

# APPENDIX J: CHOOSING BY ADVANTAGES AND ENVIRONMENTALLY PREFERRED ALTERNATIVE

J.1: Sample Worksheet for Choosing by Advantages

## J.1 SAMPLE WORKSHEET FOR CHOOSING BY ADVANTAGES

ANY NATIONAL PARK — PROJECT NAME							
COMPONENT	FUNCTION						
FACTOR	ALTERNATIVES						
	Alternative __		Alternative ___		Alternative ____		Alternative _____
PROTECT CULTURAL AND NATURAL RESOURCES							
FACTOR 1 - Prevent Loss of Resources							
Attributes							
Advantages	<i>Least Preferred Set of Attributes</i>						
FACTOR 2 - Maintain and Improve Condition of Resources							
Attributes							
Advantages							
PROVIDE FOR VISITOR ENJOYMENT							
FACTOR 3 - Provide Visitor Services and Educational and Recreational Opportunities							
Attributes							
Advantages							

ANY NATIONAL PARK — PROJECT NAME							
COMPONENT	FUNCTION						
FACTOR	ALTERNATIVES						
	Alternative __	Alternative ___	Alternative ____				
FACTOR 4 - Protect Public Health, Safety and Welfare							
Attributes							
Advantages							
IMPROVE EFFICIENCY OF PARK OPERATIONS							
FACTOR 5 - Improve Operational Efficiency and Sustainability							
Factor 5a -							
Attributes							
Advantages							
FACTOR 6 - Protect Employee Health, Safety and Welfare							
Factor 6a -							
Attributes							
Advantages							
PROVIDE COST-EFFECTIVE, ENVIRONMENTALLY RESPONSIBLE, AND OTHERWISE BENEFICIAL DEVELOPMENT FOR THE NPS							
FACTOR 7 - Provide Other Advantages to the National Park System							
Factor 7a - Compliance Effort							
Attributes							
Advantages							

ANY NATIONAL PARK — PROJECT NAME								
COMPONENT		FUNCTION						
FACTOR	ALTERNATIVES							
	Alternative __		Alternative ___		Alternative ____		Alternative ____	
TOTAL IMPORTANCE OF ADVANTAGES								
Initial Cost (Net)								
Re-design Cost								
Compliance								
Life Cycle Cost (Net)								
TOTAL								
Version 12/11/98								

## J.2 EXAMPLE OF CHOOSING BY ADVANTAGES WORKSHEETS

The following worksheet was developed for the Cane River GMP. The administrative record for the project also includes pages of notes taken during the CBA discussions. The notes are as important as the table, since they record the reasons decisions were made.

	STATUS QUO	ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3		
<b>FACTOR 1</b> Maintain or improve the condition of resources.	<b>ATTRIBUTE:</b> 50 structures preserved (external) 2 rehabilitated (open to public) 4 post-1948 structures removed Cultural landscapes maintained at current level. Security provided at both sites. Natural resources maintained at current level	<b>ATTRIBUTE:</b> 54 structures preserved (external) 15 restored/rehabilitated (open to public.) Potential for additional resource pres. offsite through coop. agreement, partners. Cultural landscape preserved --slight improvement through added preservation efforts more research data --6 comp. landscapes rehabilitated Improved resource security (at least part time) at Oakland--seasonal employees at Doctor's house. Natural resources impacted by development --soils, drainage, compaction, more at Oakland than Magnolia.	<b>ATTRIBUTE:</b> 50 structures preserved (external) 12 structures restored/rehabilitated pen to public) 4 post-1948 structures removed. Cultural I landscape preserved slight to moderate improvement of no action through locating development offsite, low level interpretation. 7 component landscapes restored/rehabilitated Security same as status quo alternative. Natural resources -- protect additional 60-100 acres.	<b>ATTRIBUTE:</b> 54 structures preserved (external) --18 rehabilitated (open to visitors) --3 used to house animals. Cultural landscape preserved -- would receive greater emphasis in the "working plantation" concept, but this benefit diminished by development and high visitor traffic. --9 comp. landscape rehabilitated. Security same as status quo alternative. Natural resources impacted by development --soils, drainage, compaction.		
	<b>ADVANTAGE:</b>	<b>0</b>	<b>ADVANTAGE:</b> -more professional expertise and attention to park and regional resources -many more structures, landscape comp preserved	<b>ADVANTAGE:</b> -many more structures and landscapes comp. preserved (some restored) -minimal site development -double the acreage protected -more protection of regional context	<b>85</b>	<b>ADVANTAGE:</b> -many more structures and landscape components are preserved, used and maintained -more preservation of lifeways
<b>FACTOR 2</b> Provide opportunities for visitors to learn about the history and culture of the Cane River region as	<b>ATTRIBUTE:</b> <b>On site:</b> Opportunities for visitors limited due to limited access to resources/limited park hours. Quiet, uncrowded setting provides contemplative learning environment (esp. for ranger-led groups)	<b>ATTRIBUTE:</b> <b>On site:</b> Opportunities moderately high at visitor center--state of art programs, personal services, exhibits of park artifacts. Opportunities variable in historic core--dependent on projects ongoing & level of visitor interaction with researchers	<b>ATTRIBUTE:</b> <b>Onsite:</b> Opportunities to learn moderate to high depending on type of visitor/ type of media used--potentially high quality leaning environment due to setting no new development -dispersment of visitors, low-key interpretation methods.	<b>ATTRIBUTE:</b> <b>Onsite:</b> Opportunities to learn moderate to high --wide variety of experiences/ opportunities available depicting a working plantation and lifeways.		

