-in from all levels of participation.

The preferred alternative, Alternative F, for this Draft General Management Plan/Environmental Impact Statement, was selected by the Choosing by Advantages method, and is the National Park Service’s proposed action. The matrix used to evaluate the advantages of each alternative follows this summary of the CBA method.

The team that applied the Choosing by Advantages process consisted of the following individuals:

Kevin Cheri, Superintendent, Chattahoochee River National Recreation Area (CHAT NRA)

Chris Hughes, Acting Chief, Science & Resource Management, CHAT NRA

Riana Ventura Bishop, Administrative Officer, CHAT NRA

Richard Lutz, Chief, Facility Management, CHAT NRA

Nancy Poe, Chief, Resource Education, CHAT NRA

Scott Pfeninger, Chief Ranger, CHAT NRA

Richard Sussman, Chief, Planning and Compliance Division, National Park Service Southeast  
Regional Office (NPS SERO)

David Libman, Park Planner, NPS SERO

John Barrett, Park Planner, NPS SERO

Amy Wirsching, Park Planner, NPS SERO

Anita Barnett, Environmental Specialist, NPS SERO

Chris Martin, Senior Fisheries Biologist, Georgia Department of Natural Resources (GADNR)

Bill Couch, Buford Trout Hatchery Manager, GADNR

The first step in the Choosing by Advantages process is to decide the factors that will be used in the decision. For the National Park Service there are 4 categories of factors from which the specific factors for each decision (in this case the selection of the agency preferred alternative for the Draft General Management Plan). They are:

1. Protect Cultural and Natural Resources
2. Provide for Visitor Enjoyment
3. Improve Efficiency of Park Operations
4. Provide Cost-Effective, Environmentally Responsible, and Otherwise Beneficial Development for the National Park Service

Factor category number 4 was eliminated from the analysis because it mainly applies to selecting from among alternative line item construction projects which are beyond the scope of the General Management Plan. Specific factors within categories 1-3 were selected as follows:

1. Protect Cultural and Natural Resources
  - a. Protects and enhances water quality
  - b. Preserves and enhances biodiversity
  - c. Preserves and enhances cultural resources
2. Provide for Visitor Enjoyment
  - d. Provides visitor services and recreational opportunities
  - e. Provides interpretive and educational opportunities
  - f. Provides access for a variety of users
3. Improve Efficiency of Park Operations
  - g. Extent to which the alternative benefits operational efficiency and effectiveness

For each of the 6 alternatives under consideration, including the no-action (continue current management policies and strategies) alternative the team discussed each alternative for each factor and

reached a consensus regarding how each factor should be characterized for each alternative. In the CBA process this characterization is known as the attribute of that alternative for that factor. For example, in a car buying decision where color is a factor in the decision, the colors red, blue, and black would be the attributes for three alternatives in that factor.

**The following is a list, for each factor, of the criteria which the team used as a basis for discussion and building consensus on the attribute of each factor for each alternative.**

1. Protects and enhances water quality
  - a. Total acreage in the natural zone (from the acreages table)
  - b. Level of the built environment
  - c. Presence of the river solitude zone
  - d. Environmental impacts matrix
2. Preserves and enhances biodiversity
  - a. Same criteria as No. 1
3. Preserves and enhances cultural resources
  - a. Environmental impacts matrix
  - b. Level of preservation/restoration (similar attribute across all alternatives for historic resources)
  - c. Preservation of Archeological resources
4. Provides visitor services and recreational opportunities
  - a. Staffing levels required
  - b. Level of built environment
  - c. Differences in zoning (acreage table)
  - d. Environmental impacts matrix
  - e. Variety and number of opportunities throughout the park
  - f. Stakeholder input and feedback
5. Provides interpretive and educational opportunities
  - a. Zoning in general
  - b. Staffing levels required
  - c. Availability of educational facilities
  - d. Level of partnering
6. Provides access for a variety of users
  - a. Staffing levels required
  - b. Level of built environment
  - c. Differences in zoning (acreage table)
  - d. Environmental impacts matrix
  - e. Stakeholder input and feedback
  - f. Reference to a table of all potential user groups and the level of access for each of those groups.
7. Extent to which the alternative benefits operational efficiency and effectiveness
  - a. Distribution of facilities

- b. Environmental impacts matrix
- c. Staffing level table

Finally, the team reconsidered and re-discussed the entire process and the resulting analysis matrix which follows this discussion prior to preparing the preference chart which applies cost to the decision. That chart is also included in this appendix.

# CHATTAHOOCHEE RIVER NATIONAL RECREATION AREA DRAFT GENERAL MANAGEMENT PLAN ALTERNATIVES Choosing by Advantages

COMPONENT; FACTOR	ALTERNATIVES					
	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
PROTECT CULTURAL AND NATURAL RESOURCES						
FACTOR 1 – Protects and enhances water quality.						
Attributes	• Very low level	• Very high level	• High level	• Low level	• Moderate level	• Low level
Advantages		- Highest level of protection and enhancement	- Much higher	- Slightly higher	- Moderately higher	- Slightly higher
		15	10	2	5	2
FACTOR 2 – Preserves and enhances biodiversity.						
Attributes	• Very low level	• Very high level	• High level	• Low level	• Moderate level	• Moderate (minus) level
Advantages		- Highest level of preservation and enhancement	- Much higher	- Minimally higher	- Moderately higher	- Slightly higher
		60	40	5	30	25
FACTOR 3 – Preserves and protects cultural resources.						
Attributes	• Low level	• High level	• High (minus) level	• Low level	• Moderate level	• Moderate level
Advantages		- Moderately higher	- Slightly higher		- Minimally higher	- Minimally higher
		10	8		6	6
PROVIDE FOR VISITOR ENJOYMENT						
FACTOR 4 – Provides visitor services and recreational opportunities.						
Attributes	• Low level	• Low level	• High level	• High (plus) level	• High (plus) level	• Very high level
Advantages			- More services and opportunities	- Much more	- Much more	- Many more
			75	85	85	95
FACTOR 5 – Provide interpretive and educational opportunities.						
Attributes	• Very low level	• Low level	• Moderate level	• Very high level	• Very high level	• Very high level
Advantages		- Minimally more	- Many more	- Significantly more	- Significantly more	- Significantly more opportunities
		40	70	85	85	85
FACTOR 6 – Provides access for a variety of users.						
Attributes	• Moderate (plus) level	• Very low level	• Moderate level	• High level	• High level	• Very high level
Advantages	Moderate increase	70	Minimal increase	Higher increase	Higher increase	Significantly higher increase in access for variety of users
			45	85	85	100
IMPROVE EFFICIENCY OF PARK OPERATIONS						
FACTOR 7 – Extent to which the alternative benefits operational efficiency and effectiveness						

COMPONENT:		ALTERNATIVES										
FACTOR	Alternative A		Alternative B		Alternative C		Alternative D		Alternative E		Alternative F	
Attributes	• Very low level		• Moderate level		• High level		• Moderate (minus)		• Moderate level		• Moderate level	
Advantages			Slightly more		Significantly more efficient and effective		Minimally more		Slightly more		Slightly more	
TOTAL IMPORTANCES OF ADVANTAGES		70			20	35	303	10	272	20	316	333
Initial Cost (Net)												
Re-design Cost												
Compliance												
Life Cycle Cost (Net)	\$44,300,000.00		\$45,500,000.00					\$67,400,000.00		\$65,300,000.00		\$65,000,000.00
TOTAL												



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