	STATUS QUO	ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	
represented by the resources of Magnolia and Oakland plantations.	<p><b>Offsite:</b> Opportunities for visitors either not available or limited to primarily non-NPS activities (i.e., chamber, heritage area).</p>	<p>and preservations. Controlled environment at Magnolia.</p> <p><b>Offsite:</b> Shuttle trip allows heritage area opportunities.</p>	<p>--few opportunities for activity-based learning</p> <p><b>Offsite</b> Opportunities to learn in Natchitoches and heritage area high --joint v.c. provides state of art programs, personal services, exhibits of park artifacts; --shuttle system offers interpretation en route to park; --partnerships w/heritage area, others, result in other interp/education programs, etc.</p>	<p>--few opportunities for contemplative for experiences due to high levels of activity and substantial development within historic landscape.</p> <p><b>Offsite:</b> Opportunities to learn moderate to low--joint contact facility provides basic orientation to park and area.</p>	
	<p><b>ADVANTAGE:</b></p>	<p>0</p> <p><b>ADVANTAGE:</b> -unique experiential opportunity to interpret a preservation laboratory -much more extensive vis. opportunities at vc &amp; onsite- whole range of techniques -more exposure to reg. themes</p>	<p><b>ADVANTAGE:</b> -much more extensive visitor exposure to regional opportunities and themes. -greater diversity of visitor opportunities throughout region -facilitates opportunity for visitor self-educate -acquisition provides additional visitor experiences.</p>	<p>100</p> <p><b>ADVANTAGE:</b> -facilitates participative learning activities onsite -much more extensive visitor opportunities onsite to experience and understand plantation lifeways - more extensive visitor exposure to regional opportunities and themes.</p>	<p>80</p>
<b>FACTOR 3</b> Provide visitor access, circulation, and services that enhance visitor enjoyment of the park.	<p><b>ATTRIBUTE:</b> <b>Onsite:</b> Access to site and structures minimal. Very limited services. <b>Offsite:</b> No visitor services</p>	<p><b>ATTRIBUTE:</b> <b>Onsite:</b> High level of visitor services --convenient parking at Oakland, v.c. programs and services, trails to key resources, some structures accessible, Oakland-Magnolia shuttle <b>Offsite</b> Potential shuttle access to other HA sites</p>	<p><b>ATTRIBUTE:</b> <b>Onsite:</b> Low level of services--little to no parking, basic facilities, very limited personal services. <b>Offsite:</b> High level of visitor services--convenient parking, v.c. programs and services, shuttle service w/interpretive services (heritage area/park overview).</p>	<p><b>ATTRIBUTE:</b> <b>Onsite:</b> Moderately high level of visitor services--convenient parking, orientation and restrooms, high level of personal services--programs and demos <b>Offsite:</b> Moderate to low level of services--convenient parking, basic information and restrooms, low level of personal services</p>	
	<p><b>ADVANTAGE:</b></p>	<p>0</p> <p><b>ADVANTAGE:</b> -extensive, complete visitor services onsite -much more access to park resources</p>	<p><b>ADVANTAGE:</b> -very extensive, complete visitor services onsite -more and direct access to onsite</p>	<p>40</p> <p><b>ADVANTAGE:</b> -more convenient access to the park -much more direct access to park</p>	<p>50</p>

	STATUS QUO		ALTERNATIVE 1		ALTERNATIVE 2		ALTERNATIVE 3	
					resources -greater access to regional resources		resources -more access to regional resources -extensive personal services onsite	
<b>FACTOR 4</b> Establish operational efficiency and sustainability.	<b>ATTRIBUTE:</b> Moderate efficiency for initial low visitation--small staff concentrated in one area, allowing good communication among staff and with visitors, proximity to resource. Efficiency will diminish as program/visitation grows.		<b>ATTRIBUTE:</b> Moderately high efficiency for operations--admin. and interp. staff combined, good communication, high access to majority of visitors and resources (70%). Controlled access to Magnolia  Onsite maintenance promotes good communication, and potentially efficiency. Reuse structures that would have to be maintained anyway.		<b>ATTRIBUTE:</b> Moderate to low efficiency for operations--admin and some interp staff combined in town (high access to many visitors and community), other interp staff at units, maintenance elsewhere. Operations fractured between 4 areas (5 incl Curation storage). Best efficiency for communication/business with area partners.		<b>ATTRIBUTE:</b> High operational efficiency--majority of staff combined at Oakland, allowing good communication, efficient use of space & parking, proximity to majority of visitors and resources (70%). Onsite collections management.	
	<b>ADVANTAGE:</b> - Consolidated staff at Oakland	<b>30</b>	<b>ADVANTAGE:</b> -improved capability for preservation maintenance -consolidated staff at Oakland		<b>ADVANTAGE:</b>	<b>0</b>	<b>ADVANTAGE:</b> -staff at only 2 locations	<b>20</b>
<b>FACTOR 5</b> Assist in educational and preservation activities in support of Cane River cultural heritage.	<b>ATTRIBUTE:</b> <b>Onsite:</b> Minimal partnership opportunities pursued in education/preservation assistance  <b>Offsite:</b> Minimal partnership opportunities pursued in education/preservation assistance.		<b>ATTRIBUTE:</b> <b>Onsite:</b> Moderate partnership opportunities pursued in education/preservation assistance  <b>Offsite:</b> Minimal partnership opportunities pursued in education/preservation assistance.		<b>ATTRIBUTE:</b> <b>Onsite:</b> Minimal partnership opportunities pursued in education/preservation assistance  <b>Offsite:</b> High level of partnership opportunities in educational and preservation assistance including technical assistance		<b>ATTRIBUTE:</b> <b>Onsite:</b> Moderate level of partnership opportunities pursued in educational/preservation assistance.  <b>Offsite:</b> Minimal partnership opportunities pursued in education/preservation assistance	
	<b>ADVANTAGE:</b>	<b>0</b>	<b>ADVANTAGE:</b> -provide outreach by example, research resource, and focus for prof. preservation programs		<b>ADVANTAGE:</b> -extensive, multiple partnership activities including technical assistance	<b>60</b>	<b>ADVANTAGE:</b> -provide focus for lifeways preservation, education and school programs	<b>40</b>
<b>TOTAL IMPORTANCE OF THE ADVANTAGES</b>		<b>30</b>				<b>285</b>		<b>260</b>

## J.3 THE ENVIRONMENTALLY PREFERRED ALTERNATIVE — EXAMPLES

### Example 1: Walnut Canyon NM

The No-Action Alternative represents the current management direction for Walnut Canyon National Monument. The existing use and development of the park is based on planning initiated and implemented during the Mission 66 program. Personal services interpretation and resource protection patrols are sporadic at the two archeological interpretive areas (Island and Rim trails and at ranger cabin). Resource protection patrols are even less frequent on the south side of the canyon. The majority of visitors to the park see the two archeological areas on their own with no on-site NPS presence. The ranger cabin area is by guided tour only. For resource protection purposes, areas of the park other than the developed sites and administrative areas are closed to unguided entry. Since the No-Action Alternative maintains the Mission 66 visitor experience, diversity of educational opportunities is limited. Protection of cultural and natural resources would be less enhanced than under Alternative 2. Visitor opportunities would not be as diverse as under Alternative 1. The No-Action Alternative does not fully realize provisions 3, 4, 5 and 6 of the goals.

Alternative 1 provides more diverse visitor experience and access to more of the park to decrease congestion at the visitor center and on the Island Trail meeting goals 3 and 5 of the National Environmental Policy Act. A variety of motorized and non-motorized activities would be spread across the area north of the canyon rim. Parking would be redesigned and relocated away from the canyon rim, and visitors would walk a short trail to the canyon edge. The park would remain day-use only, with the road gated at night at the intersection of the entrance road and FR303. Gating the road may disrupt recreational use of the road (such as biking and jogging) and may affect access to grazing allotments, not fully realizing goal 4. The existing visitor center would be remodeled to accommodate more visitor use by removing administrative offices, and a new scenic drive would be developed along the north rim to disperse use to a new area and provide different views of the canyon. Construction of a scenic drive in the east end of the park would fragment wildlife habitat, not meeting goal 6 of the National Environmental Policy Act. Areas of the park not zoned for administrative or visitor use would remain closed to protect resources, partially realizing goal 6. As compared to the No-Action Alternative and Alternative 2, Alternative 1 meets goals 3 and 5 by providing more diverse visitor experiences, and partially realizes goals 4 and 6. Protection of natural and cultural resources would not be as enhanced as under Alternative 2.

Alternative 2 would preserve untrailed expanses, unfragmented natural systems, and relatively pristine resource conditions throughout much of the park. Walnut Canyon would be protected as a critical wildlife corridor meeting goal 6 of the National Environmental Policy Act. Visitation to the park would be managed with the goal of providing quality learning opportunities in an intimate atmosphere while maintaining the health of the canyon ecosystem. Preservation and protection of threatened and endangered species, preservation of riparian habitat, and maintenance of the long-term integrity of systems and natural processes would be emphasized. Efforts would be made to provide a broader range of educational programs (ranger guided hikes in the east end of the park and a self-guided trail to ranger cabin), partially realizing goals 3 and 5 of the National Environmental Policy Act. The park entrance road would be gated at night, while allowing 24-hour use of FR303. Gating the road may disrupt recreational use of the road (such as biking and jogging) and may affect access to grazing allotments, not fully realizing goal 4. Compared to the No-Action Alternative and Alternative 1, Alternative 2 provides the greatest protection to the cultural and natural resources of the park.

After careful review of potential resource and visitor impacts, and developing proposed mitigation for impacts to natural and cultural resources, the environmentally preferred alternative is Alternative 2. Alternative 2 surpasses the other alternatives in best realizing the full range of national environmental policy goals as stated in § 101 of the National Environmental Policy Act. Although other alternatives may achieve greater levels of individual protection for cultural resources or natural resources, or better enhance visitor experience, Alternative 4 overall does (1) provides a high level of protection of natural and cultural resources while concurrently attaining the widest range of neutral and beneficial uses of the environment without degradation; (2) maintains an environment that supports diversity and

variety of individual choice; and, (3) integrates resource protection with an appropriate range of visitor uses.

## Example 2

The environmentally preferable alternative is the alternative that will promote the national environmental policy as expressed in section 101 of the National Environmental Policy Act. In the National Park Service, the environmentally preferred alternative is identified by (1) determining how each alternative would meet the criteria set forth in section 101(b) and (2) considering any inconsistencies between the alternatives analyzed and other environmental laws and policies (DO 12, 2.7E). Section 101 states that "... it is the continuing responsibility of the Federal Government to

- (1) fulfill the responsibilities of each generation as trustee of the environment for succeeding generations
- (2) assure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings
- (3) attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences\
- (4) preserve important historic, cultural, and natural aspects of our national heritage, and, wherever possible, maintain an environment that supports diversity and variety of individual choice
- (5) achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life's amenities
- (6) enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources." (Criteria 6 was determined to be not applicable to this planning effort.)

Taken as a whole, the preferred alternative (alternative 2) would best satisfy the five remaining goals and is the environmentally preferred alternative. The preferred alternative would enhance the park's ability to carry out its mission through developmental and programmatic activities while limiting the amount of new environmental impacts from development and use. Current visitor experiences would still be available but with a greater depth and range, and there would be increased opportunities for both recreational diversity and learning about park resources. Buildings would be adaptively used for new functions thus maximizing visitor opportunities without expanding the developed areas. Thus the preferred alternative would satisfy national goals 2, 3, 4, and 5 to a high degree, ensuring for the long-term that visitors coming to the park see an esthetically and culturally pleasing area, providing a wide range of opportunities for visitors to learn and enjoy the area with minimal adverse impacts, while preserving and enhancing the understanding and preservation of the park's important natural and cultural resources and fulfilling the Park Service's responsibilities as trustee of the environment (goals 1 and 4).

Alternative 1, the no-action alternative, would continue to preserve important cultural and natural resources (goals 1 and 4), although it would not enhance the Park Service's ability to achieve these goals to the same degree as under the preferred alternative. Educational, informational, and research opportunities would remain limited by lack of facilities and programs and would thus not fulfill goals 2, 3, 4, and 5 as well as the preferred alternative.

Alternative 3 would provide the greatest range and flexibility in visitor recreational opportunities, thus meeting goals 2, 3, 4, and 5. However, alternative 3 would not have the emphasis on both research based educational opportunities and recreational diversity that the preferred alternative would offer. Providing these opportunities and associated new facilities would also result in more extensive and dispersed resource impacts and a greater likelihood that resource management would become more reactive rather than proactive in addressing issues. Thus this alternative would not provide as great a degree of protection for resources (goals 1 and 4) compared to the preferred alternative.

Alternative 4 would provide the highest degree of protection for the park's natural and cultural resources, primarily by removing nonhistoric facilities and restoring areas to more natural conditions, expanding resource management programs and data collection, and generally preserving cultural resources at the highest level possible, with preservation of historic fabric a priority. Thus goals 1 and 4 would be best served by this alternative. Although some visitor opportunities would be enhanced, particularly nonmotorized opportunities, overall there would be a narrower range and fewer opportunities for all visitors to fully enjoy the park and its resources (goals 2, 3, 4, and 5) compared to the other alternatives.

## Notes: