

# Chapter 3 - Affected Environment

*The Affected Environment and Environmental Consequences chapters comprise the Environmental Impact Statement (EIS) for this Final General Management Plan. The descriptions, data, and analysis presented focus on the specific conditions or consequences that may result from implementing the alternatives. The EIS should not be considered a comprehensive description of all aspects of the human environment within or surrounding the park.*

*A description of existing environmental conditions give the reader a better understanding of planning issues and establish a benchmark by which the magnitude of environmental effects of the various alternatives can be compared.*

## **MANDATORY ENVIRONMENTAL IMPACT TOPICS DISMISSED FROM FURTHER ANALYSIS**

The following mandatory environmental impact topics were dismissed from further analysis:

### **NATURAL RESOURCES**

#### **Air quality**

Section 118 of the 1963 Clean Air Act (42 USC 7401 *et seq.*) requires an NPS unit to meet all federal state, and local air pollution standards. The Clean Air Act also provides that the federal land manager has an affirmative responsibility to protect air quality related values from adverse pollution impacts, including visibility, plants, soils, water quality, cultural resources, and visitor health. St. Johns County, as well as the rest of Florida, is designated as an attainment area, in compliance with the standards set forth by the Environmental Protection Agency. St. Johns County is currently well below air quality standards as set by the Environmental Protection Agency (FDEP 2004).

If an alternative were selected that required construction, local and park air quality would temporarily be affected by dust and construction vehicle emissions during construction. Hauling material and operating equipment during the construction period would result in increased vehicle exhaust and emissions. Emissions would generally disperse fairly quickly from the project area because airflow is good and air stagnation seldom occurs due to the park's

proximity to the water and ocean breeze. To mitigate the impacts of increased vehicle emissions, idling of construction vehicles would be limited. Overall, construction related impacts upon air quality would be adverse, but short term and negligible.

Depending on the alternative selected and implemented, visitor use could increase and in turn emissions from visitor vehicles could increase. Although emissions could increase, this increase would likely not significantly affect air quality.

The NPS will cooperate with the Florida Department of Environmental Protection and the Environmental Protection Agency to monitor air quality and ensure that the park's overall air quality and visibility conditions remain good. It should be noted that the NPS has very little direct control over air quality within the air shed encompassing the park.

Because degradation of local air quality due to construction activities and emissions would be short term, lasting only as long as construction, and negligible; and any long-term, adverse impacts that implementation of any of the alternatives would have on the air quality of either the park or the region, are negligible; air quality was dismissed as an impact topic.

### **SOCIALLY OR ECONOMICALLY DISADVANTAGED POPULATIONS**

U.S. Census Bureau income and poverty estimates for St. Johns County in 1999 (U.S. Census Bureau 2000) indicate the local area has

a significantly lower percentage of persons below the poverty level (8%) than for Florida (12.5%) or the U.S. (12.4%). U.S. Census information also shows that St. Johns County in 2000 has a very low minority population (11%) compared to Florida (34.6%) or the U.S. (30.9%). Since none of the proposed actions is expected to reduce the availability of affordable housing or result in a negative impact to the socioeconomic environment of the local community, minority and low-income populations, to the extent they exist, would not be significantly affected.

## **MANDATORY ENVIRONMENTAL IMPACT TOPICS DISCUSSED IN PLAN: DESCRIPTION OF EXISTING CONDITIONS**

The following discussion provides an understanding of existing environmental conditions potentially affected by implementing the alternatives:

### **NATURAL RESOURCES**

Within the boundary of the park there are no common natural resources as defined by NPS policies. The 20-acre site has been modified throughout its history by human activity. There are no free-flowing streams, wetlands, forests, or other naturally occurring ecosystems here. Therefore, management activities with respect to natural resources within the park boundaries are limited to those with potential impacts on water quality and floodplains.

The grounds of the park are principally open grassy areas with scattered palm and oak trees mainly around the park perimeter. The grounds are completely manipulated, with regular mowing, trimming, fertilizing, and removal of invasive species and storm damaged vegetation.

#### **Water Quality**

The park is situated directly on the banks of the Matanzas River. The view eastward toward the Atlantic Ocean is of great interpretive and aesthetic importance. Matanzas River is a body

of water located in St. Johns and Flagler Counties in Florida. Contrary to its name, it is not actually a river, but a narrow saltwater bar-bounded estuary sheltered from the Atlantic Ocean by Anastasia Island.

The Matanzas River is roughly 20 miles (32 km) in length and extends from St. Augustine Inlet in St. Augustine, Florida southward to approximately 8 miles (13 km) south of the Matanzas Inlet on the southern tip of Anastasia Island. The river is part of the Intracoastal Waterway.

The Matanzas River supports an extensive tidal marsh habitat that includes salt marshes, mangrove tidal wetlands, oyster bars, estuarine lagoons, upland habitat, and marine environments. The Matanzas River faces several pollution issues, mostly related to urbanization in St. Augustine and the northern portion of Anastasia Island.

Although the park contains no part of the Matanzas River within its boundary, water quality will be addressed as an impact topic.

#### **Floodplains**

The entire park is within the 100-year regulatory floodplain as is the city of St. Augustine. Flooding can occur and is usually storm (i.e. hurricane) induced.

### **CULTURAL RESOURCES**

#### **Museum Collection**

The museum collection at the park and Fort Matanzas is considered to be one entity for administrative purposes; however they are reported and accounted for as two separate collections, each with their own accessioning and cataloging systems. Most all of the objects are stored together. The museum collection includes 41,822 artifacts. Most are Indian, Spanish and English pottery sherds, bottles, and fragments thereof, gun flints, arrowheads, human and animal skeletal remains, military equipment and accoutrements, domestic items, coins, and manuscript collections related to the

Fort's artillery. The museum collection also includes a substantial amount of archival material, estimated at 449,500 items.

The archeological collection has resulted from a number of formal excavations conducted at both the park and Fort Matanzas National Monument. Approximately 40,085 archeological specimens have been collected through excavations, with historic ceramics representing the majority of the objects. Only 4,100 of these objects are stored at the parks, and some are on loan to the NPS Southeast Archeological Center (SEAC) in Tallahassee, Florida, for analysis, study, and cataloging. Included in the loan to SEAC are 23 objects that fall under the Native American Graves Protection and Repatriation Act (NAGPRA) regulations. SEAC has analyzed the human remains and completed the mandated inventories; the consultation process of repatriating the remains has begun. (Lang et al. 1995)

There are 861 history objects in the museum collection. These consist primarily of flags and banners, books, military objects, and some personal objects. There are thirteen firearms in the collection. An artillery collection of 38 pieces, including 24 cannons, 8 howitzers, 6 mortars, and 12 cannon carriages of which 18 pieces were received with the fort in 1933 and the rest have been acquired through gift, exchange, or loan (NPS 1993). All 38 pieces of the artillery collection are authentic and two additional pieces are reproductions that are used for firing demonstrations.

Only 97 objects are on exhibit throughout the casemates inside the fortress and few are stored at the park and SEAC. The collection stored at CASA consists of archives stored in a room of 750 square feet constructed as an addition to the headquarters building (NPS 2003). Museum collections not stored at the park or SEAC are stored in the Timucuan Ecological and Historical Preserve museum management facility.

## Historic Structures

There are eleven historic structures at the park (Brown 1997). The List of Classified Structures (LCS) is the NPS's system wide computerized database of historic structures. Structures on the LCS have either been determined eligible for the National Register of Historic Places or are managed by the parks as cultural resources. Of the eleven structures in the LCS inventory, ten of the structures are listed on the National Register of Historic Places as contributing to the historic district. Although the Tricentennial Marker fails to satisfy the National Register's fifty-year requirement, it is managed as a cultural resource:

- **Castillo de San Marcos (1672-1756).** A bastioned masonry fortification located north of the colonial city of St. Augustine, the Castillo de San Marcos centers on a square plaza, the sides of which measure 320 feet. Diamond-shaped bastions project outward from each corner of the fortress; each bastion has a sentry box at its point. The coquina walls of the Castillo de San Marcos are thirty feet high, ten to fourteen feet thick at the base, and five feet thick at the top. Vaulted casemates support the wide terreplein, and embrasures at intervals along the top of the wall provided openings through which cannon could be fired. The entrance to the fort, or sally port, is located in the south curtain wall and accessed by a reconstructed drawbridge.
- **Moat (1672-1696).** A coquina-lined ditch approximately forty-two feet wide surrounds the Castillo de San Marcos on the north, west, and south. The ditch contains a small amount of water. Originally constructed to encircle the fort on all sides, the moat was filled on the east side in 1842 to create the water battery.
- **Ravelin (1762).** A roughly triangular masonry structure located within the moat on the south side of the Castillo de San Marcos. The ravelin was built to afford additional protection to the corners of the

bastions and to protect the sally port. It is connected to the main structure by a reconstructed drawbridge.

- **Covered Way (1672-1762).** The flat, grassy area between the moat and the glacis on the north, west, and south sides of the Castillo de San Marcos is separated from the glacis by a masonry retaining wall five feet high.
- **Glacis (1672-1758).** The open, sloped area beyond the covered way that stretches from the fort into the landscape on the north, west, and south sides of the Castillo de San Marcos. The glacis was historically kept clear of trees and other obstructions in order to maintain a clear line of vision for the fort's defenders.
- **City Gate Pillars (1808).** Two four-foot-square coquina pillars frame an opening twelve feet wide. Each pillar has a convex, molded pyramidal cap with a round finial and a height of fourteen feet. On either side of the pillars, low stone walls thirty feet long by eleven feet wide extend to meet reconstructed portions of the Cubo Line. North of the gate, a coquina bridge spans a shallow moat. The City Gate was originally part of the Cubo Line and provided entrance to the city of St. Augustine from the north.



St. Augustine City Gate and Pillars

- **Cubo Line (1808, reconstructed 1963).** A reconstruction of the earth and log structure built by the Spanish in 1808, the Cubo Line extends from the covered way on the northwest side of the fort and proceeds 250 feet west toward the city Gate. The northern and southern faces of the defense work are concrete cast to imitate the palm logs of the original wall. Between the concrete walls is earthen infill with a depth of forty-five feet. A dry moat exists along the north face of the Cubo Line.



North Fort Green and Cubo Line

- **Seawall (1833-1842).** Coquina structure faced with granite to the high water mark, the seawall protects the fort from the waters of Matanzas Bay. The Army Corps of Engineers substantially reconstructed the original Spanish seawall between 1833 and 1844.
- **Water Battery (1842).** The earth and coquina structure comprises the east side of the Castillo de San Marcos, between the curtain wall and the seawall. The Army Corps of Engineers built the water battery on top of the east side of the moat between 1842 and 1844 to permit placement of guns facing the harbor.
- **Hot Shot Furnace (1842).** Stuccoed coquina furnace measuring nine feet long by eight feet wide has a chimney eleven feet high on the south end. Small arched openings with lintels provide access to the interior of the furnace on the south and north ends. The exterior of the structure is marked with iron cross-ties on all sides. The hot shot

furnace sits on top of the water battery on the east side of the fort.



**Hot Shot Furnace, Photo by Jack E. Boucher 1965**

- **Tricentennial Marker (1972).** Three foot high concrete podium-type marker commemorates the tricentennial of Castillo de San Marcos and has an inscribed metal plaque with plastic cover on face. Although the Tricentennial Marker is ineligible for the National Register because it is less than 50 years old, it is significant as a commemorative structure marking the tricentennial of the Castillo de San Marcos. As a result, it is managed as a cultural resource.

## Landscape

The NPS has been part of the preservation effort for the landscape since it assumed responsibility of the park in 1933. The park contains 20.48 acres. The park area is roughly triangular, with the Castillo de San Marcos at the east on Matanzas Bay. It is surrounded on the other sides by the fort green, kept open in accord with Spanish colonial military practice.

Although the park landscape is managed for preservation, it is not entirely free of non-historic objects and elements. Contemporary elements have been added to accommodate the visiting public and provide facilities for managing and maintaining the park. Contemporary elements in the landscape include:

- A paved parking area located on the south fort green. Built in 1965, it holds 139 cars and three buses.
- Approximately 3,000 feet of sidewalk are located within the park.
- A portion of Castillo Drive (U.S. Business Route 1 and Florida AIA) within the park boundary is owned by the NPS.
- Built in 1964, an administration building and covered maintenance area (3,853 square feet) are located at the extreme northwest end of the park. The structures were placed here to prevent their intrusion on the historic scene and are fairly well screened by trees and other plantings. A paved parking area is located in front of these buildings.
- A small fee booth is located immediately south of the ravelin on the fort green. The booth does not fit with the character of the historic setting and is not screened from view.
- Routed wood interpretive exhibits, signs, and waysides are strategically placed throughout the Castillo de San Marcos and park grounds.

## Archeological Resources

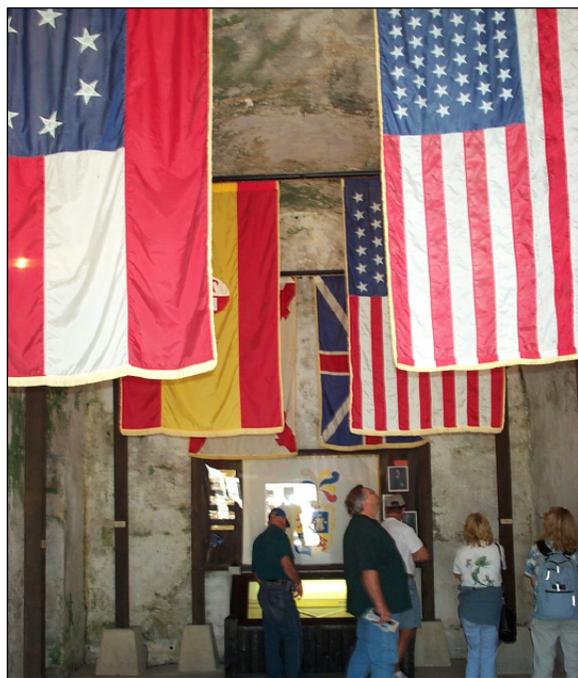
Although numerous archeological investigations have been performed at the park most have been small in scale. Consequently, this provides only piecemeal information that is gathered by different testing strategies. SEAC recommends a large-scale geophysical survey of the park grounds surrounding the fort. Based on previous excavations, future archeological discoveries could possibly uncover: evidence of Oglethorpe's siege, information concerning earthwork construction, further evidence of prehistoric occupation, and other sub-surface features present on the park grounds. (NPS Southeast Archeological Center, 2002.)

## **INTERPRETATION AND MUSEUM OPERATIONS**

### **Facilities Capable of Supporting Interpretation**

Exhibits located in the casemates of the fort, including some with audio and others with artifacts, explore the full range of fort history, paying particular attention to the Spanish colonial period. Some of the casemates offer recreated settings suggesting historic use. Subjects interpreted include (but are not limited to): the fort's construction, sea routes of Spain, the Western Indian incarceration, and Spanish and British quarters.

The park has both a guide brochure and a handbook, supplemented with several other park brochures that explore chapters in the fort's lengthy history. Informational and interpretive signs have been strategically located around the grounds of the fort and at the reconstructed Cubo Line.



**Flag Room Exhibit**

Visitors can climb to the upper level of the fort and look out over the city and bay. Cannon (both replica and authentic) sit in place along the walls and bastions, interpreted with occasional

signs. In season, the staff offers weapons firing talks. Several special events, linked to landmarks in the fort's history and supported by living history, punctuate the park's calendar of events.

### **Opportunities for Solitude or a Contemplative Experience**

Opportunities exist for visiting the park grounds during and after the fort's operating hours. Visitors can climb to the upper level of the fort and look out over the city and bay. Observing the fort and walking along the sea wall are ways to get away from crowded areas, especially outside of fort operating hours.



**Castillo de San Marcos Gun Deck**

### **Public Contact with NPS Personnel (Staff or Trained Volunteers)**

Castillo de San Marcos National Monument is second in visitor contacts among the NPS units that conduct historic weapons demonstrations with approximately 66,726 visitor contacts in 2003.

There is one way into and out of the fort; all visitors who decide to enter the fort have contact with staff at an information/fee collection booth. As they walk through the ravelin, cross the drawbridge, and enter the fort via the main gate, visitors are greeted again by staff or volunteers and offered advice on how to tour the fort. Rangers and volunteers offer interpretive talks and tours of the fort. School groups are guided through the fort by staff or certified tour guides, usually via special arrangements made in advance.

## **VISITOR USE AND EXPERIENCE**

### **Visitor Use and Trends**

Annual visitation to The park was 830,009 people in 1992, and visitation has seen a decline to 553,139 people in 1998 with an increase to 648,875 people in 2004.

A survey conducted to determine how to report official visitation statistics revealed that 12 percent of all visitors who stopped at the entrance booth did not enter the fort. Staff estimates that 15 percent of all visitors come for recreation and these visitors do not enter the fort or make inquiries at the information booth. (NPS, 2002.)

The peak visitation time for the park is between mid-February and August. During this period, the park receives 65 percent of its annual visitors with a significant increase in visitation by large family groups. Visitation peaks on weekends with Tuesday, Wednesday, and Thursday being slower days. Visitation is also heavy during the Christmas/New Year holiday period. Visits by seniors and Canadians increased in the winter months with the population being primarily adult peer groups. Activities in St. Augustine, Jacksonville, and Daytona Beach such as Bike Week and the Daytona 500 cause noticeable fluctuations in park visitation. School groups account for roughly 10 percent of the visitors to the fort. Ninety percent of those groups are made up of elementary and middle school students. School visitation is heaviest in April and May. (NPS, 2002.)

### **Visitor Understanding and Experience**

Although there are ample opportunities for visitors to participate in ranger led programs and self-guided tours, there is little opportunity for visitors to learn about the history of the Castillo de San Marcos in any great detail. There is no park run visitor information center where the full history can be interpreted. Some casemates inside the fort are accessible to visitors for interpretation purposes. In these areas, visitors can read wayside exhibits and view soldiers quarters as they would have appeared during the

colonial period. However, the visitor only gets a glimpse into the overall history of the fort. In the casemate adjacent to the sally port entrance, Eastern National operates a very small gift shop, which gets crowded during high visitation.

### **Accessibility for Visitors**

The entire first floor of the Castillo de San Marcos is wheelchair accessible, with only the top gundeck unavailable to those in wheelchairs. Accessible parking is available in the parking lot, as are spaces for buses for short term parking. Brochures on the history of the fort are available in several foreign languages. A large bronze model of the fort located in the sallyport (entranceway) enables visually challenged visitors to feel the outlines of the fortress. An audio/visual room on the first level of the fort provides opportunities for viewing live demonstrations taking place on the gun deck (second level of the fort) for those finding it difficult to access the gun deck.

## **PARK OPERATIONS AND ADMINISTRATION**

Factors in this category describe the existing conditions related to park operations and administration potentially impacted by implementation of the alternatives.

### **Personnel**

Castillo de San Marcos and Fort Matanzas National Monuments are organized into five divisions, all under the supervision of the park superintendent. Three of the divisions provide services for both sites. Those divisions are Law Enforcement/Fee Management, Administration, and Maintenance. The other two divisions provide services specific to Fort Matanzas and the park. Those two divisions are Fort Matanzas Visitor Service Operations and Castillo de San Marcos Visitor Service Operations.

The current staffing level of the National Monument, including full-time, part-time, term, vacant, and other position categories, consists of 13 positions in Law Enforcement/Fee Management, 9 positions in Visitor Service

Operations, 4 positions in Administration, 9 positions in Maintenance/Facility Operations, 1 Information Technology specialist, and the park superintendent.

The headquarters of the park is located at the north end of the National Monument site, directly across State Road A1A and to the east of the St. Augustine Visitor Information Center. Most functions that serve the park originate from this location. Some services are currently housed in the fort in modified casemates.



**Park Administrative HQ Building**

Volunteers provide an important supplement to the paid staff of the National Monument. Over the last five years they have donated thousands of hours of personal time performing administrative and maintenance services, conducting educational and interpretive programs, and assisting park staff with vital preservation and resource management duties.

### **Parking**

There are three parking areas totaling approximately 150 spaces. The largest of the lots is dedicated for park visitor parking, although visitors to the historic district also park there as it is a metered lot and entry is not monitored. This lot contains accessible spaces and three bus spaces. A smaller lot is located by the park headquarters building for employee parking, and the third lot, smaller still and also for employee parking and is located across State Road A1A from the fort.

Also, across State Road A1A from the park, there is limited parking within the historic district itself. There is more parking nearby, behind the city’s visitor information center.

### **Employee, Volunteer, and Visitor Health and Safety**

The overall park environment is safe and healthy for employees, volunteers, and visitors. However, two conditions cause safety concerns. Due to the fort’s age and the fact that it is a seventeenth century masonry structure built for military purposes, surfaces are uneven and potentially hazardous in some areas of the fort. This safety concern is difficult to remedy without altering the look and feel of the historic fort. The other concern is that many visitors walk to the park from the city’s historic district and therefore have to cross State Road A1A, which has a high volume of vehicle traffic. There are two crossing zones with traffic lights, but people do not always use these zones.

### **SOCIOECONOMIC ENVIRONMENT**

#### **Economic Contribution to Community**

The park contributes to the local economy by attracting visitors each year. It is also an integral component of the overall tourism experience that makes St. Johns County a successful tourist destination. In addition, the park contributes directly to the local economy by hiring employees and purchasing goods and services from local suppliers.

#### **Provides Incentives for Partnering with Local Governments, Community Groups, and Individual Citizens**

Park management is active in the local community. It maintains a close working relationship with historical associations, societies, and organizations that have legitimate goals in preserving and interpreting the historical values of the City of St. Augustine. The park continues to cooperate on issues of mutual interest and concern and works to strengthen its existing relationships with friends support groups, volunteers, and local

government officials. Park management also cooperates with local and state government offices and community and civic organizations to maintain the scenic qualities and historic setting of the park. This coordination serves to heighten visitor enjoyment and appreciation of the park and its prominence in the overall historic setting of St. Augustine.

### **Regional and Local Tourism**

There are many tourist destinations within a two-hour drive of St. Augustine. Among the top destinations are Orlando, with many theme parks and attractions; Daytona, with mile of wide beaches, the Daytona 500 race track, and Bike Week; and Cape Canaveral with the Kennedy Space Center, Canaveral National Seashore, and Merritt Island National Wildlife Refuge.

There are also many local destinations for tourists. In 2001, there were over 4.06 million overnight visitors in St. Johns County. The historic district of St. Augustine has many shops, restaurants, and lodgings and offers a pleasing and pedestrian friendly atmosphere for strolling the historic areas. Other local area attractions are Fort Matanzas, Flagler College, and historic churches. There are numerous museums, golf courses, marinas, opportunities for water sports, and 43 miles of beaches.



**St. George St. - Spanish Quarter**

### **Community Characteristics**

St. Augustine retains much of the character of the city's colonial beginnings. The historic city plan is largely intact. Among the major features still in place from the original plan are: the city plaza, the street plan, the Castillo de San Marcos, the City Gate, and several eighteenth century houses. St. Augustine is a small city with a relaxed atmosphere, and its historic core is accommodating to pedestrians. The city is a popular tourist destination and one of the country's best examples of historic preservation on a larger community-wide scale. The city's historic preservation program has been very effective in ensuring that new development is compatible with the character of its various historic districts, including those areas adjacent to the park.

In recent years, there has been a growing recognition of the city's historic and architectural significance. As a result, much has been accomplished in recreating San Agustin Antiquo in conformance with original Spanish and English designs. Since 1960, more than 40 structures have been restored or reconstructed and several gardens reestablished. This effort has centered on the two blocks of St. George Street leading south from the City Gate. The city, business firms, private individuals, and a number of organizations or agencies have contributed to this remarkable achievement.



# Chapter 4 - Environmental Consequences

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*The purpose of this chapter is to discuss impacts on the environment that may be brought about by actions in the various alternatives.*

## INTRODUCTION

The purpose of this chapter is to discuss impacts on the environment that may be brought about by actions in the various alternatives. By definition the alternatives in a GMP/EIS are conceptual in nature. Specific design features, building footprints, and precise locations for all potential ground disturbing activities in these alternatives would only be identified in future implementation plans. Therefore the impacts to follow are, of necessity, very general. Future environmental assessments, prepared in connection with any new facility design and construction, would provide more specific and quantitative analysis of the impacts on resources. All impacts for all alternatives were determined by multi-disciplinary planning team discussion and review.

The National Environmental Policy Act requires that environmental documents discuss the environmental impacts of a proposed federal action, feasible alternatives to that action, and any adverse environmental effects that cannot be avoided if the proposed action is implemented. This section of the GMP/EIS describes the potential environmental impacts of implementing each of the four alternatives on natural and cultural resources, the visitor experience, the socioeconomic environment, and park operations and facilities. These impacts provide a basis for comparing the advantages and disadvantages of the four alternatives.

In this chapter, impact topics are analyzed under the following headings:

- Natural resources
- Cultural resources
- Visitor use and experience
- Socioeconomic environment
- Operational efficiency

The first part of this chapter discusses the methodology the planning team used to identify impacts and includes definitions of terms. The action alternatives are then analyzed with reference to the No-Action Alternative (continue current management).

Analysis of the No-Action Alternative (Alternative A) identifies what resource conditions would be if no changes to facilities or park management occurred. This alternative reflects changes associated with the growth in regional population and increased visitor use that is anticipated during the next 15 – 20 years. The three action alternatives are then compared to the No-Action Alternative to identify the incremental changes that would occur as a result of changes in park facilities and management.

All impact topics are assessed for each alternative. The discussion of each alternative includes a description of the positive and negative effects of the alternative, a discussion of cumulative effects, if any, and a conclusion. The conclusion includes a discussion of whether, and to what extent, the alternative would impair park resources and values. For the analyses, the planning team considered mitigation measures.

At the end of each alternative there is a discussion of energy requirements and conservation potential; unavoidable adverse impacts; irreversible and irretrievable commitments of

resources; the relationship of short-term uses of the environment; and the maintenance and enhancement of long-term productivity.

## METHODOLOGY

The planning team based the impact analysis and the conclusions in this part largely on a review of existing literature and park studies, information provided by experts within the NPS and other agencies, park staff insights and professional judgment.

The following section describes the methodology used for assessing impacts to natural resources, cultural resources, visitor use and experience, the socioeconomic environment, and park operations.

## NATURAL RESOURCES

### Impact Assessment

The NPS is required to protect the natural abundance and diversity of all of the park's naturally occurring resources and communities. NEPA calls for an examination of the likely impacts of the alternatives on the human environment. The entire 20-acre site has been modified by human activity from one end to the other. There are no free-flowing streams, wetlands, forests, or other naturally occurring ecosystems here.

Proposed actions and management zoning under this plan were evaluated in terms of the context, intensity, and duration of the impacts, as defined below, and whether the impacts were considered beneficial or adverse to the natural environment. Generally, the methodology for natural resource impact assessments follows direction provided in the CEQ Regulations for Implementing NEPA, Parts 1502 and 1508.

**Water Quality.** The water quality analysis identified potential effects on water quality to Matanzas Bay (adjacent to the park boundary) associated with existing and proposed construction and rehabilitation of park infrastructure, principally parking areas and visitor/administrative buildings. The

relationship of pollution sources to existing water quality in Matanzas Bay has not been sufficiently studied and modeled to quantitatively assess impacts. The limited amount of baseline information on the physical, chemical, and biological characteristics of park surface water run-off makes it difficult to detect changes in water quality. Consequently, water quality impacts of the alternatives were assessed qualitatively.

**Floodplains.** The impact assessment for floodplains focuses on a qualitative analysis of locating projects in floodplains, the relative extent of the effects, and the effectiveness of mitigation measures employed. The entire National Monument property is located in the 100-year regulatory floodplain. Flooding can occur and is usually storm (i.e. hurricane) induced. Impacts were assessed from available floodplain maps of the area. The *Floodplain Management Guidelines* (NPS, 1993), Director's Order 77-2, and NPS Floodplain Procedures Manual 77-2 and the extent of alteration to the floodplain were used to define the intensity of impacts.

### Context

This is the setting within which an impact is analyzed, such as an affected locality or region, affected commercial or cultural interests, or society as a whole. In this EIS, the intensity of impacts to natural resources is evaluated within a local context (i.e., project area) or regional context, as appropriate. The contribution of particular actions or management prescriptions to cumulative impacts is evaluated in a regional context.

### Intensity

This evaluation used the approach for defining the intensity (or magnitude) of an impact presented in *Director's Order 12: Conservation Planning, Environmental Impact Analysis and Decision-making* (NPS, 2001). Each impact was identified as negligible, minor, moderate, or major. Because this is a programmatic document, intensities are expressed qualitatively.

The definition of intensity varies by impact topic, as follows:

**Water Quality:**

Negligible	An action would have no measurable or detectable effect on water quality or the timing and intensity of flows.
Minor	An action would have measurable effects on water quality or the timing or intensity of flows. Water quality effects could include increased or decreased loads of sediment, debris, chemical or toxic substances, or pathogenic organisms.
Moderate	An action would have clearly detectable effects on water quality or the timing or intensity of flows and potentially would affect organisms or natural ecological processes. Alternatively, an impact would be visible to visitors.
Major	An action would have substantial effects on water quality or the timing or intensity of flows and potentially would affect organisms or natural ecological processes. Alternatively, an impact would be easily visible to visitors.

**Floodplains:**

Negligible	Impacts would not occur within the regulatory floodplain as defined by the <i>Floodplain Management guidelines</i> (100-year or 500-year floodplain, depending on the type of action), or no measurable or perceptible change in the floodplain would occur.
Minor	Actions within the regulatory floodplain would potentially interfere with or improve floodplain areas.

Moderate	Actions within the regulatory floodplain would interfere with or enhance floodplain areas in a substantial way or in a large area.
Major	An action would permanently alter or improve floodplain areas.

**Duration**

The planning horizon for this GMP/EIS is approximately 15 – 20 years. Within this timeframe, impacts that would occur within five years or less were classified as short-term effects. Long-term effects would last for more than five years.

**Impact Type**

The alternatives were evaluated in terms of whether impacts would be beneficial or adverse to natural resources. In some cases, an alternative could result in both adverse and beneficial effects to natural resources. Beneficial impacts would help preserve, enhance, and restore the natural functioning of ecological systems in the park. Adverse impacts would deplete or degrade natural resources.

CEQ regulations and the NPS’s *Conservation Planning, Environmental Impact Analysis and Decision-making* (Director’s Order #12) call for a discussion of the appropriateness of mitigation, as well as an analysis of how effective the mitigation would be in reducing the intensity of a potential impact, e.g. reducing the intensity of an impact from major to moderate or minor. All of the alternatives in this plan assume that park managers would apply mitigation measures to minimize or avoid impacts. Increased visitor use would generate the need for additional monitoring and the mitigation of impacts. If appropriate mitigation measures were not applied, the potential for resource impacts would increase and the magnitude of those impacts would rise.

**Direct Versus Indirect Impacts**

Direct impacts would be caused by an action and would occur at the same time and place as the action. Indirect impacts would be caused by the action and would be reasonably foreseeable but would occur later in time, at another place, or to another resource.

**CULTURAL RESOURCES**

Impacts to archeological and cultural resources were identified and evaluated by (1) determining the area of potential impacts; (2) identifying cultural resources present in the area of potential impacts that were either listed in or eligible to be listed in the National Register of Historic Places; (3) identifying the type and extent of impacts; (4) applying the criteria of adverse effect to affected cultural resources either listed in or eligible to be listed in the National Register; and (5) considering ways to avoid, minimize or mitigate adverse impacts.

**Impact Assessment**

Impacts to cultural resources are described in terms of the context, intensity, duration, and type of impacts. This approach is consistent with the regulations of the CEQ that implement NEPA. These impact analyses are intended, however, to comply with the requirements of both NEPA and Section 106 of the NHPA. Under regulations issued by the Advisory Council on Historic Preservation, a determination of either *adverse effect* or *no adverse effect* must also be made for affected National Register eligible properties. Accordingly, a Section 106 summary is included in the discussion of each alternative. The summary is intended to meet the requirements of section 106 and is an assessment of the effect of the undertaking (implementation of the alternative) on cultural resources, based upon the criterion of *effect* and criteria of *adverse effect* found in the Advisory Council’s regulations.

An *adverse effect* occurs whenever an impact alters, directly or indirectly, any characteristic of a property that qualifies it for inclusion in the National Register, e.g. diminishing the integrity

of the property’s location, design, setting, materials, workmanship, feeling, or association. Adverse effects also include reasonably foreseeable effects caused by an alternative that would occur later in time, be farther removed in distance or be cumulative (36 CFR Part 800.5, *Assessment of Adverse Effects*). A determination of *no adverse effect* means there is an effect, but the effect would not diminish in any way the characteristics of the property that qualify it for inclusion in the National Register.

**Context**

The intensity of impacts to cultural resources is evaluated within a local context (i.e., project area) or regional context, as appropriate. The contribution of particular actions or management prescriptions to cumulative impacts is evaluated in a regional context.

**Intensity**

The definition of intensity is as follows:

Negligible	The impact is at the lowest levels of detection – barely perceptible and not measurable.
Minor	For archeological resources, the impact affects an archeological site(s) with modest data potential and no significant ties to a living community’s cultural identity. The impact does not affect the character defining features of a National Register of Historic Places eligible or listed structure, district, or cultural landscape.
Moderate	For archeological resources, the impact affects an archeological site(s) with high data potential and no significant ties to a living community’s cultural identity. For a National Register eligible or listed structure, district, or cultural

	landscape, the impact changes a character defining feature(s) of the resource but does not diminish the integrity of the resource to the extent that its National Register eligibility is jeopardized.
Major	For archeological resources, the impact affects an archeological site(s) with exceptional data potential or that has significant ties to a living community's cultural identity. For a National Register eligible or listed structure, district, or cultural landscape, the impact changes a character defining feature(s) of the resource, diminishing the integrity of the resource to the extent that it is no longer eligible to be listed in the National Register.

The criteria for listing properties on the National Register evaluate the quality of significance in American history, architecture, archeology, engineering, and culture that is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

- A. That are associated with events that have made a significant contribution to the broad patterns of our history; or
- B. That are associated with the lives of persons significant in our past; or
- C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. That have yielded or may be likely to yield, information important in prehistory or history.

**Duration**

Impacts that would occur within five years or less were classified as short-term effects. Long-term effects would last for more than five years.

**Impact Type**

The four alternatives were evaluated in terms of whether impacts would be beneficial or adverse to cultural resources. Beneficial impacts would help preserve and enhance character-defining qualities that make a property eligible for listing on the National Register. Adverse impacts would deplete or negatively alter the resources and any character-defining qualities.

Mitigation would tend to reduce the negative impacts of a particular alternative. Any resultant reduction in intensity of impact due to mitigation, however, is an estimate of the effectiveness of mitigation under NEPA only. Potential adverse effects to cultural resources would require further consultation and mitigation in accordance with Section 106 of the NHPA.

**Direct versus Indirect Impacts**

Direct impacts would be caused by an action and would occur at the same time and place as the action. Indirect impacts would be caused by the action and would be reasonably foreseeable but would occur later in time, at another place, or to another resource.

**VISITOR USE AND EXPERIENCE**

The visitor use and experience analysis evaluates the impact of the four alternatives on opportunities for visitors to experience the park and learn about and appreciate its many resources.

**Impact Assessment**

This analysis is conducted in terms of how the visitor experience might vary by applying the different management zones and management prescriptions in the alternatives. Analysis is qualitative rather than quantitative due to the

conceptual nature of the alternatives. Consequently, professional judgment was used to reach reasonable conclusions as to the intensity and duration of potential impacts, as well as whether the impacts would be beneficial or adverse. The impact assessment focuses on four aspects of visitor experience, as follows:

***Diversity of Visitor Activities.*** The analysis of effects on visitor activities is based on whether there was a complete loss, addition, expansion, or a change in access to or availability of a recreational opportunity, and how the management zones would affect group and individual opportunities.

***Interpretation and Orientation.*** The analysis of interpretation and orientation is based on whether there would be a change in the availability of education programs resulting from management zone application or other actions.

***Visitor Facilities and Services.*** This analysis discusses impacts on access to visitor facilities and services provided by the NPS and commercial services as a result of application of the management zones and other actions.

***Visitor Experience Values.*** This analysis is based on whether there would be a change in opportunities for solitude, tranquility, scenic views, and freedom to travel throughout the park.

**Context**

The intensity of impacts involving visitor use and experience is evaluated within a local context (i.e., project area) or regional context, as appropriate. The contribution of particular actions or management prescriptions to cumulative impacts is evaluated in a regional context.

**Intensity**

The definition of intensity is as follows:

Negligible	A negligible effect would be a change that would not be perceptible or would be barely perceptible by most visitors.
Minor	A slight change in a few visitors' experiences, which would be noticeable but which would result in little detracting or improvement in the quality of the experience.
Moderate	A moderate effect would be a change in a large number of visitors' experiences that would result in a noticeable decrease or improvement in the quality of the experience.
Major	A substantial improvement in many visitors' experience or a severe drop in the quality of many peoples' experience, such as the addition or elimination of a recreational opportunity or a permanent change in access to a popular area.

**Duration**

Impacts that would occur within five years or less were classified as short-term effects. Long-term effects would last for more than five years.

**Impact Type**

Impacts are evaluated in terms of whether they are beneficial or adverse to visitor experience. Beneficial impacts would include greater availability of recreational opportunities or educational programs, as well as other services and types of experiences. Adverse impacts would reduce access or availability to the four facets of visitor experience described above.

**Direct versus Indirect Impacts**

Direct impacts would be caused by an action and would occur at the same time and place as the action. Indirect impacts would be caused by the action and would be reasonably foreseeable but would occur later in time, at another place, or to another resource.

## **SOCIOECONOMIC ENVIRONMENT**

The impact analysis evaluated the effect that park operations and tourism and recreation would have on the local and regional economy under the four alternatives. The analysis of socioeconomic impacts was developed from a review of the local and regional conditions as they relate to the park. The potential for future development and changes in visitor use patterns was considered.

### **Impact Assessment**

Proposed actions and management zoning under this plan were evaluated in terms of the context, intensity, and duration of the socioeconomic impacts, and whether the impacts were considered to be beneficial or adverse.

### **Context**

The intensity of impacts is evaluated within a local context (i.e., project area) or regional context, as appropriate. The contribution of particular actions or management prescriptions to cumulative impacts is evaluated in a regional context.

### **Intensity**

The definition of intensity is as follows:

Negligible	The impact either would be undetectable or would have no discernable effect.
Minor	The impact would be slightly detectable but would not have an overall effect.
Moderate	The impact would be clearly detectable and could have an appreciable effect.
Major	The impact would be substantial and have a highly positive (beneficial) or severely negative (adverse) effect. Such impacts could permanently alter the socioeconomic environment.

### **Duration**

Impacts that would occur within five years or less were classified as short-term effects. Long-term effects would last for more than five years.

### **Impact Type**

Impacts were evaluated in terms of whether the impact would be beneficial or adverse to the socioeconomic environment. Socioeconomic effects were recognized as beneficial if, for example, they would increase the employment base or enhance the experience of park visitors (such as by providing improved services). Adverse socioeconomic impacts would negatively alter social or economic conditions in the county or region.

### **Direct versus Indirect Impacts**

Direct impacts would be caused by an action and would occur at the same time and place as the action. Indirect impacts would be caused by the action and would be reasonably foreseeable but would occur later in time, at another place, or to another resource.

## **OPERATIONAL EFFICIENCY**

For purposes of this analysis, operational efficiency refers to the adequacy of staffing levels and the quality and effectiveness of infrastructure used in the operation of the park in order to adequately protect and preserve vital resources and provide quality visitor experiences. Facilities analyzed include staff work areas, visitor orientation facilities, and administrative buildings used to support park operations. Park staff knowledge was used to evaluate the impacts of each alternative based on the current description of park facilities and operational efficiency presented in the Affected Environment section of this document.

### **Impact Assessment**

Proposed actions and management zones under this plan were evaluated in terms of the context, intensity, and duration of impacts on park

operational efficiency, and whether such impacts were considered to be beneficial or adverse.

**Context**

The intensity of impacts to park operations and facilities is evaluated within a local context (i.e., project area). The contribution of particular actions or management prescriptions to cumulative impacts is evaluated in a regional context.

**Intensity**

Intensity of impact on park operational efficiency is defined as follows:

Negligible	The change may affect park operations, but would be so small as to have no measurable or perceptible consequences.
Minor	The change would be slightly detectable but would not have an overall effect.
Moderate	The change would be clearly detectable and could have an appreciable effect.
Major	The change would have substantial influence on site operations and facilities and include impacts that would reduce or improve the park’s ability to provide adequate services and facilities to visitors and staff.

**Duration**

Impacts that would occur within five years or less were classified as short-term effects. Long-term effects would last for more than five years.

**Impact Type**

Impacts are evaluated in terms of whether the impacts on site operations and facilities would be beneficial or adverse. Beneficial impacts would improve site operations and/or facilities. Adverse impacts would negatively affect site operations and/or facilities and could hinder the

park’s ability to provide adequate facilities and services to visitors and staff.

**Direct versus Indirect Impacts**

Direct impacts would be caused by an action and would occur at the same time and place as the action. Indirect impacts would be caused by the action and would be reasonably foreseeable but would occur later in time, at another place, or to another resource.

**CUMULATIVE IMPACTS**

Regulations implementing NEPA issued by the CEQ require the assessment of cumulative impacts in the decision-making process for federal actions. Cumulative impacts are defined as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions" (40 CFR 1508.7). Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

Cumulative impacts were determined by combining the effects of a given alternative with other past, present, and reasonably foreseeable future actions. The impact analysis and conclusions are based on information available in the literature, data from NPS studies and records, and information provided by experts within the NPS and other agencies. Unless otherwise stated, all impacts are assumed to be direct and long-term. All of the impact analyses assume that mitigating measures will be applied at the time the alternative is implemented in order to minimize or avoid impacts. Mitigating measures are described in the “Alternatives, including the Preferred Alternative” chapter of this document.

**IMPAIRMENT OF NATIONAL MONUMENT RESOURCES OR VALUES**

In addition to determining the environmental consequences of the Preferred and other alternatives, the NPS *Management Policies* and

Director's Order 12 require analysis of potential effects to determine if actions would impair park resources or values.

The fundamental purpose of the National Park System, as established by the Organic Act and reaffirmed by the General Authorities Act, is to conserve the resources and values of each unit of the system. NPS managers must always seek ways to avoid or minimize to the greatest degree practicable adverse impacts on unit resources and values. However, the laws do give NPS management discretion to allow impacts to unit resources and values when necessary and appropriate to fulfill the purposes of a unit, as long as the impact does not constitute impairment of the affected resources and values. Moreover, an impact is less likely to constitute impairment if it is an unavoidable result, which cannot be further mitigated, of an action necessary to preserve or restore the integrity of unit resources or values.

Although Congress has given NPS management discretion to allow certain impacts within individual units, that discretion is limited by statutory requirement that the NPS must leave resources and values unimpaired, unless a particular law directly and specifically provides otherwise. The prohibited impairment is an impact that, in the professional judgment of the responsible NPS manager, would harm the integrity of unit resources or values, including opportunities that otherwise would be present for the enjoyment of those resources or values. Impairment may result from NPS activities in managing the unit, visitor activities, or activities undertaken by concessionaires, contractors, and others operating in the unit.

An impact to any unit resource or value may constitute impairment. However, an impact would more likely constitute impairment to the extent it affects a resource or value whose conservation is central to the unit's mission or critical to the unit's integrity.

To determine whether actions and management prescriptions involving park resources would result in impairment, each alternative was evaluated to determine if it had a major adverse

effect on a resource or value whose conservation is:

- necessary to fulfill specific purposes identified in the establishing legislation of the park;
- key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- identified as a goal in this GMP/EIS or other relevant NPS planning documents.

## **TOPICS DISMISSED FROM FURTHER ANALYSIS**

The following topics were dismissed from further analysis in this document, for the reasons indicated:

### **NATURAL RESOURCES**

#### **Air Quality**

Because degradation of local air quality due to construction activities and emissions would be short term, lasting only as long as construction, and negligible; and any long-term, adverse impacts that implementation of any of the alternatives would have on the air quality of either the park or the region, are negligible; air quality was dismissed as an impact topic.

#### **Geology, Physiography, and Soils**

The entire 20-acre site has been modified by human activity from one end to the other. There are no free-flowing streams, wetlands, forests, or other naturally occurring ecosystems here. Therefore, this topic was dismissed from further consideration in this document.

#### **Wetlands**

The entire 20-acre site has been modified by human activity from one end to the other. There are no free-flowing streams, wetlands, forests, or other naturally occurring ecosystems here. Therefore, this topic was dismissed from further consideration in this document.

## **Vegetation**

The entire 20-acre site has been modified by human activity from one end to the other. There are no free-flowing streams, wetlands, forests, or other naturally occurring ecosystems here. The grounds of the park are principally open grassy areas with scattered palm and oak trees mainly around the park perimeter. They are completely manipulated, with regular mowing, trimming, fertilizing, and removal of invasive species and storm damaged vegetation. Therefore, this topic was dismissed from further consideration in this document.

## **Terrestrial and Aquatic Animal Life**

The entire 20-acre site has been modified by human activity from one end to the other. There are no free-flowing streams, wetlands, forests, or other naturally occurring ecosystems here. Therefore, this topic was dismissed from further consideration in this document.

## **Endangered Species and other Listed Species of Concern (Special Status Species)**

The entire 20-acre site has been modified by human activity from one end to the other. There are no free-flowing streams, wetlands, forests, special status species, or other naturally occurring ecosystems here. Therefore, this topic was dismissed from further consideration in this document.

## **SOCIALLY OR ECONOMICALLY DISADVANTAGED POPULATIONS**

Executive Order 12898 (“Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations”) requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing disproportionately high and adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities. None of the alternatives considered in this document would result in any identifiable adverse health effects, and none of the impacts to the natural and physical

environment would significantly and adversely affect any minority or low-income population or community. Therefore, environmental justice was dismissed as an impact topic.

## **PRIME AND UNIQUE AGRICULTURAL LANDS**

CEQ regulations require that federal agencies assess the effects of their actions on farmland soils classified by the U.S. Natural Resource Conservation Service (NRCS) as prime or unique. According to NRCS, none of the soils in the project area are classified as prime or unique. Therefore, this topic was dismissed from further consideration in this document.

## **INDIAN SACRED SITES**

Executive Order 130007 (“Indian Sacred Sites”) requires all federal agencies to determine whether their proposed actions would restrict access to or ceremonial use of Indian sacred sites by Indian religious practitioners or adversely affect the integrity of such sacred sites. None of the alternatives considered in this document would restrict access to any sites sacred to American Indians or limit ceremonial use of any such sites. Therefore, this topic was dismissed from further consideration in this document.

## **ALTERNATIVE A (NO-ACTION ALTERNATIVE)**

### **NATURAL RESOURCES**

*Applicable Laws and Policies.* The laws, regulations, and policies that govern NPS actions with respect to this impact topic can be found in Appendix A.

### **Water Quality**

*Analysis.* The water quality analysis identified possible existing effects on water quality to Matanzas Bay (adjacent to the park boundary) associated with one existing parking area. Current conditions with the parking lot constructed of impervious materials and vehicles

in the parking lot causes negligible adverse impacts on the water quality of Matanzas Bay. These impacts would continue under this alternative.

**Cumulative Impacts.** Actions outside the park, such as runoff from existing and new developments in the area and vehicle-related pollutants, would result in minor adverse effects on water quality due to increased surface runoff.

When the effects of actions by others are combined with impacts associated with Alternative A, the cumulative impacts would be minor, long-term, and adverse, primarily because of the effects of surface runoff from areas outside of the park.

### **Floodplains**

**Analysis.** The entire park is within the 100-year floodplain. Under the No-Action Alternative, impacts would be associated with the continued need to maintain existing grounds, parking areas, and structures in the floodplain. These facilities are exempt from NPS policies on floodplain management (Director's Order 77-2; NPS Floodplain Procedures Manual 77-2). No new developments would occur in regulatory floodplains under this alternative. Therefore, only negligible adverse impacts would occur under the No-Action Alternative.

**Cumulative Impacts.** There are numerous developments on lands outside the park boundary that could affect the floodplain. These developments along with existing development have the potential to have moderate adverse impacts on the floodplain. The No-Action Alternative would not contribute to these cumulative impacts.

### **Conclusion**

Existing conditions are causing negligible adverse impacts to water quality to Matanzas Bay. The No-Action Alternative would perpetuate these conditions. Cumulative impacts would include minor, long-term, and adverse impacts on water quality.

This alternative would result in negligible long-term adverse impacts on floodplain values for the park and surrounding areas. Cumulative impacts would include moderate adverse long-term effects on floodplains because of actions outside the park. This alternative's contribution to these impacts would be negligible.

This alternative would not result in major, adverse impacts to any natural resource, the conservation of which is (1) necessary to fulfill specific purposes identified in the establishing legislation of the park; (2) key to the natural or cultural integrity of the park or to opportunities for its use and enjoyment; or (3) identified as a goal in this plan or other relevant NPS planning document. Therefore, the environmental impacts associated with this alternative would not result in impairment to the natural resources of the park.

### **CULTURAL RESOURCES**

**Applicable Laws and Policies.** The laws, regulations, and policies that govern NPS actions with respect to this impact topic can be found in Appendix A.

#### **Archeological Resources**

**Analysis.** Under the No-Action Alternative, archeological resources would continue to experience beneficial impacts due to the established resource protection measures for the identification and treatment of archeological resources that the NPS follows. At present, the park has had numerous archeological surveys completed to identify and define the archeological resources that can be found within the boundary of the park. (NPS Southeast Archeological Center, 2002.)

NPS staff would continue established resource protection measures for the identification and treatment of archeological resources on a case-by-case basis. The NPS would consult the SHPO regarding appropriate response actions and mitigation measures. Where potential impacts are identified, possible mitigation could include, but not be limited to, avoidance and protection, data recovery (evaluated as an

adverse impact that would be undertaken as a last resort), and educational outreach programs such as informative onsite tours and presentations.

**Cumulative Impacts.** Cumulative impacts on archeological resources are considered on a region-wide basis because historic activity in the park region was not limited to the lands within the park boundary.

Actions outside the park include land disturbing activities such as development projects. Because of the urban environment, it is likely that numerous sites would continue to be impacted. If any of these actions require permits from state or federal agencies, recordation may be required. However, it is likely that archeological resources outside the park boundary would be destroyed without knowledge, causing an adverse effect. The City of St. Augustine's Archaeological Preservation Ordinance also provides another safeguard against impacts to archeological sites in the city. The ordinance states that any proposed major or minor disturbance which requires a building permit, a city utility permit, or a city right-of-way permit shall be subject to a review of the proposed disturbance, before such disturbance takes place. The park will monitor land use proposals and changes to adjacent lands and work closely with the city's preservation commission to mitigate any potential negative impacts to park archeological resources and values.

When actions external to the park are considered in conjunction with this alternative, there would be a moderate, long-term, and adverse cumulative effect on archeological resources outside the park boundary, primarily because of development outside of the park that would impact sites without recordation.

## **Landscape**

**Analysis.** Under the No-Action Alternative, the visitor parking lot would remain. The parking lot is located south of the fort and is a large visual intrusion into the glacial and fort green. Retaining the parking lot would result in a

continued major adverse impact on historic views and the landscape.

The continued existence of the ticket booth, located in front of the entrance to the fort, would result in a moderate adverse impact.

**Cumulative Impacts.** Cumulative impacts on the landscape are considered on a region-wide basis because historic activity in the park region was not limited to the lands within the park boundary.

Actions outside the park include a variety of land disturbing activities such as development projects. Because of the urban environment, it is likely that the landscape will continue to be impacted, causing an adverse effect.

When other actions external to the park are considered in conjunction with this alternative, the cumulative impacts on the landscape would be major, long-term, and adverse, primarily because of development outside of the park that would impact the landscape. The No-Action Alternative does not contribute to this adverse effect.

## **Historic Structures**

**Analysis.** Under the No-Action Alternative, historic structures would continue to be protected as required by law. However, no further direction for future use and interpretation of these structures would be developed and their educational potential would go unrealized. In addition, there could be deterioration and loss of the historic fabric as a result of natural deterioration and ongoing human interaction. An example would be casemates that are hidden by structures inserted into them. It is difficult to assess the fort's structure when it cannot be accessed.

This alternative would not include any major new development or major changes that would affect historic structures. The park staff would continue to implement established resource protection measures for the treatment of historic resources on a case by case basis. Where appropriate, NPS would consult the SHPO regarding response actions and mitigation

measures. Treatment measures for historic resources would continue to conform to the *Secretary of the Interior's Standards and Guidelines for the Treatment of Historic Properties*, 36 CFR section 68. However, as structures aged and more visitors to the park encountered historic structures, the potential would exist for increasing impacts.

**Cumulative Impacts.** Cumulative impacts on historic structures are considered on a region-wide basis because they extend beyond the park boundary.

Actions outside the park that could affect historic resources are the same as those identified for archeological resources. Specific impacts on historic resources outside the boundary are unknown. Although region-wide impacts have had a cumulative adverse effect on historic resources, they have not directly affected the structures eligible for listing on the National Register.

When other actions external to the park are considered in conjunction with this alternative, the cumulative impacts on historic structures would be moderate, long-term, and adverse, primarily because of the effects of non-compatible and non-historic uses of the casemates in the fort. The contribution of the No-Action Alternative to this adverse effect would be moderate.

## Conclusion

Under the No-Action Alternative, archeological resources would continue to experience beneficial impacts due to the protection the NPS offers. Established resource protection measures for the identification and treatment of archeological resources would continue on a case-by-case basis.

The existing parking lot and ticket booth facilities would remain in the No-Action Alternative. The impacts of these facilities on the landscape would continue to be moderate to major, long-term and adverse.

Adverse effects to historic resources would continue under the No-Action Alternative. Regionwide development activities would continue to have a cumulative adverse effect on historic resources. The No-Action Alternative would continue to have a moderate, adverse impact on the historic fabric of the fort.

This alternative would not result in major, adverse effects to cultural resources, the conservation of which is (1) necessary to fulfill specific purposes identified in the establishing legislation of the park; (2) key to the natural or cultural integrity of the park or to opportunities for its use and enjoyment; or (3) identified as a goal in this plan or other relevant NPS planning document. Therefore, the environmental impacts associated with this alternative would not result in impairment to the cultural resources of the park.

## VISITOR USE AND EXPERIENCE

**Applicable Laws and Policies.** The laws, regulations, and policies that govern NPS actions with respect to this impact topic can be found in Appendix A.

**Analysis.** Under the No-Action Alternative, all resources currently available to the public for visitor use would remain available in the future. Currently, the only limitations to visitor access are the fort's operating hours and four of the casemates that are used exclusively by park staff. These limitations on access would remain under the No-Action Alternative. The park's grounds are open around the clock.

Public education programs and exhibits would continue to be provided on a variety of resource-related subjects. General, informal outreach to the communities by park personnel would continue to assist in maintaining a dialogue concerning issues of mutual interest.

Continued use of some of the fort's casemates for non-compatible and non-historic uses and retention of the visitor parking lot would continue to result in a moderate, adverse, and long-term impact on visitor experience. The parking lot detracts from the visitor experience

because of its visual intrusion into the landscape and safety hazards, although it does have a minor beneficial impact on visitor convenience.

Not addressing the need for a visitor center would result in a moderate to major, adverse, and long-term impact on visitor experience.

**Cumulative Impacts.** The extremely close proximity of the Spanish Quarter to the park has a great impact on visitor experience. Visitors usually explore the Quarter and visit the fort. The impacts of this on visitor experience are major and beneficial.

When the cumulative impacts of actions by others are combined with impacts associated with this alternative, there would be moderate long-term cumulative adverse impacts on visitor use and experience. The contribution of the No-Action Alternative to this adverse effect would be moderate.

## Conclusion

The general character of the park would not change under the No-Action Alternative. The No-Action Alternative would continue to provide visitors with educational and self-exploration opportunities. The existing levels of visitor facilities would be continued with no plans for expanded visitor facilities. This alternative would have moderate to major, long-term, and adverse effects on visitor use and experience.

## SOCIOECONOMIC ENVIRONMENT

### Operation of the Park

**Analysis.** Under the No-Action Alternative, the park would continue to be managed according to current policies. The No-Action Alternative would not result in the development of major new facilities at the park or an increase in employment. Therefore, there would be no direct incremental increase in impact on the local and regional economy from operation of the park, over and above what currently exists. However, nearby communities would continue to experience direct benefits of expenditures by

NPS for supplies and by individual NPS employee purchases. Impacts would thus be minor, long-term, and beneficial.

**Cumulative Impacts.** The areas surrounding the park would be affected by continued regional growth. Development activities outside the boundary could result in more concentrated residential and commercial development near the park, and also stimulate growth in tourism. The effects of growth in the regional context could have both beneficial impacts, such as increased income and employment, and adverse impacts, such as increased cost of housing and greater levels of pollution and congestion.

The No-Action Alternative would not result in significant increases in employment or expenditures in a regional context. Existing economic impacts arising from operation of the park would continue, with slight increases possible. In a regional context, the impact of this alternative would be minor, long-term, and beneficial.

### Tourism and Recreation

**Analysis.** Under the No-Action Alternative, people would continue to visit the local area in increasing numbers, and indirect benefits would continue to occur from visitors' spending for goods and services. Locally there are also many tourist and recreational attractions. The historic district of St. Augustine has many shops, restaurants, and lodging. Other local area attractions are Fort Matanzas, Flagler College, and historic churches. There are numerous museums, golf courses, marinas, opportunities for water sports, and 43 miles of beaches.

The local tourism industry would depend in part on, and benefit from, visitors attracted to the park, and the park would continue to be an important attraction in the area. However, the overall impact of the park on gateway communities or the local area would not change importantly under this alternative, with modest increases in visitation likely resulting in modest increases in visitor expenditures in the local area. Therefore, the No-Action Alternative

would likely continue to have a moderate beneficial impact on the local tourism economy.

**Cumulative Impacts.** The regional tourism economy is very strong with many tourist destinations within a two-hour drive of St. Augustine. Among the top destinations are Orlando, Daytona, with mile of wide beaches, the Daytona 500 race track, and Bike Week; and Cape Canaveral with the Kennedy Space Center, Canaveral National Seashore, and Merritt Island National Wildlife Refuge. The No-Action Alternative would have a minor effect on tourism to the region as a whole.

### **Conclusion**

Under this alternative, socioeconomic impacts to the local area resulting from the operation of the park would reflect existing conditions and hence would be minor, long-term, and beneficial.

The No-Action Alternative would have a moderate, beneficial, and long-term effect on the park's contribution to local tourism and recreation. In addition, it would continue to provide important economic benefits to the regional economy in the form of tourism expenditures. Therefore, it would have a minor, beneficial, and long-term impact on the regional tourism economy.

### **OPERATIONAL EFFICIENCY**

**Analysis.** Under the No-Action Alternative, the park would continue to be managed according to current policies. Park headquarters and maintenance are located in the same area within the park boundary. Since the entire site is only 22 acres, the proximity of the headquarters and maintenance to the resources and visitor areas work well and have a major beneficial impact on operational efficiency.

There are two ranger offices, a bookstore, and interpretive costume storage within the fort. These also work well in their current locations and have a moderate beneficial impact on operational efficiency.

Continued existence of the parking lot is costly in terms of equipment, materials, and labor and results in a minor, adverse, and long-term impact on maintenance activities at the site.

There is no visitor center or contact center for the park. Therefore, no consolidated space is available for visitor orientation and education. A "temporary", ticket booth, that has become permanent, is located outside the entrance of the fort. Interpretive displays in the casemates of the fort and ranger programs are held often. Not having a formal visitor center has a minor adverse impact on operational efficiency resulting from the lack of consolidated visitor orientation space.

Current resource needs and increasing levels of visitation have resulted in an unfulfilled staffing need causing minor to moderate adverse impacts.

Overall, the No-Action Alternative results in minor adverse impacts to operational efficiency.

**Cumulative Impacts.** Growth and development in the vicinity of the park and in the region as a whole would have a minor to moderate, long-term and adverse impact on operational efficiency. The most important impact would be increased visitation to the park, which would further stretch the ability of NPS staff to protect, preserve, and interpret park resources, and place greater demands on the limited existing visitor and staff facilities.

### **Conclusion**

The No-Action Alternative would result in no substantial change in operations of the park. Impacts to operational efficiency resulting from the retention the parking lot and work space in the fort and the absence of visitor contact facilities would be minor. At current staffing levels and with increasing visitation, operational efficiency in providing for visitors and park resources would be increasingly diminished. Thus, the No-Action Alternative would result in impacts that are minor, long-term, and adverse.

## **CONSISTENCY WITH THE PLANS OF OTHERS**

Under the No-Action Alternative, park management would continue as before and there would be no new impacts on the plans of surrounding communities or other Area neighbors. Park management is active in the local community. It maintains a close working relationship with those historical associations, societies, and organizations that have legitimate goals in preserving and interpreting the historical values of the City of St. Augustine. The park continues to cooperate on issues of mutual interest and concern and works to strengthen its existing relationships with friends support groups, volunteers, and local government officials. Park management also cooperates with local and state government offices and community and civic organizations to maintain the scenic qualities and historic setting of the park. This coordination serves to heighten visitor enjoyment and appreciation of the park and its prominence in the overall historic setting of St. Augustine.

In recent years, there has been a growing recognition of the city's historic and architectural significance. As a result, much has been accomplished in recreating the city in conformance with original Spanish and English designs. Since 1960, more than 40 structures have been restored or reconstructed and several gardens reestablished. This effort has centered on the two blocks of St. George Street leading south from the City Gate. The city, business firms, private individuals, and a number of organizations or agencies have contributed to this remarkable achievement. The No-Action Alternative for the park is consistent with these state and local goals.

## **IMPACTS ON ENERGY REQUIREMENTS AND CONSERVATION POTENTIAL**

Although St. Augustine and the park are very walkable and shuttle services are currently available for a fee, private vehicles would continue to be the primary means of transportation to the park.

## **UNAVOIDABLE ADVERSE EFFECTS**

Unavoidable adverse impacts are defined as impacts that cannot be fully mitigated or avoided. This alternative would result in minor to major adverse impacts on cultural resources in some areas of the park due to human use. To fully mitigate these impacts, the resources would essentially need to be off limits to visitors. Impacts would be expected to be minor in terms of overall loss.

## **IRRETRIEVABLE OR IRREVERSIBLE COMMITMENTS OF RESOURCES**

All facility development and use is considered essentially a permanent commitment of resources, although removal of facilities and site restoration has occurred and could still occur.

## **RELATIONSHIP BETWEEN SHORT TERM USES OF THE ENVIRONMENT AND MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY**

For the purposes of this discussion, short term is defined as the time span for which this GMP/EIS is expected to be effective (generally assumed to be 15-20 years) and long term is defined as a period beyond that time.

Under the No-Action Alternative, no additional levels of action would be taken to manage visitor use. With increasing visitor use expected, there would be minor impacts to cultural resources in the park in some high use areas. Adverse impacts on the park's cultural resources, if not mitigated, could increase maintenance in the future hindering long-term productivity.

## **ALTERNATIVE B**

### **NATURAL RESOURCES**

*Applicable Laws and Policies.* The laws, regulations, and policies that govern NPS actions with respect to this impact topic can be found in Appendix A.

## Water Quality

**Analysis.** The analysis identified possible effects on water quality to Matanzas Bay (adjacent to the park boundary) associated with one parking area, the construction of a visitor center immediately south of the park headquarters, and the widening of sidewalks with areas for wayside exhibits.

Removal of approximately two thirds of the existing parking lot and reestablishment of the glaciis would reduce runoff into Matanzas Bay and would have a negligible long-term beneficial impact on water quality. The construction of a visitor center could produce negligible short-term adverse effects on water quality due to the construction process and negligible long-term adverse effects due to increasing the amount of impermeable surfaces. Appropriate mitigation measures would be taken to reduce any effects. The widening of sidewalks with areas for wayside exhibits along State Road AIA would slightly increase the area of impermeable surface, therefore possibly increasing runoff resulting in negligible long-term adverse effects on water quality.

**Cumulative Impacts.** Actions outside the park, such as runoff from existing and new developments in the area and vehicle-related pollutants, would result in minor adverse effects on water quality due to increased surface runoff.

When the effects of actions by others are combined with impacts associated with Alternative B, the cumulative impacts would be minor, long-term, and adverse, primarily because of the effects of surface runoff from areas outside of the park.

## Floodplains

**Analysis.** The entire park is within the 100-year floodplain. Under Alternative B, impacts would be associated with the continued need to maintain existing grounds, parking areas, and structures in the floodplain. These facilities are exempt from NPS policies on floodplain management (Director's Order 77-2; NPS Floodplain Procedures Manual 77-2). Changes

to development include the construction of a visitor center immediately south of the headquarters and a reduction in the paved parking area. These changes would occur in regulatory floodplains. Although the reduction of paved parking would have a negligible beneficial impact on floodplains, the visitor center would have negligible adverse impacts. There is no alternative to placing structures in the floodplain.

**Cumulative Impacts.** There are numerous developments on lands outside the park boundary that could affect the floodplain. These developments along with existing development have the potential to have moderate adverse impacts on the floodplain.

When the effects of actions by others are combined with the impacts associated with Alternative B, the cumulative impacts would be moderate, potentially long-term, and adverse.

## Conclusion

This alternative would result in negligible long-term adverse impacts to water quality to Matanzas Bay due to the offsetting impacts of reducing and adding areas of impermeable surfaces. Cumulative impacts would include minor, long-term, and adverse impacts on water quality.

This alternative would result in negligible long-term adverse impacts on floodplain values for the park and surrounding areas. Cumulative impacts would include moderate adverse long-term effects on floodplains because of actions outside the park. This alternative's contribution to these impacts would be negligible.

This alternative would not result in major, adverse impacts to any natural resource, the conservation of which is (1) necessary to fulfill specific purposes identified in the establishing legislation of the park; (2) key to the natural or cultural integrity of the park or to opportunities for its use and enjoyment; or (3) identified as a goal in this plan or other relevant NPS planning document. Therefore, the environmental impacts associated with this alternative would

not result in impairment to the natural resources of the park.

## **CULTURAL RESOURCES**

***Applicable Laws and Policies.*** The laws, regulations, and policies that govern NPS actions with respect to this impact topic can be found in Appendix A.

### **Archeological Resources**

***Analysis.*** The analysis identified possible effects to archeological resources under Alternative B associated with the construction of a visitor center immediately south of the park headquarters, the removal of two thirds of the existing paved parking lot, and the widening of the sidewalk with areas for wayside exhibits along State Road AIA.

Construction associated with a visitor center immediately south of the park headquarters could result in the disturbance of archeological resources. Removal of the existing parking lot surface and widening of the sidewalk could also disturb archeological resources.

Prior to any construction all applicable NEPA and Section 106 procedures would be followed to minimize impacts. NPS staff would continue established resource protection measures for the identification and treatment of archeological resources on a case-by-case basis. The NPS would consult the SHPO regarding appropriate response actions and mitigation measures. Where potential impacts are identified, possible mitigation could include, but not be limited to, avoidance and protection, data recovery (evaluated as an adverse impact that would be undertaken as a last resort), and educational outreach programs such as informative onsite tours and presentations. Despite potential impacts associated with construction, Alternative B would have beneficial impacts to archeological resources due to the established resource protection measures for the identification and treatment of such resources that the NPS follows.

***Cumulative Impacts.*** Cumulative impacts on archeological resources are considered on a region-wide basis because historic activity in the park region was not limited to the lands within the park boundary.

Actions outside the park include land disturbing activities such as development projects. Because of the urban environment, it is likely that numerous sites would continue to be impacted. If any of these actions require permits from state or federal agencies, recordation may be required. However, it is likely that archeological resources outside the park boundary would be destroyed without knowledge, causing an adverse effect. The City of St. Augustine's Archeological Preservation Ordinance also provides another safeguard against impacts to archeological sites in the city. The ordinance states that any proposed major or minor disturbance which requires a building permit, a city utility permit, or a city right-of-way permit shall be subject to a review of the proposed disturbance, before such disturbance takes place. The park will monitor land use proposals and changes to adjacent lands and work closely with the city's preservation commission to mitigate any potential negative impacts to park archeological resources and values.

When actions external to the park are considered in conjunction with this alternative, there would be a moderate, long-term, and adverse cumulative effect on archeological resources outside the park boundary, primarily because of development outside of the park that would impact sites without recordation.

### **Landscape**

***Analysis.*** Alternative B would reduce the size of the visitor parking lot by two thirds and reestablish the glaxis and fort green in this area. The current parking lot is located south of the fort and is a large visual intrusion into the glaxis and fort green. Reducing the size of the parking lot would have a major beneficial impact on historic views and the landscape.

This alternative would remove the ticket booth and relocate the ticket sales function to a more appropriate location. Removal of the ticket booth would result in a moderate beneficial impact.

This alternative would construct a visitor center immediately south of the park headquarters. Construction of a visitor center would have minor adverse impacts to the landscape. The visitor center would be screened and designed in such a way as to be as non-visually intrusive area as possible.

Alternative B would also widen the sidewalks with areas for wayside exhibits along State Road AIA. This expansion would only have a minor adverse impact on the historic views and the landscape because of the low profile of the addition.

**Cumulative Impacts.** Cumulative impacts on the landscape are considered on a region-wide basis because historic activity in the park region was not limited to the lands within the park boundary.

Actions outside the park include a variety of land disturbing activities such as development projects. Because of the urban environment, it is likely that the landscape would continue to be impacted, causing an adverse effect.

When other actions external to the park are considered in conjunction with this alternative, the cumulative impacts on the landscape would be moderate, long-term, and adverse, primarily because of development outside of the park that would impact the landscape. Alternative B would make a major beneficial contribution to this adverse effect.

### **Historic Structures**

**Analysis.** Under Alternative B, historic structures would continue to be protected as required by law. Alternative B will remove three of seven non-compatible, non-historic uses of casemates from the fort. These non-compatible, non-historic uses of the fort are structures that have been inserted into casemates

disallowing appropriate inspections of the fort's structure. Removing these uses would allow for inspection of the fort's structure and preservation of this resource in a more aggressive way.

Where appropriate, NPS would consult the SHPO regarding response actions and mitigation measures. Treatment measures for historic resources would continue to conform to the *Secretary of the Interior's Standards and Guidelines for the Treatment of Historic Properties*, 36 CFR section 68.

**Cumulative Impacts.** Cumulative impacts on historic structures are considered on a region-wide basis because they extend beyond the park boundary.

Actions outside the park that could affect historic resources are the same as those identified for archeological resources. Specific impacts on historic resources outside the boundary are unknown. Although region-wide impacts have had a cumulative adverse effect on historic resources, they have not directly affected the structures eligible for listing on the National Register.

When other actions external to the park are considered in conjunction with this alternative, the cumulative impacts on historic structures would be minor, long-term, and adverse, primarily because of the effects external actions. The contribution of Alternative B to this adverse effect would be minor and beneficial.

### **Conclusion**

Alternative B would have beneficial impacts to archeological resources. Established resource protection measures for the identification and treatment of archeological resources would continue on a case-by-case basis.

The reduction of the size of the parking lot, the removal of the ticket booth, and the construction of a visitor center are important elements of Alternative B. The impacts of this alternative on the historic views and landscape of the park

would be moderate to major, long-term and beneficial.

Regionwide development activities would continue to have a cumulative adverse effect on historic resources. Alternative B would have a minor beneficial impact on the historic resources of the park.

This alternative would not result in major, adverse effects to cultural resources, the conservation of which is (1) necessary to fulfill specific purposes identified in the establishing legislation of the park; (2) key to the natural or cultural integrity of the park or to opportunities for its use and enjoyment; or (3) identified as a goal in this plan or other relevant NPS planning document. Therefore, the environmental impacts associated with this alternative would not result in impairment to the cultural resources of the park.

## **VISITOR USE AND EXPERIENCE**

***Applicable Laws and Policies.*** The laws, regulations, and policies that govern NPS actions with respect to this impact topic can be found in Appendix A.

***Analysis.*** Under Alternative B, the removal of three non-compatible non-historic uses from the fort's casemates would result in a moderate, beneficial, and long-term impact on visitor use and experience. Visitors would be able to see and experience more of the fort and opening these casemates would allow for more interpretive displays.

Sidewalks along State Road AIA would be widened to accommodate benches and wayside exhibits resulting in minor, beneficial, and long-term impact on visitor use and experience.

The removal of two thirds of the parking lot from the site would result in a decrease in visitor convenience. The remaining one third of the parking area would be used to accommodate parking for persons with disabilities. This impact on visitor convenience would be minor, adverse, and long-term. However, the re-establishment of the fort green in two thirds of

the area of the parking lot would result in a moderate, beneficial, and long-term impact on visitor experience.

A new visitor center on site would have a moderate to major, beneficial, and long-term impact on visitor experience. A visitor center would allow for many visitor functions to be consolidated in one location and allow for the interpretive staff to more fully communicate the variety of stories and historical periods encompassed by the park.

***Cumulative Impacts.*** The extremely close proximity of the Spanish Quarter to the park has a great impact on visitor experience. Visitors usually explore the Quarter and visit the fort. The impacts of this on visitor experience are major and beneficial.

When the cumulative impacts of actions by others are combined with impacts associated with this alternative, there would be major long-term cumulative beneficial impacts on visitor use and experience. The contribution of Alternative B to this beneficial effect would be moderate to major.

## **Conclusion**

The general character of the park would change under Alternative B. Alternative B would provide visitors with additional interpretive opportunities as well as providing for a continuation of the glacis. Visitor facilities would be expanded to include a visitor center. This alternative would have moderate to major, long-term, and beneficial effects on visitor use and experience.

## **SOCIOECONOMIC ENVIRONMENT**

### **Operation of the Park**

***Analysis.*** Under Alternative B, the park would continue to be managed according to current policies. The construction of a visitor center immediately south of the park headquarters would provide temporary construction jobs and some permanent jobs associated with staffing and maintenance of the facility. In addition to

the existing minor benefit, this would have a negligible beneficial impact on the local and regional economy.

The removal of two thirds of the parking lot from the site will result in some loss of revenue for both the City of St. Augustine and the park. For the City this revenue will be more than made up for by a multi-story parking garage being built behind the City's visitor information center. Resulting impacts to the local economy would be negligible, long-term, and adverse.

**Cumulative Impacts.** The areas surrounding the park would be affected by continued regional growth. Development activities outside the boundary could result in more concentrated residential and commercial development near the park, and also stimulate growth in tourism. The effects of growth in the regional context could have both beneficial impacts, such as increased income and employment, and adverse impacts, such as increased cost of housing and greater levels of pollution and congestion.

The Alternative B would not result in significant increases in employment or expenditures in a regional context. Existing economic impacts arising from operation of the park would continue, with slight increases possible. In a regional context, the impact of this alternative would be minor, long-term, and beneficial.

### **Tourism and Recreation**

**Analysis.** Under Alternative B, people would continue to visit the local area in increasing numbers, and indirect benefits would continue to occur from visitors' spending for goods and services. Locally there are also many tourist and recreational attractions. The historic district of St. Augustine has many shops, restaurants, and lodging. Other local area attractions are Fort Matanzas, Flagler College, and historic churches. There are numerous museums, golf courses, marinas, opportunities for water sports, and 43 miles of beaches.

The local tourism industry would depend in part on, and benefit from, visitors attracted to the park, and the park would continue to be an

important attraction in the area. A new visitor center could result in a longer average visit. The longer visitors stay in the park, the more likely they are to need food and lodging in the community. However, the overall impact of the park on gateway communities or the local area would only change minimally under this alternative, with modest increases in visitation due to the new visitor center, likely resulting in modest increases in visitor expenditures in the local area. Therefore, Alternative B would likely continue to have a moderate beneficial impact on the local tourism economy.

**Cumulative Impacts.** The regional tourism economy is very strong with many tourist destinations within a two-hour drive of St. Augustine. Among the top destinations are Orlando, Daytona, with mile of wide beaches, the Daytona 500 race track, and Bike Week; and Cape Canaveral with the Kennedy Space Center, Canaveral National Seashore, and Merritt Island National Wildlife Refuge. Alternative B would have a minor effect on tourism to the region as a whole.

### **Conclusion**

Under this alternative, socioeconomic impacts to the local area resulting from the operation of the park and new visitor center would be minor, long-term, and beneficial.

Alternative B would have a moderate, beneficial, and long-term effect on the park's contribution to local tourism and recreation. In addition, it would continue to provide important economic benefits to the regional economy in the form of tourism expenditures. Therefore, it would have a minor, beneficial, and long-term impact on the regional tourism economy.

### **OPERATIONAL EFFICIENCY**

**Analysis.** Under Alternative B, the park headquarters and maintenance areas would remain in their current locations. A visitor center would be constructed immediately south of the park headquarters. A visitor center would result in a minor beneficial impact on operational efficiency mainly from having

visitor orientation activities in a consolidated space. A new visitor center would also increase maintenance costs.

The two ranger offices and the interpretive costume storage would be removed from the fort and relocated to the new visitor center or the headquarters. Although the current location of the ranger offices is convenient, relocating them with other administrative functions may result in better efficiency. This would have a negligible beneficial impact on operational efficiency.

Removal of two thirds of the parking lot would have a minor, beneficial, and long-term impact on maintenance at the site. Maintenance of a parking lot is more costly in terms of equipment, materials, and labor than that of a grassy lawn, which would require more frequent maintenance, but less costly and labor intensive.

A new visitor center, current resource needs, and increasing levels of visitation would result in an unfulfilled staffing need and increased staffing costs causing minor to moderate adverse impacts.

***Cumulative Impacts.*** Growth and development in the vicinity of the park and in the region as a whole would have a minor to moderate, long-term and adverse impact on operational efficiency. The most important impact would be increased visitation to the park, which would further stretch the ability of NPS staff to protect, preserve, and interpret park resources, and place greater demands on the limited existing visitor and staff facilities. The new visitor center would help alleviate the effects of increasing visitation if adequate staff could be provided.

## **Conclusion**

Beneficial impacts to operational efficiency resulting from a new visitor center and the benefits of reducing the size of the parking lot would be minor when additional staffing needs are taken into consideration. Thus, Alternative B would result in impacts that are moderate, long-term, and beneficial to operational efficiency.

## **CONSISTENCY WITH THE PLANS OF OTHERS**

Under Alternative B, park management would change to enhance resource protection and improve visitor opportunities. There would be only beneficial impacts on the plans of surrounding communities or other area neighbors. The introduction of an on-site visitor center would likely enhance cooperative efforts between the park and the city of St. Augustine. Although on-site parking will be eliminated (except for those with disabilities), possibly having an impact on customers of local businesses, a new parking garage with proposed shuttle service is being constructed nearby which should alleviate most inconveniences.

Park management is active in the local community. It maintains a close working relationship with those historical associations, societies, and organizations that have legitimate goals in preserving and interpreting the historical values of the City of St. Augustine. The park continues to cooperate on issues of mutual interest and concern and works to strengthen its existing relationships with friends support groups, volunteers, and local government officials. Park management also cooperates with local and state government offices and community and civic organizations to maintain the scenic qualities and historic setting of the park. This coordination serves to heighten visitor enjoyment and appreciation of the park and its prominence in the overall historic setting of St. Augustine.

In recent years, there has been a growing recognition of the city's historic and architectural significance. As a result, much has been accomplished in recreating the city in conformance with original Spanish and English designs. Since 1960, more than 40 structures have been restored or reconstructed and several gardens reestablished. This effort has centered on the two blocks of St. George Street leading south from the City Gate. The city, business firms, private individuals, and a number of organizations or agencies have contributed to this remarkable achievement. Alternative B for

the park is consistent with these state and local goals.

## **IMPACTS ON ENERGY REQUIREMENTS AND CONSERVATION POTENTIAL**

Although St. Augustine and the park are very walkable and shuttle services are currently available for a fee, private vehicles would continue to be the primary means of transportation to the park.

Any new construction that the NPS initiates will meet all pertinent building codes to aid in energy conservation.

## **UNAVOIDABLE ADVERSE EFFECTS**

Unavoidable adverse impacts are defined as impacts that cannot be fully mitigated or avoided. This alternative would result in minor to major adverse impacts on cultural resources in some areas of the park due to human use. To fully mitigate these impacts, the resources would essentially need to be off limits to visitors. Impacts would be expected to be minor in terms of overall loss.

## **IRRETRIEVABLE OR IRREVERSIBLE COMMITMENTS OF RESOURCES**

All facility development and use is considered essentially a permanent commitment of resources, although removal of facilities and site restoration has occurred and could still occur. New facilities would be developed on sites that have negligible resource value, which would be specifically considered during detailed implementation planning.

## **RELATIONSHIP BETWEEN SHORT TERM USES OF THE ENVIRONMENT AND MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY**

For the purposes of this discussion, short term is defined as the time span for which this GMP/EIS is expected to be effective (generally assumed to be 15-20 years) and long term is defined as a period beyond that time.

The resource prescriptions included in the management units, along with required management, are intended to ensure the achievement and maintenance of the purposes for which the park was established. All use and development would occur in the context of sustainable resource conditions that, in turn, permit sustained levels of visitor use and satisfaction.

Under Alternative B, a number of new actions would be taken to manage visitor use, including constructing a new visitor center. With increasing visitor use expected, impacts to cultural resources in the park would be more aptly prevented by the orientation and educational opportunities that a visitor center provides. This would reduce maintenance and enhance long-term productivity.

## **ALTERNATIVE C (AGENCY AND ENVIRONMENTALLY PREFERRED ALTERNATIVE)**

### **NATURAL RESOURCES**

*Applicable Laws and Policies.* The laws, regulations, and policies that govern NPS actions with respect to this impact topic can be found in Appendix A.

#### **Water Quality**

*Analysis.* The analysis identified possible effects on water quality to Matanzas Bay (adjacent to the park boundary) associated with one parking area, the construction of a visitor center outside the park's current boundary, and the widening of sidewalks.

Removal of part of the visitor parking lot (specific size and configuration would be determined in a later planning and design phase) and reestablishment of the glacial would reduce runoff into Matanzas Bay and would have a negligible long-term beneficial impact on water quality. The construction of a visitor center could produce negligible short-term adverse effects on water quality due to the construction process. Appropriate mitigation measures would be taken to reduce any effects. The

widening of sidewalks along State Road AIA will slightly increase the area of impermeable surface, therefore possibly increasing runoff resulting in negligible long-term adverse effects on water quality.

**Cumulative Impacts.** Actions outside the park, such as runoff from existing and new developments in the area and vehicle-related pollutants, would result in minor adverse effects on water quality due to increased surface runoff.

When the effects of actions by others are combined with impacts associated with Alternative C, the cumulative impacts would be minor, long-term, and adverse, primarily because of the effects of surface runoff from areas outside of the park.

## **Floodplains**

**Analysis.** The entire park is within the 100-year floodplain. Under Alternative C, impacts would be associated with the continued need to maintain existing grounds, parking areas, and structures in the floodplain. These facilities are exempt from NPS policies on floodplain management (Director's Order 77-2; NPS Floodplain Procedures Manual 77-2). Changes to development include the construction of a visitor center outside the current park boundary and a reduction in the paved parking area. These changes would occur in regulatory floodplains. Although the reduction of paved parking would have a negligible beneficial impact on floodplains, the visitor center would have minor adverse impacts. There is no alternative to placing structures in the floodplain.

**Cumulative Impacts.** There are numerous developments on lands outside the park boundary that could affect the floodplain. These developments along with existing development have the potential to have moderate adverse impacts on the floodplain.

When the effects of actions by others are combined with the impacts associated with Alternative C, the cumulative impacts would be moderate, potentially long-term, and adverse.

## **Conclusion**

This alternative would result in negligible beneficial long-term impacts to water quality to Matanzas Bay due to reducing the area of impermeable surfaces and therefore reducing the amount of runoff. Cumulative impacts would include minor, long-term, and adverse impacts on water quality.

This alternative would result in minor long-term adverse impacts on floodplain values for the park and surrounding areas. Cumulative impacts would include moderate adverse long-term effects on floodplains because of actions outside the park. This alternative's contribution to these impacts would be minor.

This alternative would not result in major, adverse impacts to any natural resource, the conservation of which is (1) necessary to fulfill specific purposes identified in the establishing legislation of the park; (2) key to the natural or cultural integrity of the park or to opportunities for its use and enjoyment; or (3) identified as a goal in this plan or other relevant NPS planning document. Therefore, the environmental impacts associated with this alternative would not result in impairment to the natural resources of the park.

## **CULTURAL RESOURCES**

**Applicable Laws and Policies.** The laws, regulations, and policies that govern NPS actions with respect to this impact topic can be found in Appendix A.

### **Archeological Resources**

**Analysis.** The analysis identified possible effects to archeological resources under Alternative C associated with the construction of a visitor center outside the park boundary, the removal of part of the existing paved parking lot (specific size and configuration would be determined in a later planning and design phase), and the widening of the sidewalk along State Road AIA.

Construction associated with a visitor center outside the current park boundary could result in the disturbance of archeological resources even though the site has been previously disturbed. Removal of the existing parking lot surface and widening of the sidewalk could also disturb archeological resources.

Prior to any construction all applicable NEPA and Section 106 procedures would be followed to minimize impacts. NPS staff would continue established resource protection measures for the identification and treatment of archeological resources on a case-by-case basis. The NPS would consult the SHPO regarding appropriate response actions and mitigation measures. Where potential impacts are identified, possible mitigation could include, but not be limited to, avoidance and protection, data recovery (evaluated as an adverse impact that would be undertaken as a last resort), and educational outreach programs such as informative onsite tours and presentations. Despite potential impacts associated with construction, Alternative C would have beneficial impacts to archeological resources due to the established resource protection measures for the identification and treatment of such resources that the NPS follows.

**Cumulative Impacts.** Cumulative impacts on archeological resources are considered on a region-wide basis because historic activity in the park region was not limited to the lands within the park boundary.

Actions outside the park include land disturbing activities such as development projects. Because of the urban environment, it is likely that numerous sites would continue to be impacted. If any of these actions require permits from state or federal agencies, recordation may be required. However, it is likely that archeological resources outside the park boundary would be destroyed without knowledge, causing an adverse effect. The City of St. Augustine's Archaeological Preservation Ordinance also provides another safeguard against impacts to archeological sites in the city. The ordinance states that any proposed major or minor disturbance which requires a building

permit, a city utility permit, or a city right-of-way permit shall be subject to a review of the proposed disturbance, before such disturbance takes place. The park will monitor land use proposals and changes to adjacent lands and work closely with the city's preservation commission to mitigate any potential negative impacts to park archeological resources and values.

When actions external to the park are considered in conjunction with this alternative, there would be a moderate, long-term, and adverse cumulative effect on archeological resources outside the park boundary, primarily because of development outside of the park that would impact sites without recordation.

### **Landscape**

**Analysis.** Alternative C would remove part of the visitor parking lot (specific size and configuration would be determined in a later planning and design phase) and reestablish the glaxis and fort green in this area. The current parking lot is located south of the fort and is a large visual intrusion into the glaxis and fort green. Reducing the size of the parking lot would major beneficial impact on historic views and the landscape.

This alternative would remove the ticket booth and relocate the ticket sales function to a more appropriate location. Removal of the ticket booth would result in a moderate beneficial impact.

This alternative would construct a visitor center outside the current park boundary, possibly at the Mary Peck house site across State Road AIA. Construction of a visitor center would have negligible adverse impacts to the landscape. The visitor center would be located amongst many other existing buildings in the Spanish Quarter.

Alternative C would also slightly widen the sidewalks along State Road AIA. This expansion would only have a minor adverse impact on the historic views and the landscape because of the low profile of the addition.

**Cumulative Impacts.** Cumulative impacts on the landscape are considered on a region-wide basis because historic activity in the park region was not limited to the lands within the park boundary.

Actions outside the park include a variety of land disturbing activities such as development projects. Because of the urban environment, it is likely that the landscape would continue to be impacted, causing an adverse effect.

When other actions external to the park are considered in conjunction with this alternative, the cumulative impacts on the landscape would be moderate, long-term, and adverse, primarily because of development outside of the park that would impact the landscape. Alternative C would make a major beneficial contribution to this adverse effect.

### **Historic Structures**

**Analysis.** Under Alternative C, historic structures would continue to be protected as required by law. Alternative C will remove three of seven non-compatible, non-historic uses of casemates from the fort. These non-compatible, non-historic uses of the fort are structures that have been inserted into casemates disallowing appropriate inspections of the fort's structure. Removing these uses would allow for inspection of the fort's structure and preservation of this resource in a more aggressive way.

Where appropriate, NPS would consult the SHPO regarding response actions and mitigation measures. Treatment measures for historic resources would continue to conform to the *Secretary of the Interior's Standards and Guidelines for the Treatment of Historic Properties*, 36 CFR section 68.

**Cumulative Impacts.** Cumulative impacts on historic structures are considered on a region-wide basis because they extend beyond the park boundary.

Actions outside the park that could affect historic resources are the same as those identified for archeological resources. Specific impacts on historic resources outside the boundary are unknown. Although region-wide impacts have had a cumulative adverse effect on historic resources, they have not directly affected the structures eligible for listing on the National Register.

When other actions external to the park are considered in conjunction with this alternative, the cumulative impacts on historic structures would be minor, long-term, and adverse, primarily because of the effects external actions. The contribution of Alternative C to this adverse effect would be minor and beneficial.

### **Conclusion**

Alternative C would have beneficial impacts on archeological resources because of the protection that the NPS provides to these resources. Established resource protection measures for the identification and treatment of archeological resources would continue on a case-by-case basis.

The reduction of the size of the parking lot and the removal of the ticket booth are important elements of Alternative C. The impacts of this alternative on the historic views and landscape of the park would be major, long-term, and beneficial.

Regionwide development activities would continue to have a cumulative adverse effect on historic resources. Alternative C would have a minor beneficial impact on the historic resources of the park.

This alternative would not result in major, adverse effects to cultural resources, the conservation of which is (1) necessary to fulfill specific purposes identified in the establishing legislation of the park; (2) key to the natural or cultural integrity of the park or to opportunities for its use and enjoyment; or (3) identified as a goal in this plan or other relevant NPS planning document. Therefore, the environmental impacts associated with this alternative would

not result in impairment to the cultural resources of the park.

## **VISITOR USE AND EXPERIENCE**

***Applicable Laws and Policies.*** The laws, regulations, and policies that govern NPS actions with respect to this impact topic can be found in Appendix A.

***Analysis.*** Under Alternative C, the removal of three non-compatible non-historic uses from the fort's casemates would result in a minor, beneficial, and long-term impact on visitor use and experience. Visitors would be able to see and experience more of the fort and opening these casemates would allow for more interpretive displays.

Sidewalks along State Road AIA would be slightly widened for safety issues resulting in negligible, beneficial, and long-term impact on visitor use and experience.

The removal of part of the visitor parking lot (specific size and configuration would be determined in a later planning and design phase) from the site would result in a decrease in visitor convenience. The remaining parking area would be used to accommodate parking for persons with disabilities. This impact on visitor convenience would be minor, adverse, and long-term. Although, the re-establishment of the fort green in three quarters of the area of the parking lot would result in a moderate, beneficial, and long-term impact on visitor experience.

A new visitor center located outside the current boundary possibly at the Mary Peck house site would have a moderate to major, beneficial, and long-term impact on visitor experience. A visitor center would allow for many visitor functions to be consolidated in one location and allow for the interpretive staff to more fully communicate the variety of stories and historical periods encompassed by the park.

***Cumulative Impacts.*** The extremely close proximity of the Spanish Quarter to the park has a great impact on visitor experience. Visitors usually explore the Quarter and visit the fort.

The impacts of this on visitor experience are major and beneficial. Constructing a visitor center in this historic district would only enhance the positive experiences.

When the cumulative impacts of actions by others are combined with impacts associated with this alternative, there would be major long-term cumulative beneficial impacts on visitor use and experience. The contribution of Alternative C to this beneficial effect would be moderate to major.

## **Conclusion**

The general character of the park would change under Alternative C. Alternative C would provide visitors with additional interpretive opportunities as well as providing for a continuation of the glaxis. Visitor facilities would be expanded to include a visitor center. This alternative would have major, long-term, and beneficial effects on visitor use and experience.

## **SOCIOECONOMIC ENVIRONMENT**

### **Operation of the Park**

***Analysis.*** Under Alternative C, the park would continue to be managed according to current policies. The construction of a visitor center outside the current park boundaries possibly at the Mary Peck house site would provide temporary construction jobs and some permanent jobs associated with staffing and maintenance of the facility. In addition to the existing minor benefit, this would have a negligible beneficial impact on the local and regional economy.

The removal of part of the visitor parking lot (specific size and configuration would be determined in a later planning and design phase) from the site will result in some loss of revenue for both the City of St. Augustine and the park. For the City this revenue will be more than made up for by a multi-story parking garage being built behind the City's visitor information center. Resulting impacts to the local economy would be negligible, long-term, and adverse.

**Cumulative Impacts.** The areas surrounding the park would be affected by continued regional growth. Development activities outside the boundary could result in more concentrated residential and commercial development near the park, and also stimulate growth in tourism. The effects of growth in the regional context could have both beneficial impacts, such as increased income and employment, and adverse impacts, such as increased cost of housing and greater levels of pollution and congestion.

The Alternative C would not result in significant increases in employment or expenditures in a regional context. Existing economic impacts arising from operation of the park would continue, with slight increases possible. In a regional context, the impact of this alternative would be minor, long-term, and beneficial.

### **Tourism and Recreation**

**Analysis.** Under Alternative C, people would continue to visit the local area in increasing numbers, and indirect benefits would continue to occur from visitors' spending for goods and services. Locally there are also many tourist and recreational attractions. The historic district of St. Augustine has many shops, restaurants, and lodging. Other local area attractions are Fort Matanzas, Flagler College, and historic churches. There are numerous museums, golf courses, marinas, opportunities for water sports, and 43 miles of beaches.

The local tourism industry would depend in part on, and benefit from, visitors attracted to the park, and the park would continue to be an important attraction in the area. A new visitor center could result in a longer average visit. The longer visitors stay in the park, the more likely they are to need food and lodging in the community. However, the overall impact of the park on gateway communities or the local area would only change minimally under this alternative, with modest increases in visitation due to the new visitor center, likely resulting in modest increases in visitor expenditures in the local area. Therefore, Alternative C would likely continue to have a moderate beneficial impact on the local tourism economy.

**Cumulative Impacts.** The regional tourism economy is very strong with many tourist destinations within a two-hour drive of St. Augustine. Among the top destinations are Orlando, Daytona, with mile of wide beaches, the Daytona 500 race track, and Bike Week; and Cape Canaveral with the Kennedy Space Center, Canaveral National Seashore, and Merritt Island National Wildlife Refuge. Alternative C would have a minor effect on tourism to the region as a whole.

### **Conclusion**

Under this alternative, socioeconomic impacts to the local area resulting from the operation of the park and new visitor center would be minor, long-term, and beneficial.

Alternative C would have a moderate, beneficial, and long-term effect on the park's contribution to local tourism and recreation. In addition, it would continue to provide important economic benefits to the regional economy in the form of tourism expenditures. Therefore, it would have a minor, beneficial, and long-term impact on the regional tourism economy.

### **OPERATIONAL EFFICIENCY**

**Analysis.** Under Alternative C, the park headquarters and maintenance remain at their current location within park boundary and adjacent to each other. Since the entire site is only 22 acres, the proximity of the headquarters and maintenance to the resources and visitor areas work well and have a major beneficial impact on operational efficiency.

A visitor center would be constructed outside the current park boundary, possibly at the Mary Peck house site. Having a visitor center and at this location would result in a minor beneficial impact mainly from having visitor orientation activities in a consolidated space. However, a new visitor center would increase maintenance and staffing needs and costs.

Two ranger offices and the interpretive costume storage would be removed from the fort and

relocated to the new visitor center. Although the current location of the ranger offices is convenient, relocating them with other administrative functions may result in better efficiency. This would have a negligible beneficial impact on operational efficiency.

Removal of part of the visitor parking lot (specific size and configuration would be determined in a later planning and design phase) would have a minor, beneficial, and long-term impact on maintenance at the site. Maintenance of a parking lot is more costly in terms of equipment, materials, and labor than that of a grassy lawn, which would require more frequent maintenance, but less costly and labor intensive.

A new visitor center, current resource needs, and increasing levels of visitation would result in an unfulfilled staffing need and increased staffing costs causing minor to moderate adverse impacts.

**Cumulative Impacts.** Growth and development in the vicinity of the park and in the region as a whole would have a minor to moderate, long-term and adverse impact on operational efficiency. The most important impact would be increased visitation to the park, which would further stretch the ability of NPS staff to protect, preserve, and interpret park resources, and place greater demands on the limited existing visitor and staff facilities. The new visitor center would help alleviate the effects of increasing visitation if adequate staff could be provided.

## **Conclusion**

The benefits of reducing the size of the parking lot and introducing a visitor center help to offset these impacts. Thus, Alternative C would result in impacts that are minor to moderate, long-term, and beneficial to operational efficiency.

## **CONSISTENCY WITH THE PLANS OF OTHERS**

Under Alternative C, park management would change to enhance resource protection and improve visitor opportunities. There would be only beneficial impacts on the plans of

surrounding communities or other area neighbors. The introduction of a visitor center outside the current park boundary would likely enhance cooperative efforts between the park and the city of St. Augustine. Although some on-site parking would be removed, possibly having an impact on customers of local businesses, a new parking garage with proposed shuttle service is being constructed nearby which should alleviate most inconveniences.

Park management is active in the local community. It maintains a close working relationship with those historical associations, societies, and organizations that have legitimate goals in preserving and interpreting the historical values of the City of St. Augustine. The park continues to cooperate on issues of mutual interest and concern and works to strengthen its existing relationships with friends support groups, volunteers, and local government officials. Park management also cooperates with local and state government offices and community and civic organizations to maintain the scenic qualities and historic setting of the park. This coordination serves to heighten visitor enjoyment and appreciation of the park and its prominence in the overall historic setting of St. Augustine.

In recent years, there has been a growing recognition of the city's historic and architectural significance. As a result, much has been accomplished in recreating the city in conformance with original Spanish and English designs. Since 1960, more than 40 structures have been restored or reconstructed and several gardens reestablished. This effort has centered on the two blocks of St. George Street leading south from the City Gate. The city, business firms, private individuals, and a number of organizations or agencies have contributed to this remarkable achievement. Alternative C for the park is consistent with these state and local goals.

## **IMPACTS ON ENERGY REQUIREMENTS AND CONSERVATION POTENTIAL**

Although St. Augustine and the park are very walkable and shuttle services are currently

available for a fee, private vehicles would continue to be the primary means of transportation to the park.

Any new construction that the NPS initiates will meet all pertinent building codes to aid in energy conservation.

## **UNAVOIDABLE ADVERSE EFFECTS**

Unavoidable adverse impacts are defined as impacts that cannot be fully mitigated or avoided. This alternative would result in minor to major adverse impacts on cultural resources in some areas of the park due to human use. To fully mitigate these impacts, the resources would essentially need to be off limits to visitors. Impacts would be expected to be minor in terms of overall loss.

## **IRRETRIEVABLE OR IRREVERSIBLE COMMITMENTS OF RESOURCES**

All facility development and use is considered essentially a permanent commitment of resources, although removal of facilities and site restoration has occurred and could still occur. New facilities would be developed on sites that have negligible resource value, which would be specifically considered during detailed implementation planning.

## **RELATIONSHIP BETWEEN SHORT TERM USES OF THE ENVIRONMENT AND MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY**

For the purposes of this discussion, short term is defined as the time span for which this GMP/EIS is expected to be effective (generally assumed to be 15-20 years) and long term is defined as a period beyond that time.

The resource prescriptions included in the management units, along with required management, are intended to ensure the achievement and maintenance of the purposes for which the park was established. All use and development would occur in the context of sustainable resource conditions that, in turn,

permit sustained levels of visitor use and satisfaction.

Under Alternative C, a number of new actions would be taken to manage visitor use, including constructing a new visitor center. With increasing visitor use expected, impacts to cultural resources in the park would be more aptly prevented by the orientation and educational opportunities that a visitor center provides. This would reduce maintenance and enhance long-term productivity.

## **ALTERNATIVE D**

### **NATURAL RESOURCES**

*Applicable Laws and Policies.* The laws, regulations, and policies that govern NPS actions with respect to this impact topic can be found in Appendix A.

#### **Water Quality**

*Analysis.* The water quality analysis identified possible existing effects on water quality to Matanzas Bay (adjacent to the park boundary) associated with one existing parking area. Current conditions with the parking lot constructed of impervious materials and vehicles in the parking lot causes negligible adverse impacts on the water quality of Matanzas Bay. These impacts would continue under this alternative.

The construction of a structure for relocated administrative functions could produce negligible short-term adverse effects on water quality due to the construction process. Appropriate mitigation measures would be taken to reduce any effects.

*Cumulative Impacts.* Actions outside the park, such as runoff from existing and new developments in the area and vehicle-related pollutants, would result in minor adverse effects on water quality due to increased surface runoff.

When the effects of actions by others are combined with impacts associated with Alternative D, the cumulative impacts would be

minor, long-term, and adverse, primarily because of the effects of surface runoff from areas outside of the park.

### **Floodplains**

**Analysis.** The entire park is within the 100-year floodplain. Under Alternative D, impacts would be associated with the continued need to maintain existing grounds, parking areas, and structures in the floodplain. These facilities are exempt from NPS policies on floodplain management (Director's Order 77-2; NPS Floodplain Procedures Manual 77-2). No new developments would occur in regulatory floodplains under this alternative. Therefore, only negligible adverse impacts would occur under the Alternative D. Changes to development include the construction of a structure for relocated administrative functions. This change would occur in regulatory floodplains and would have minor adverse impacts. There is no alternative to placing structures in the floodplain.

**Cumulative Impacts.** There are numerous developments on lands outside the park boundary that could affect the floodplain. These developments along with existing development have the potential to have moderate adverse impacts on the floodplain. The Alternative D would not contribute to these cumulative impacts.

### **Conclusion**

Existing conditions are causing negligible adverse impacts to water quality to Matanzas Bay. Alternative D would perpetuate these conditions. Cumulative impacts would include minor, long-term, and adverse impacts on water quality.

This alternative would result in negligible long-term adverse impacts on floodplain values for the park and surrounding areas. Cumulative impacts would include moderate adverse long-term effects on floodplains because of actions outside the park. This alternative's contribution to these impacts would be negligible.

This alternative would not result in major, adverse impacts to any natural resource, the conservation of which is (1) necessary to fulfill specific purposes identified in the establishing legislation of the park; (2) key to the natural or cultural integrity of the park or to opportunities for its use and enjoyment; or (3) identified as a goal in this plan or other relevant NPS planning document. Therefore, the environmental impacts associated with this alternative would not result in impairment to the natural resources of the park.

### **CULTURAL RESOURCES**

**Applicable Laws and Policies.** The laws, regulations, and policies that govern NPS actions with respect to this impact topic can be found in Appendix A.

#### **Archeological Resources**

**Analysis.** The analysis identified possible effects to archeological resources under Alternative D associated with the widening of the sidewalk along State Road AIA.

Widening of the sidewalk and construction of a structure for relocated administrative functions could result in the disturbance of archeological resources.

Prior to any construction all applicable NEPA and Section 106 procedures would be followed to minimize impacts. NPS staff would continue established resource protection measures for the identification and treatment of archeological resources on a case-by-case basis. The NPS would consult the SHPO regarding appropriate response actions and mitigation measures. Where potential impacts are identified, possible mitigation could include, but not be limited to, avoidance and protection, data recovery (evaluated as an adverse impact that would be undertaken as a last resort), and educational outreach programs such as informative onsite tours and presentations. Despite potential impacts associated with construction, Alternative D would have beneficial impacts to archeological resources due to the established resource protection measures for the

identification and treatment of such resources that the NPS follows.

**Cumulative Impacts.** Cumulative impacts on archeological resources are considered on a region-wide basis because historic activity in the park region was not limited to the lands within the park boundary.

Actions outside the park include land disturbing activities such as development projects. Because of the urban environment, it is likely that numerous sites would continue to be impacted. If any of these actions require permits from state or federal agencies, recordation may be required. However, it is likely that archeological resources outside the park boundary would be destroyed without knowledge, causing an adverse effect. The City of St. Augustine's Archaeological Preservation Ordinance also provides another safeguard against impacts to archeological sites in the city. The ordinance states that any proposed major or minor disturbance which requires a building permit, a city utility permit, or a city right-of-way permit shall be subject to a review of the proposed disturbance, before such disturbance takes place. The park will monitor land use proposals and changes to adjacent lands and work closely with the city's preservation commission to mitigate any potential negative impacts to park archeological resources and values.

When actions external to the park are considered in conjunction with this alternative, there would be a moderate, long-term, and adverse cumulative effect on archeological resources outside the park boundary, primarily because of development outside of the park that would impact sites without recordation.

## **Landscape**

**Analysis.** Under Alternative D, the visitor parking lot would remain. The parking lot is located south of the fort and is a large visual intrusion into the glacis and fort green. Retaining the parking lot would result in a continued major adverse impact on historic views and the landscape.

This alternative would remove the ticket booth and relocate the ticket sales function to a more appropriate location. Removal of the ticket booth would result in a moderate beneficial impact.

This alternative would construct a structure for relocated administrative functions. This structure would have negligible adverse impacts to the landscape.

**Cumulative Impacts.** Cumulative impacts on the landscapes are considered on a region-wide basis because historic activity in the park region was not limited to the lands within the park boundary.

Actions outside the park include a variety of land disturbing activities such as development projects. Because of the urban environment, it is likely that the landscape would continue to be impacted, causing an adverse effect.

When other actions external to the park are considered in conjunction with this alternative, the cumulative impacts on the landscape would be major, long-term, and adverse, primarily because of development outside of the park that would impact the landscape. Alternative D would make a major adverse contribution to this adverse effect.

## **Historic Structures**

**Analysis.** Under Alternative D, historic structures would continue to be protected as required by law. Alternative D will remove three of seven non-compatible, non-historic uses of casemates from the fort. These non-compatible, non-historic uses of the fort are structures that have been inserted into casemates disallowing appropriate inspections of the fort's structure. Removing these uses would allow for inspection of the fort's structure and preservation of this resource in a more aggressive way.

Where appropriate, NPS would consult the SHPO regarding response actions and mitigation measures. Treatment measures for historic resources would continue to conform to the

*Secretary of the Interior's Standards and Guidelines for the Treatment of Historic Properties*, 36 CFR section 68.

**Cumulative Impacts.** Cumulative impacts on historic structures are considered on a region-wide basis because they extend beyond the park boundary.

Actions outside the park that could affect historic resources are the same as those identified for archeological resources. Specific impacts on historic resources outside the boundary are unknown. Although region-wide impacts have had a cumulative adverse effect on historic resources, they have not directly affected the structures eligible for listing on the National Register.

When other actions external to the park are considered in conjunction with this alternative, the cumulative impacts on historic structures would be minor, long-term, and adverse, primarily because of the effects external actions. The contribution of Alternative D to this adverse effect would be minor and beneficial.

## Conclusion

Alternative D would have beneficial impacts to archeological resources because of the protection that the NPS provides to these resources. Established resource protection measures for the identification and treatment of archeological resources would continue on a case-by-case basis.

By retaining the parking lot and removing the ticket booth, the impacts of this alternative on the historic views and landscape of the park would continue to be major, long-term, and adverse.

Regionwide development activities would continue to have a cumulative adverse effect on historic resources. Alternative D would have a minor beneficial impact on the historic resources of the park.

This alternative would not result in major, adverse effects to cultural resources, the

conservation of which is (1) necessary to fulfill specific purposes identified in the establishing legislation of the park; (2) key to the natural or cultural integrity of the park or to opportunities for its use and enjoyment; or (3) identified as a goal in this plan or other relevant NPS planning document. Therefore, the environmental impacts associated with this alternative would not result in impairment to the cultural resources of the park.

## VISITOR USE AND EXPERIENCE

**Applicable Laws and Policies.** The laws, regulations, and policies that govern NPS actions with respect to this impact topic can be found in Appendix A.

**Analysis.** Under Alternative D, retention of the visitor parking lot would result in a moderate, adverse, and long-term impact on visitor experience. The parking lot detracts from the visitor experience because of its visual intrusion into the landscape and safety hazards, although it does have a minor beneficial impact on visitor convenience.

Under Alternative D, the removal of three non-compatible non-historic uses from the fort's casemates would result in a minor, beneficial, and long-term impact on visitor use and experience. Visitors would be able to see and experience more of the fort and opening these casemates would allow for more interpretive displays.

Not addressing the need for a visitor center would result in a moderate to major, adverse, and long-term impact on visitor experience.

**Cumulative Impacts.** The close proximity of the Spanish Quarter to the park has a great impact on visitor experience. Visitors usually explore the Quarter and visit the fort. The impacts of this on visitor experience are major and beneficial. Constructing a visitor center in the historic district would only enhance the positive experiences.

When the cumulative impacts of actions by others are combined with impacts associated

with this alternative, there would be minor long-term cumulative adverse impacts on visitor use and experience. The contribution of Alternative D to this adverse effect would be moderate to major.

## **Conclusion**

The general character of the park would not change under Alternative D. Alternative D would not address the need for a visitor center and would retain the visitor parking lot. This alternative would have moderate to major, long-term, and adverse effects on visitor use and experience.

## **SOCIOECONOMIC ENVIRONMENT**

### **Operation of the Park**

**Analysis.** Alternative D would not result in the development of major new facilities at the park or an increase in employment. Therefore, there would be no direct incremental increase in impact on the local and regional economy from operation of the park, over and above what currently exists. However, nearby communities would continue to experience direct benefits of expenditures by NPS for supplies and by individual NPS employee purchases. Impacts would thus be minor, long-term, and beneficial.

The parking lot would remain and would result in some revenue for both the City of St. Augustine and the park. Resulting impacts to the local economy would be negligible, long-term, and beneficial.

**Cumulative Impacts.** The areas surrounding the park would be affected by continued regional growth. Development activities outside the boundary could result in more concentrated residential and commercial development near the park, and also stimulate growth in tourism. The effects of growth in the regional context could have both beneficial impacts, such as increased income and employment, and adverse impacts, such as increased cost of housing and greater levels of pollution and congestion.

The Alternative D would not result in significant increases in employment or expenditures in a regional context. Existing economic impacts arising from operation of the park would continue, with slight increases possible. In a regional context, the impact of this alternative would be minor, long-term, and beneficial.

### **Tourism and Recreation**

**Analysis.** Under Alternative D, people would continue to visit the local area in increasing numbers, and indirect benefits would continue to occur from visitors' spending for goods and services. Locally there are also many tourist and recreational attractions. The historic district of St. Augustine has many shops, restaurants, and lodging. Other local area attractions are Fort Matanzas, Flagler College, and historic churches. There are numerous museums, golf courses, marinas, opportunities for water sports, and 43 miles of beaches.

The local tourism industry would depend in part on, and benefit from, visitors attracted to the park, and the park would continue to be an important attraction in the area. The overall impact of the park on gateway communities or the local area would not change under this alternative. Therefore, Alternative D would likely continue to have a moderate beneficial impact on the local tourism economy.

**Cumulative Impacts.** The regional tourism economy is very strong with many tourist destinations within a two-hour drive of St. Augustine. Among the top destinations are Orlando, Daytona, with mile of wide beaches, the Daytona 500 race track, and Bike Week; and Cape Canaveral with the Kennedy Space Center, Canaveral National Seashore, and Merritt Island National Wildlife Refuge. Alternative D would have a minor effect on tourism to the region as a whole.

## **Conclusion**

Under this alternative, socioeconomic impacts to the local area resulting from the operation of the park would be negligible, long-term, and beneficial.

Alternative D would have a moderate, beneficial, and long-term effect on the park's contribution to local tourism and recreation. In addition, it would continue to provide important economic benefits to the regional economy in the form of tourism expenditures. Therefore, it would have a minor, beneficial, and long-term impact on the regional tourism economy.

## **OPERATIONAL EFFICIENCY**

***Analysis.*** Under Alternative D, the park headquarters and maintenance remain at their current location within park boundary and adjacent to each other. Since the entire site is only 22 acres, the proximity of the headquarters and maintenance to the resources and visitor areas work well and have a major beneficial impact on operational efficiency.

However, a new visitor center would increase maintenance and staffing needs and costs. The two ranger offices and the interpretive costume storage would be removed from the fort and relocated to a new structure in the Visitor Services Zone. Although the current location of the ranger offices is convenient, relocating them with other administrative functions may result in better efficiency. This would have a negligible beneficial impact on operational efficiency. However, a new structure would increase maintenance costs.

The parking lot would remain in this alternative and is costly in terms of equipment, materials, and labor and results in a minor, adverse, and long-term impact on maintenance activities at the site. There is no visitor center or contact center for the park. Therefore, no consolidated space is available for visitor orientation and education. The "temporary" ticket booth currently located outside the entrance of the fort would be relocated to a more appropriate location. Interpretive displays in the casemates of the fort and ranger programs are held often. Not having a formal visitor center has a minor adverse impact on operational efficiency resulting from the lack of consolidated visitor orientation space.

***Cumulative Impacts.*** Growth and development in the vicinity of the park and in the region as a whole would have a minor to moderate, long-term and adverse impact on operational efficiency. The most important impact would be increased visitation to the park, which would further stretch the ability of NPS staff to protect, preserve, and interpret park resources, and place greater demands on the limited existing visitor and staff facilities.

## **Conclusion**

Under Alternative D, impacts to operational efficiency resulting from the retention the parking lot and relocating some administrative functions from the fort to a new structure would result in impacts that are minor, long-term, and beneficial to operational efficiency.

## **CONSISTENCY WITH THE PLANS OF OTHERS**

Under Alternative D, park management would change to enhance resource protection and improve visitor opportunities. There would be only beneficial impacts on the plans of surrounding communities or other area neighbors.

Park management is active in the local community. It maintains a close working relationship with those historical associations, societies, and organizations that have legitimate goals in preserving and interpreting the historical values of the City of St. Augustine. The park continues to cooperate on issues of mutual interest and concern and works to strengthen its existing relationships with friends support groups, volunteers, and local government officials. Park management also cooperates with local and state government offices and community and civic organizations to maintain the scenic qualities and historic setting of the park. This coordination serves to heighten visitor enjoyment and appreciation of the park and its prominence in the overall historic setting of St. Augustine.

In recent years, there has been a growing recognition of the city's historic and architectural significance. As a result, much has been accomplished in recreating the city in

conformance with original Spanish and English designs. Since 1960, more than 40 structures have been restored or reconstructed and several gardens reestablished. This effort has centered on the two blocks of St. George Street leading south from the City Gate. The city, business firms, private individuals, and a number of organizations or agencies have contributed to this remarkable achievement. Alternative D for the park is consistent with these state and local goals.

### **IMPACTS ON ENERGY REQUIREMENTS AND CONSERVATION POTENTIAL**

Although St. Augustine and the park are very walkable and shuttle services are currently available for a fee, private vehicles would continue to be the primary means of transportation to the park.

Any new construction that the NPS initiates will meet all pertinent building codes to aid in energy conservation.

### **UNAVOIDABLE ADVERSE EFFECTS**

Unavoidable adverse impacts are defined as impacts that cannot be fully mitigated or avoided. This alternative would result in minor to major adverse impacts on cultural resources in some areas of the park due to human use. To fully mitigate these impacts, the resources would essentially need to be off limits to visitors. Impacts would be expected to be minor in terms of overall loss.

### **IRRETRIEVABLE OR IRREVERSIBLE COMMITMENTS OF RESOURCES**

All facility development and use is considered essentially a permanent commitment of resources, although removal of facilities and site restoration has occurred and could still occur. New facilities would be developed on sites that have negligible resource value, which would be specifically considered during detailed implementation planning.

### **RELATIONSHIP BETWEEN SHORT TERM USES OF THE ENVIRONMENT AND MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY**

For the purposes of this discussion, short term is defined as the time span for which this GMP/EIS is expected to be effective (generally assumed to be 15-20 years) and long term is defined as a period beyond that time.

The resource prescriptions included in the management units, along with required management, are intended to ensure the achievement and maintenance of the purposes for which the park was established. All use and development would occur in the context of sustainable resource conditions that, in turn, permit sustained levels of visitor use and satisfaction.

With increasing visitor use expected, impacts to cultural resources in the park would be more aptly prevented by the orientation and educational opportunities that a visitor center provides. This would reduce maintenance and enhance long-term productivity.

# APPENDIX A: LIST OF RELEVANT LEGISLATION

*Some of the Laws and executive orders that apply to the management of Castillo de San Marcos National Monument are provided below.*

## NATIONAL PARK SERVICE ENABLING LEGISLATION

Act of August 25, 1916 (National Park Service Organic Act), Public Law (P.L.) 64-235, 16 United States Code (U.S.C.) Section (§)1 *et sequens* (*et seq.* (and the following ones)) as amended

Reorganization Act of March 3, 1933, 47 Stat. 1517

General Authorities Act, October 7, 1976, P.L.94-458, 90 Stat. 1939, 16 U.S.C. §1a-1 *et seq.*

Act amending the Act of October 2, 1968 (commonly called Redwoods Act), March 27, 1978, P.L.95-250, 92 Stat. 163, 16 U.S.C. Subsection(s)(§§)1a-1, 79a-q

National Parks and Recreation Act, November 10, 1978, P.L.95-625, 92 Stat. 3467; 16 U.S.C. §1 *et seq.*

## NPS OPERATIONS LAWS

### Accessibility

Americans with Disabilities Act, P.L.101-336, 104 Stat. 327, 42 U.S.C. §12101

Architectural Barriers Act of 1968, P.L.90-480, 82 Stat. 718, 42 U.S.C. §4151 *et seq.*

Rehabilitation Act of 1973, P.L.93-112, 87 Stat. 357, 29 U.S.C. §701 *et seq.* as amended by the Rehabilitation Act Amendments of 1974, 88 Stat. 1617

### Cultural Resources

American Indian Religious Freedom Act, P.L.95-341, 92 Stat. 469, 42 U.S.C. §1996

Antiquities Act of 1906, P.L.59-209, 34 Stat. 225, 16 U.S.C. §432 and 43 Code of Federal Regulations (CFR) 3

Archaeological and Historic Preservation Act of 1974, P.L.93-291, 88 Stat. 174, 16 U.S.C. §469

Archaeological Resources Protection Act of 1979, P.L.96-95, 93 Stat. 712, 16 U.S.C. §470aa *et seq.* and 43 CFR 7, subparts A and B, 36 CFR 79

National Historic Preservation Act as amended, P.L.89-665, 80 Stat. 915, 16 U.S.C. §470 *et seq.* and 36 CFR 18, 60, 61, 63, 68, 79, 800

Protection of Historic and Cultural Properties, Executive Order (E.O.)11593; 36 CFR 60, 61, 63, 800; 44 Federal Register (FR)6068

Public Buildings Cooperative Use Act of 1976, P.L.94-541, 90 Stat. 2505, 42 U.S.C. §4151-4156

## **Natural Resources**

Clean Air Act as amended, P.L.Chapter 360, 69 Stat. 322, 42 U.S.C. §7401 *et seq.*

Coastal Zone Management Act of 1972 as amended, P.L.92-583, 86 Stat. 1280, 16 U.S.C. §1451 *et seq.*

Endangered Species Act of 1973, as amended, P.L.93-205, 87 Stat. 884, 16 U.S.C. §1531 *et seq.*

Executive Order 11988: Floodplain Management, 42 FR 26951, 3 CFR 121 (Supp 177)

Executive Order 11991: Protection and Enhancement of Environmental Quality

Federal Insecticide, Fungicide, and Rodenticide Act, P.L.92-516, 86 Stat. 973, 7 U.S.C. §136 *et seq.*

Federal Water Pollution Control Act (commonly referred to as Clean Water Act), P.L.92-500, 33 U.S.C. §1251 *et seq.* as amended by the Clean Water Act, P.L.95-217

National Environmental Policy Act of 1969, P.L.91-190, 83 Stat. 852, 42 U.S.C. §4321 *et seq.*

Resource Conservation and Recovery Act, P.L.94-580, 30 Stat. 1148, 42 U.S.C. §6901 *et seq.*

Rivers and Harbors Act of 1899, 33 U.S.C.Chapter 425, as amended by P.L.97-332, October 15, 1982 and P.L.97-449, 33 U.S.C. §§401-403

Water Resources Planning Act of 1965 (P.L.89-80, 42 U.S.C. § 1962 *et seq.*) and Water Resource Council's Principles and Standards, 44 FR 723977

Watershed Protection and Flood Prevention Act, P.L.92-419, 68 Stat. 666, 16 U.S.C. §100186

## **Other**

Administrative Procedures Act, 5 U.S.C. § 551--559, §§701-706

Concessions Policy Act of 1965, P.L.89-249, 79 Stat. 969, 16 U.S.C. § 20 *et seq.*

Department of Transportation Act of 1966, P.L.89-670, 80 Stat. 931, 49 U.S.C. § 303

Energy Supply and Environmental Coordination Act of 1974

Executive Order 12003: Energy Policy and Conservation, 3 CFR 134 (Supp 1977), 42 U.S.C. § 2601

Executive Order 12008: Federal Compliance with Pollution Control Standards

Freedom of Information Act, P.L.93-502, 5 U.S.C. §552 *et seq.*

Intergovernmental Coordination Act of 1969, 42 U.S.C. §§4101, 4231, 4233

Noise Control Act of 1972 as amended, P.L.92-574, 42 U.S.C. §4901 *et seq.*

Outdoor Recreation Coordination Act of 1963, P.L.88-29, 77 Stat. 49

# APPENDIX B: CONSULTATION AND CIVIC ENGAGEMENT

This *Final GMP/EIS* for Castillo de San Marcos National Monument is based upon the ideas, concerns, and suggestions of NPS staff and managers, representatives of state, local, and other Federal agencies, private organizations and individuals, elected officials and the general public at large. These ideas, concerns, and suggestions were presented and recorded in individual stakeholder meetings, by participation in public meetings, through responses to newsletters, and comments entered on the Castillo de San Marcos GMP/EIS website.

## Stakeholder Meetings and Consultations

The consultation and civic engagement process began with a series of meetings with NPS subject matter experts and managers in the Southeast Regional Office in Atlanta during the second and third weeks of June, 2001. Meetings with various local agency and organization representatives began during the second week of March 2002 and continued during the last week of April, 2002. Agencies and organizations consulted during this period included various tour bus companies, historical societies, State and Federal agencies, the Chamber of Commerce, the St. Augustine Visitors and Conventions Bureau, the St. Johns County Planning Department, the St. Augustine City Manager's office, the Historic District Manager, and the St. Augustine Police Chief, among others. During the third week of February, 2003 the planning team met with representatives of the residential neighborhood on the northeast side of the park boundary and with the Colonial St. Augustine Foundation. Government to government consultation with federally recognized Indian tribes took place in person and by telephone during July and August of 2003.

## Public Meetings and Newsletters

The planning team kept the public informed and involved in the planning process through public meetings in the St. Augustine area and through the distribution of newsletters. Representatives of governmental agencies, organizations, businesses, legislators, local governments, and interested citizens contributed their names and addresses to a mailing list for the project. The NPS published a notice of intent to prepare the GMP/EIS in the *Federal Register* on October 9, 2001.

Newsletter No.1 described the planning effort and solicited public input. Public open house meetings were held at the St. Augustine Beach City Hall on May 29 and 30, 2002. The NPS received comments in the meetings and in response to the first newsletter. A second newsletter, presenting the preliminary management alternatives was published and distributed during the fall of 2004. This newsletter was also posted on the National Monument's GMP/EIS website. On December 8 and 9, 2004, the planning team presented the preliminary alternatives to the general public at the St. Augustine Beach City Hall.

In July 2005 Newsletter #3 was distributed and posted to the NPS Planning, Environment, and Public Comment (PEPC) website to report the status of the GMP planning process and to give the public options for reviewing the document (Electronic Files on a CD ROM, hard copy, or viewing on the Internet).

The Draft GMP/EIS for Castillo de San Marcos National Monument was published for public review and comment in April 2006. The public comment period ended on August 15, 2006. Public meetings were conducted in St. Augustine, Florida on June 5 and 6, 2006. In addition, comments were accepted through a dedicated electronic mailbox in the NPS Regional Office, through the PEPC website, and by U.S. mail.

Castillo visitors were also given the opportunity to select one of the four alternatives by filling out a comment sheet at a GMP display inside the fort.

Based on public comment on the Draft GMP/EIS, NPS revised the document to reflect a change in the agency preferred alternative from Alternative D to Alternative C. Another newsletter, Newsletter #4 was produced, mailed to about 80 agencies, individuals, neighbors, and other stakeholders and interested parties, and posted to the PEPC website on December 15, 2006 to provide an additional opportunity for public comment. The comment period closed on January 15, 2007. All substantive (see definition in Appendix D) comments are reproduced with the NPS response in Appendix D.

# APPENDIX C: SCOPING COMMENTS

*Scoping is the name for the process by which Federal agencies such as the NPS seek and record suggestions, concerns, ideas, and issues that stakeholders (park staff and management, other NPS staff and managers, Federal, state, and local public agencies, elected officials, and a variety of organizations, associations, and park neighbors) want to see considered and addressed in the planning document and environmental impact statement. This process consisted of individual meetings with individuals, agencies, and organizations, public meetings, newsletters with response cards, and a GMP/EIS website. The following lists of bulleted items represent the full range of public suggestions for the planning process. The comments have been sorted by broad categories.*

## **Administrative Uses of the Fort**

- The restrooms, Eastern National bookstore, and ticketing kiosk should be removed from the fort and relocated.
- Remove administrative functions from the fort (restrooms, bookstore, rangers' offices, and fee booth operation).
- Would like to see most offices and administrative uses removed from the fort (CASA), including the Eastern bookstore, even though sales in the fort are higher than they would be in another location. More office space would permit more products for visitors. Possible location: part of the existing parking lot.
- Relocate ticket booth.
- Current location and use of bathrooms and administrative offices is OK inside the fort. We need these functions in the fort.
- Visitor services should be moved out of the fort.
- There shouldn't be a visitor center on the west side of A1A because this would increase the flow of pedestrians across A1A from the Spanish Quarter to the fort and would cause more pedestrian accidents and impede vehicular traffic.
- Visitor center should be removed from the fort site. The Colonial St. Augustine Foundation would like to see the commercial strip between the Spanish Quarter and the park removed and a combined visitor center created in that space that serves both entities.
- There could also be a visitor center on the green just south of the park's administrative offices.

## **Parking Issue**

- Parking lot has circulation problems.
- Remove the parking lot from the site. It is a visual intrusion on the historic scene.
- Restore parking lot to natural conditions. Current parking lot is a big safety issue, maintenance issue, and visual intrusion.
- Open the park parking lot at night.
- The parking lot is important to the local business community.
- Need to manage the presence of automobiles at the park better.
- Parking is an issue.

## **Visitor Center**

- Relocate visitor center contact area to less intrusive location.

- Can a visitor center be dug into the glaxis?
- CASA (*CASA is NPS shorthand for Castillo de San Marcos National Monument*) needs a visitor center outside the fort.
- Off site visitor center might cause people to avoid coming to the fort itself. People might spend 15 minutes in a free visitor center, view exhibits, buy souvenirs and then skip the fort entirely. Keep them engaged but keep them engaged inside rather than elsewhere in the community. It is possible to design displays that are weatherproof and without air conditioning.
- Go to north fort green to establish visitor contact station.
- There shouldn't be a visitor center on the west side of A1A because this would increase the flow of pedestrians across A1A from the Spanish Quarter to the fort and would cause more pedestrian accidents and impede vehicular traffic.
- A new visitor center should be within the current park boundary. Convert park offices to a visitor center and move the offices and maintenance area off site.
- Visitor center should be removed from the fort site. The Foundation would like to see the commercial strip between the Spanish Quarter and the park removed and a combined visitor center created in that space that serves both entities.
- The park parking lot is a potential site for a visitor center.
- There could also be a visitor center on the green just south of the park's administrative offices.

## **Recreation on the Green**

- Any chance for multi-purpose paths (bike, hike, etc.)?
- There should be picnic tables on the green at the park.
- Don't put picnic tables on the green.
- Glaxis needs to be preserved but there are lots of requests to use it for special events.
- Too much recreation on the north green.
- Would like to see a stage or amphitheater outside the fort for community programs.

## **Visitor Experience**

- How can more groups be accommodated?
- The park is best early in the morning before opening and at night after closing. Can the hours be extended?
- Site needs to be more pedestrian friendly.
- \$5.00 entrance fee is too high.
- There should be more historical re-enactments and costumed interpretation.
- A printed schedule of re-enactments, encampments, living history demonstrations, etc. would be useful.
- Water in the moat. Would like to see water in the moat. Explanation of why water is not in the moat should be in park brochure next time it is redone. Possible wayside sign to explain?
- Wants to see the fort stay.
- The park is the greatest monument in Florida.

## **Resource Condition**

- Should the fort's walls be covered with stucco?
- How can people be brought to the park in a manner less destructive of the grounds?
- Do a geophysical archeological survey of the grounds surrounding the Castillo de San Marcos.
- Bushes on edge of parking lot look terrible.

- Will you put more trees along the paved walkway on the north green?
- Don't paint the fort. It would be dangerous to the coquina.
- You do a good job of keeping up the grounds.
- Will you be able to preserve the battery?

### **Partnerships with the City**

- Possible partnering opportunity with the city for use of the City's historic district visitor center across the street as a site for a park Visitor Center. The auditorium could be used to present an introductory film.
- Opportunities for cross-promotions, partnerships should be explored.
- Link interpretation at CASA with City's interpretation of North St. George Street.
- The NPS and the state should not tear down the Mary Peck house. *(This comment was made at least 2 years before the Mary Peck house was moved to a new location. Furthermore, NPS never owned the Mary Peck house and had no control over its fate.)*
- Fundraising activities on the gun deck could be tied in with Super Bowl in Jacksonville in 2005.

### **Commercial Tour Operators**

- Water taxi or tour boat between CASA and FOMA.
- Would like to be able to rent the fort at night for private parties.
- Would like to see evening programs at CASA for tour groups and conventions. Business clients, corporate groups could and would pay for catered dinners, entertainment, interpretive programs, etc.

### **Miscellaneous**

- Transfer ownership of Orange Street from NPS to the City of St. Augustine.
- Security is an issue. Closing the park grounds from midnight to 5 am helps.
- Eventually nighttime security at the fort may be necessary.

### **Impacts on Adjacent Neighborhood**

- Preserve the Abbot tract community in conjunction with the fort. The fort can engage the community and set some guidelines that the City can understand.
- What are plans for the gated entrance on Water Street? Please don't open it permanently again?
- There were questions about the new maintenance compound building and the presence of a dumpster behind the compound.
- The NPS and the state should not tear down the Mary Peck house. *(The Mary Peck house has been moved to a new location.)*

# APPENDIX D: COMMENTS RECEIVED ON THE DRAFT DOCUMENT

The Draft General Management Plan/Environmental Impact Statement was sent out to the public in April 2006 for a 110-day review and comment period. This section contains a summary of comments received from public meetings, letters, and electronic messages during the comment period for the draft plan.

## REGULATIONS FOR HANDLING COMMENTS

In preparing a final environmental impact statement, the National Park Service is required to respond to all substantive written and oral comments from the public or from agencies. The agency also is required to make every reasonable attempt to consider issues or alternatives suggested by the public or by other agencies.

Substantive comments are defined as those that do one or more of the following:

- question, with reasonable basis, the accuracy of information in the document
- question, with reasonable basis, the adequacy of the environmental analysis
- present reasonable alternatives other than those presented in the draft document
- cause changes or revisions in the proposal (preferred alternative)

In other words, substantive comments raise, debate, or question a point of fact or policy. Comments in favor of or against the preferred alternative, or comments that only agree or disagree with NPS policy, are not considered substantive.

The Council on Environmental Quality (CEQ) regulations, which implement the National Environmental Policy Act, provide guidance on how an agency is to respond to substantive public comments (40 CFR 1503.4.1–5). Such responses can include the following:

- modify the alternatives as requested
- develop and evaluate suggested alternatives
- supplement, improve, or modify the analysis
- make factual corrections
- explain why the comments do not warrant further agency response, citing sources, authorities, or reasons that support the agency's position

## PUBLIC MEETING AND COMMENTS RECEIVED

A notice of availability of the draft plan was published in the Federal Register on April 28, 2006 (Federal Register 71:82, page 25172). Copies of the document were distributed to government agencies, organizations, public interest groups, and individuals. In addition, the complete text of the Draft GMP/EIS was posted on the NPS Planning, Environment, and Public Comment web site (<http://parkplanning.nps.gov>). Comments were accepted through August 15, 2006.

As part of the public review period, the National Park Service conducted public meetings in St. Augustine, Florida, in June 2006. The meetings were announced in local media, and notices were sent to those on the mailing list. All letters from governing bodies, government agencies, and substantive comments from individuals are reproduced in this document.

## CHANGES RESULTING FROM COMMENTS

The NPS considered all the comments received on the Draft General Management Plan and analyzed them according to the requirements described in the regulations listed above.

Many commenters indicated that they disapproved of the preferred alternative as identified in the Draft GMP/EIS. The NPS has selected a new preferred alternative for the Final GMP/EIS in response to the vast majority of public comments. A newsletter describing the change of the preferred alternative was distributed to the public and posted on the NPS Planning, Environment, and Public Comment web site (<http://parkplanning.nps.gov>). Comments on the changes proposed in the newsletter were accepted from December 7, 2006 through January 15, 2007. In response to public comments, the National Park Service has made slight revisions to the text in this Final GMP/EIS. These changes did not affect the findings of the environmental impact statement.

## RESPONSES TO COMMENTS

Following are substantive comments on the Draft GMP/EIS and newsletter and responses to those comments. The agency, organization, or individual that voiced the concern is identified in parenthesis immediately following the concern statement. Also included are reproductions of letters received from agencies.

1. **Comment:** “As I read the plan, it did not include any reference in it to the rich black history of the area.” (David Nolan, St. Augustine, Florida)

**Response:** It is beyond the scope of a General Management Plan to discuss historical periods, people, or events that are outside the period of significance of the site.

2. **Comment:** P. 14 [of Draft GMP/EIS] NPS Recognition that CASA is integral part of larger regional environment. . . There is no mention of Fort Mose as a significant cultural site that is being developed, a site that is part of the Underground Railroad that NPS has devoted great amounts of time and resources to uncover.

(National Underground Railroad Network to Freedom <http://209.10.16.21/TEMPLATE/FrontEnd/index.cfm#>) and there is no information about how databases that exist about current CASA archaeological inventory are accessible locally or via SEAC. <http://www.cr.nps.gov/seac/seac.htm> and <http://www.cr.nps.gov/seac/collman.htm> Collections and Information Management, and there is no mention of the Florida Master Site File <http://www.cr.nps.gov/seac/siteman.htm>.

Scholarly articles, including:

**Site File in the Sunshine: The Florida Master Site File --where?**

Marion F. Smith, Jr.

**Site File Information Management: Myths, Illusions, and Realities**

Lee Tippet

**Managing and Exchanging Information about Archeological Sites in the Electronic Age**

S. Terry Childs

**Site Records in the Southeast: An Overview of Preservation Efforts and Challenges**

Michael Trinkley

**Site File Management in the Southeast**

David G. Anderson

are noted on webpage <http://www.cr.nps.gov/seac/siteman.htm>, but the text version of this volume is NOT available at URL <http://anthro.org/sfm01.htm>. because of a broken link. Another broken link on

<http://www.cr.nps.gov/seac/research.htm> , [Ongoing SEAC research](#), is broken, and it is an important link: [National Archaeological Database](#). <http://www.cast.uark.edu/error404.html> file not found. (Dwight Hines, St. Augustine, Florida)

**Response:** Fort Mose is mentioned in the draft plan in Chapter 1, at page 7 in the context of its function as part of the outer defenses of the Castillo in particular and the City of St. Augustine in general. It would have been beyond the scope and purpose of the General Management Plan to discuss the planned development of a visitor center for Fort Mose or specific plans for any of the many other significant cultural sites in St. Augustine.

Likewise it is beyond the scope of the General Management Plan to serve as a compendium of sources of archeological data or other information for researchers. The GMP focuses on the kinds of resource conditions and visitor experiences that will best fulfill the purpose of the park.

- 3. Comment:** P. 15 [of Draft GMP/EIS] NPS will work cooperatively with Non-NPS agencies is good so far, but there is no mention of possible unified plans with State Parks for joint transport solutions for Fort Mose and the CASA, and other historically significant Afro-American areas in St. Augustine. Just this weekend, there were three permanent commemorative plaques dedicated in the City, and Senator Tony Hill said that these are major tourist attractions and will become more so in the future. There needs to be specific agreements on transport to save fuel and frustrations. Similarly, the City last month received the results of a \$60,000 dollar study on St. George Street that was highly critical of the lack of historical features and cohesiveness, and the City Commission is now considering what actions to take. CASA is significant in this report. (Dwight Hines, St. Augustine, Florida)

**Response:** The details of future transportation partnerships or joint solutions for transportation to cultural sites in St. Augustine are beyond the scope of the GMP. These are left for future implementation plans that tier off the GMP.

- 4. Comment:** P. 18 [of Draft GMP/EIS] The Visitor experience section is weak. Although the Draft does state the methods were qualitative, scoping alone is NOT enough for good decisions. NPS has excellent survey procedures and what must be done is to ask the people who visit. Random surveys, truly random, would provide actionable information on what the visitors find of interest, prefer, and how the different visitors can be grouped. There were many groups of professionals and representatives of agencies contacted, but no statistically valid or reliable surveys of tourists or visitors. (Dwight Hines, St. Augustine, Florida)

**Response:** NPS agrees with the reviewer that scoping alone is not enough for good decisions. Scoping was only the first part of the decision making process. Next the multi-disciplinary planning team developed a set of preliminary management alternatives that responded to the results of scoping in the context of the park's purpose, mission, and significance. NPS managers then reviewed these alternatives and suggested changes. These modified alternatives were written into a newsletter which was distributed by mail, posted on the Internet and presented at public meetings. The feedback from these meetings was used to further modify the alternatives. Then a structured and quantitative process called "Choosing by Advantages" was employed to select an agency preferred alternative. The result of all this was the Draft GMP/EIS that was published in May of 2006. This reviewer's comments and others will be used as appropriate to create the final General Management Plan and Record of Decision.

With regard to visitor surveys, NPS is conducting an ongoing visitor survey project (VSP). The VSP conducts approximately 10 in-depth visitor surveys in units of the National Park System each year.

5. **Comment:** P. 24 [of Draft GMP/EIS] We need the Cultural Landscape Report to be completed as soon as possible, as required by law. The contents of the report could influence these recommendations. (Dwight Hines, St. Augustine, Florida)

**Response:** The Cultural Landscape Report is a requirement of NPS policy, not statutory law, and it will be completed subsequent to the publishing of the Record of Decision for the General Management Plan in the Federal Register.

6. **Comment:** P. 35 [of Draft GMP/EIS] There are no data that I know of that support the statement that a new visitor center in the “Spanish Quarter in St. Augustine would add an additional attraction to the mix of shops, museums, and food venues already there.” Based on the report the City just received, it is more likely that the experience of CASA would be negatively impacted by a visit to the Spanish Quarter. We need reliable and valid statistics from tourists, not ‘scoping’ or ideational fluency based on intuition or gut feelings of the experts. (Dwight Hines, St. Augustine, Florida)

**Response:** The statement referred to by the reviewer was added to the section explaining the cost comparison table to illustrate a possible positive impact that could occur as a result of placing a visitor center in the Spanish Quarter. However, no positive dollar impacts were included in the cost table precisely because, as stated by the reviewer, there were no available data to support such numbers.

7. **Comment:** P. 40 [of Draft GMP/EIS] There has been no need shown for a visitors’ center using generally accepted quantitative scientific methods. It would be of help to have information from other parks that do not have visitor centers. If the City of St. Augustine builds on the recent report they received on the St. George area, the City might cooperate in providing a visitors center, especially if it could be shown to increase visitors. (Dwight Hines, St. Augustine, Florida)

**Response:** The visitor center proposal in two of the three alternatives is based on recommendations in the 1978 management plan for the park, growth in visitation since 1978, and scoping comments from the public and from NPS staff.

8. **Comment:** P. 43-44 [of Draft GMP/EIS] NPS has an outstanding data base on what contributions a visitors center, or other changes, make to tourism, the visitors’ experience, and to the general socioeconomic environment. We need to know what the data from other parks show. (Dwight Hines, St. Augustine, Florida)

**Response:** Data from the economic generation model for the Castillo have been calculated for 2005 and have been added to the appendices.

9. **Comment:** P. 47 [of Draft GMP/EIS] Museum collection -- we need SEAC to be not just on the web, but available for iPods, and in accessible, query types of data bases for visitors to ask questions about the collection. We need to be sure that SEAC uses formats of data that can be shared with the different groups on St. Augustine and Florida. The schools and the local libraries must have easy access to the Museum collection via SEAC. With 41,822 artifacts and 449,500 pieces and wholes of archival material, there is much work that can be done by teachers of statistics and graphics and history. (Dwight Hines, St. Augustine, Florida)

**Response:** The availability of data on the archeological collections stored at the NPS’s Southeast Archeological Center (SEAC) is beyond the scope of the General Management Plan for the Castillo de San Marcos National Monument.

10. **Comment:** P. 51 [of Draft GMP/EIS] Visitor use seems to be highly variable. Latest number given is 659,798 for 2003. We need more current data and NPS has the ability to have an online, publicly accessible count of visitors. We need to have a reference for the survey mentioned where 12% did not make it past the entrance booth. Why so large a number? Staff estimates are a mistake, data needs to be obtained, according to NPS guidelines, on what the tourists and visitors report. Given the huge variation across years, it is most likely not meaningful to examine seasons unless the effects are robust. We don't know that.

Problem with the data becomes more acute when Draft on p. 54, states there were 3.5 million visitors to St. Johns County, and I estimate only 600,000 of them made it to CASA. Maybe CASA needs to improve their visibility or awareness within the county. We need to know which ones made it and which ones didn't and why. (Dwight Hines, St. Augustine, Florida)

**Response:** A footnote has been added to provide a reference for the survey mentioned in the paragraph on visitor use and trends.

11. **Comment:** P. 53 [of Draft GMP/EIS] we need research on how much CASA contributes to the community. Economic impact models are available and NPS has used them in the past. (Dwight Hines, St. Augustine, Florida)

**Response:** Data from the economic generation model for the Castillo have been calculated for 2005 and have been added to the appendices.

12. **Comment:** P. 54 [of Draft GMP/EIS] Community Characteristics given here are almost totally opposite to what the recent report the City received on St. George Street. Of course, neither the draft nor the City report collected data according to generally accepted scientific methods. (Dwight Hines, St. Augustine, Florida)

**Response:** The description of the St. Augustine community in this section is based on descriptions from a variety of sources and is not intended to be scientific, nor could it be.

13. **Comment:** Pp. 45 & 46 [of Draft GMP/EIS] are out of order, but they are Chapter 3- Affected Environment. I disagree strongly with the statement that none of the proposed actions is expected to reduce the availability of affordable housing or result in a negative impact to the socioeconomic environment of the local community, [and that] minority and low income populations, . . . , would not be significantly affected.”

First, St. Augustine has had a declining Afro-American population for some 40 years. The decline reduces the diversity of the community and is considered negative. Not having a negative impact on a declining population is not acceptable any more than not taking positive actions when you see a person being mugged. The intent of the Executive Order and the law is not only that NPS decisions cause no harm. The intent is to insure that NPS does not contribute to a situation that yields a huge negative effect on specific groups. Doing nothing in this situation is not acceptable. We need to be able to access data, or have NPS provide us with data that already exists on the impact of supposedly neutral park changes on characteristics and numbers of minorities and affordable housing within local communities.

Second, most of the Draft has claimed a great positive impact of CASA on the community in the past, the present and in the future. To argue that the great beneficial impact is not going to be differential by race is ignoring St. Augustine's history and some of the residual practices of the City government today, see the currently active St. Johns County, Florida, Seventh Judicial Circuit Case No. CA06-

319, Hines vs. City of St. Augustine, & Bill Harriss, City Manager, & Tim Burchfield, Chief Administrative Officer, & Frank Domingoes, Manager of Information Technology, involving multiple violations of Chapter 119, Fla. Stat. (2005) Public records law, as well as illegal dumping. The City is claiming that it has no records for its vehicles, records that would show differential services to the citizens based on race and socio-economic status. Statistical sampling show large differences in the provision of services based on socio-economic status and race.

If this section of the draft, P. 46 -- SOCIALLY OR ECONOMICALLY DISADVANTAGED POPULATIONS -- is not modified to take the above facts into account, CASA and NPS will incur civil liability for harms caused to the effected populations from individuals acting alone or as a group, and likely will be in violation, at least, of 42 USC 1983 and Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations." (Dwight Hines, St. Augustine, Florida)

**Response:** NPS believes that the preferred alternative will have minor to moderate beneficial impacts to the socioeconomic environment. Some persons may be benefited more than others, but disparate beneficial impact in and of itself does not constitute an adverse impact requiring detailed analysis of environmental justice considerations. For such an analysis to be triggered, a disparate impact to minorities or low-income populations must exist, and that impact must be potentially significant. NPS is not aware of any evidence to suggest that the specific actions in the preferred alternative would provide significantly greater benefits to the majority population than to minorities or low-income populations. Furthermore, the commenter has not shown how the preferred alternative would reduce, directly or indirectly, the availability of affordable housing or otherwise adversely affect minorities or low-income populations. Adverse impacts to minorities and low-income populations may be occurring locally and may continue to occur, but the source of these impacts would appear to be larger economic and social forces. The limited actions contemplated in the preferred alternative would not contribute to these forces in any significant way. Therefore, environmental justice has been dismissed from further consideration in the EIS.

14. **Comment:** P. 61[of Draft GMP/EIS] Socioeconomic environment is weak and unacceptable according to generally accepted scientific methods, and fails to take into account past and present discriminatory patterns in St. Augustine. (Dwight Hines, St. Augustine, Florida)

**Response:** The environmental impact section of the general management plan is required to evaluate the impacts of the management alternatives on the socio-economic environment of the local community. It is beyond the scope or purpose of the GMP to analyze historical discrimination in the city of St. Augustine.

15. **Comment:** P. 65 [of Draft GMP/EIS] Socially or Economically Disadvantaged Populations. Jeremy Dean produced a good film about some of St. Augustine's past and present, "Dare NOT Walk Alone". It is a powerful film and is playing to packed auditoriums in St. Augustine, Daytona, and Jacksonville, Florida. It will win awards for documentary coverage. Yesterday, at three different churches in St. Augustine, plaques were uncovered memorializing the accomplishments of people in the early civil rights campaigns in St. Augustine. All the speakers were proud of the progress that individuals had made in their long walk to equality. It is overwhelming when you hear a Brigadier General in the United States Marines speak of how there were no black Marines until 1943, and now there are 15 Afro-American Generals. All of the speakers said there were still miles to go on the long walk to total and complete fair citizenship. This section of the Draft needs data from other parks in urban areas and data from St. Augustine. There is a wonderful opportunity to have joint programs with Fort Mose, numerous locations in West St. Augustine and CASA in multiple domains. The only requirement is that the impact of the programs be measurable. (Dwight Hines, St. Augustine, Florida)

**Response:** The environmental impact section of the general management plan is required to evaluate the impacts of the management alternatives on the socio-economic environment of the local community. It is beyond the scope or purpose of the GMP to analyze historical discrimination in the city of St. Augustine.

16. **Comment:** P. 67 [of Draft GMP/EIS] The claim that there have been “numerous archaeological surveys” on CASA, needs to reference the surveys so they can be read. There needs to be a comprehensive inventory as discussed earlier to be sure that mitigation steps will be beneficial to the parts and the whole of CASA archaeology. (Dwight Hines, St. Augustine, Florida)

**Response:** A reference to the archeological surveys done at the Castillo has been added to the list of references in Appendix H.

17. **Comment:** P. 69 [of Draft GMP/EIS] There are no data collected that I know of using generally accepted scientific methods that support the statement that “proximity to the Spanish Quarter to the park has a great impact on the visitor experience.” There are no data that I know of that supports the statement: “Visitors usually explore the Quarter and visit the Fort.” There are no data that I know of that supports the statement: “The impacts of this on visitor experience are major and beneficial.” The recent city report on St. George indicates to most of those who read it that the Spanish Quarter and St. George Street need major changes. (Dwight Hines, St. Augustine, Florida)

**Response:** The reviewer is correct in that scientific data were not used to make the statements quoted in his comment. These assessments of cumulative impacts on visitor use and experience were made collectively by the planning team and the park staff based on their knowledge and experience. These assessments were reviewed by subject matter experts in the National Park Service before releasing the document for public review.

18. **Comment:** Appendix D: [of Draft GMP/EIS] “Choosing By Advantages” was confusing to me. A short example would have helped. I also am wary of any procedure that does not tell me what my probable error is in obtaining the information or the weights or the final outcomes. I am also concerned because the method is used widely by NPS and the Forestry Service, but appears not to be used by other agencies, although GAO does recognize the technique. (Dwight Hines, St. Augustine, Florida)

**Response:** Choosing By Advantages has been endorsed by the Society of American Value Engineers and was successfully used by an interdisciplinary decision-making team, including representatives from the Sierra Club, the Audubon Society, land developers, government agencies, and others — to select a highway location for the 2002 Winter Olympics. Jim Suhr’s book on CBA has been added to Appendix H, References.

19. **Comment:** [Comment on Newsletter 4] Where are the data to support the decision to Alternative C as the preferred plan? Pursuant to the Data Quality Act, you must provide the data, the method of collecting the data, and how the data were analyzed.

What concerns me is that there were a number of unsubstantiated statements in the earlier Draft Plan and the decision to go with any of the alternatives is not justified based on the data you have provided publicly. In fact, you have not provided any data. (Dwight Hines, St. Augustine, Florida)

**Response:** The National Park Service (NPS) issued a Director’s Order (DO # 11B, October 16, 2002) in response to the requirements of the Data Quality Act (Section 515(a) of Public Law 106-554). The purpose of the Director’s Order was to establish NPS guidelines to comply with the

requirements of the law. The General Management Plan/Environmental Impact Statement process is governed by the National Environmental Policy Act as well as other laws and policies and this process employs professional judgments from a variety of subject matter experts within and outside the National Park Service who rely on their education, experience, and readily available information from a variety of sources to make those judgments. It would be impractical to list all the sources of information from which these individuals derive their expertise and professional judgments, however relevant legislation is listed in Appendix A, principal references for this document are listed in Appendix H, and the principal contributors are listed in Appendix F. The judgments of those contributors feed into the development of plan alternatives and assessments of impacts. No new data of any kind has been generated during the planning process. Decisions regarding the selection of GMP preferred alternatives are not presented as scientific facts based on data. They are statements of agency intent that are derived from the mission, significance, and purpose of the park; goals and objectives of the National Park Service; laws, policies, and regulations; cost estimates; the Choosing by Advantages decision-making process; oversight by managers of the National Park Service and the Department of the Interior; and public comments.



FLORIDA DEPARTMENT OF STATE  
**Sue M. Cobb**  
Secretary of State  
DIVISION OF HISTORICAL RESOURCES

Mr. David Libman  
National Park Service  
Southeast Regional Office  
100 Alabama Street, 1924 Building  
Atlanta, Georgia 30303

July 26, 2006

RE: DHR Project File Number: 2006-3340  
Received by DHR April 24, 2005  
*Draft General Management Plan and Environmental Impact Statement for Castillo de San  
Marcos National Monument*  
St. Augustine, St. Johns County

Dear Mr. Libman:

Our office received and reviewed the above referenced project in accordance with Section 106 of the *National Historic Preservation Act of 1966*, as amended and *36 CFR Part 800: Protection of Historic Properties*. The State Historic Preservation Officer is to advise Federal agencies as they identify historic properties (listed or eligible for listing, in the *National Register of Historic Places*), assess effects upon them, and consider alternatives to avoid or minimize adverse effects.

We have reviewed the draft General Management Plan and Environmental Impact Statement for Castillo de San Marcos National Monument, and are in concurrence with the National Park Service preferred alternative, Alternative D. While balancing other management concerns, we are drawn to Alternative D because of its emphasis on the preservation of the Castillo.

Should you have any questions regarding our review comments, please contact David Ferro, R.A. of my staff at 850-245-6363 or 800-847-7278.

Sincerely,

Frederick P. Gaske, Director, and  
State Historic Preservation Officer

XC: Gordon Wilson, NPS

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## APPENDIX E: CHOOSING BY ADVANTAGES

The NPS uses a method of ranking GMP/EIS alternatives that was originally developed by Jim Suhr, N. Ogden, Utah. CBA is a decision-making process based on determining the advantages of different alternatives for a variety of factors or goals. The advantages are then weighed and summarized to help identify the preferred alternative.

One of the greatest strengths of the CBA system is its fundamental philosophy: decisions must be anchored in relevant facts. 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 CBA 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 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 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.

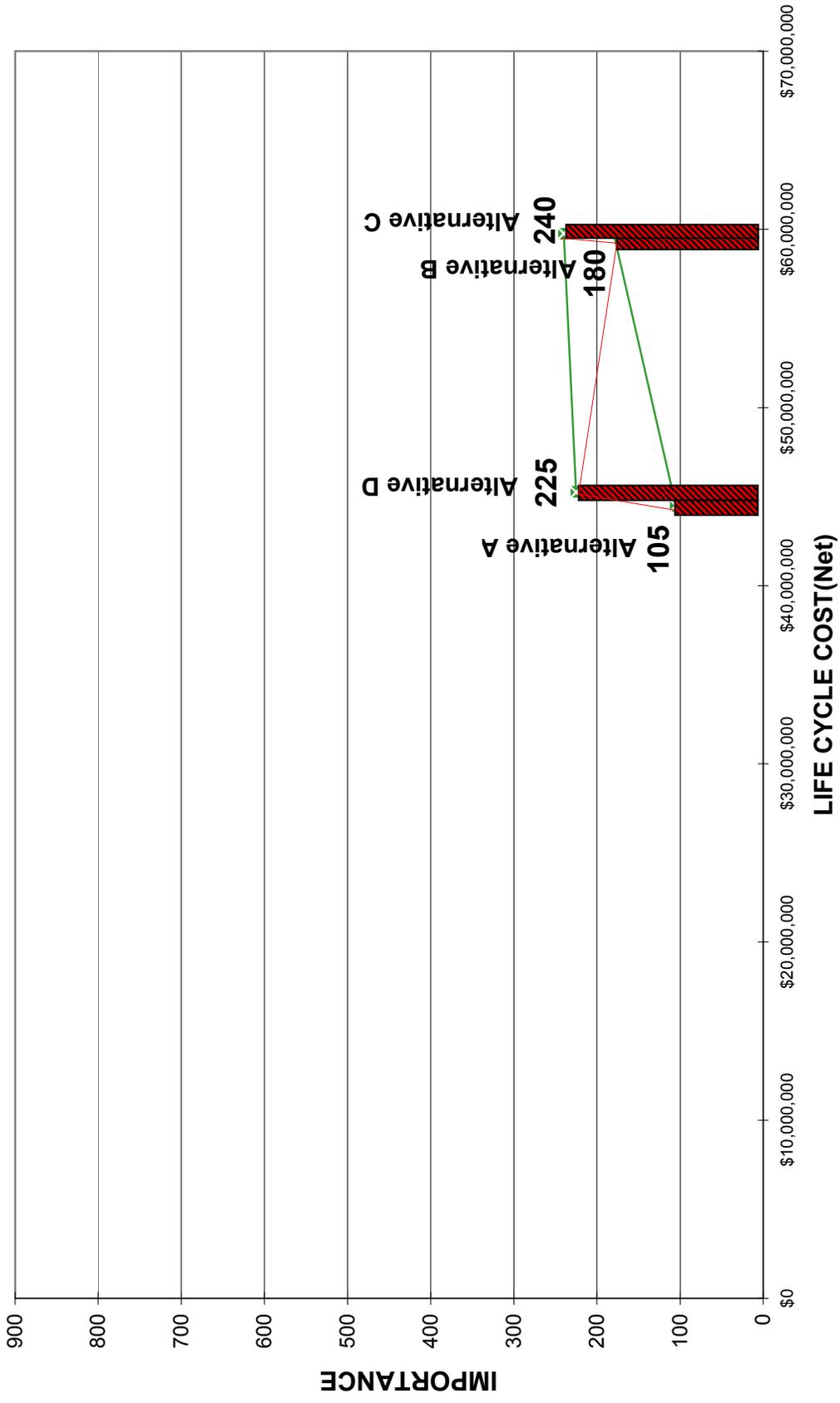
This process is an objective way to perform this tedious and complicated task which provides a way to engage participants, and come to complete consensus. It could be used to allocate capital funding or prioritize planning efforts. Its benefits include providing corporate memory and consistency, along with buy-in from all levels of participation.

The NPS preferred alternative for this Final GMP/EIS, was selected by the CBA method, and is the NPS’s proposed action.

The matrix used to evaluate the advantages of each alternative as well as the line-graph that illustrates the advantage of the preferred alternative follow this summary of the CBA method.

FACTORS	ALTERNATIVE A (NO ACTION)	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D
PROTECT AND ENHANCE THE CASTILLO - Extent to which alternative returns casemates to historic conditions	<ul style="list-style-type: none"> <li>Continue to use 7 casemates for visitor and park services</li> </ul>	<ul style="list-style-type: none"> <li>Continue to use 4 casemates for visitor and park services</li> </ul>	<ul style="list-style-type: none"> <li>Continue to use 5 casemates for visitor and park services</li> </ul>	<ul style="list-style-type: none"> <li>Continue to use 4 casemates for visitor and park services</li> </ul>
PROTECT AND ENHANCE THE LANDSCAPE - Extent to which intrusive, non-historic features / uses are present in the landscape.	<ul style="list-style-type: none"> <li>Continue location of fee station, parking lot, trailer-train/bus drop-zone in the landscape</li> </ul>	<ul style="list-style-type: none"> <li>Remove &amp; relocate fee station to less sensitive area</li> <li>Remove 2/3 of parking lot</li> <li>Construct visitor center in headquarters area</li> <li>Widen sidewalk &amp; construct 2 wayside areas</li> </ul>	<ul style="list-style-type: none"> <li>Remove &amp; relocate fee station to less sensitive area</li> <li>Remove 3/4 of parking lot</li> </ul>	<ul style="list-style-type: none"> <li>Remove &amp; relocate fee station to less sensitive area</li> <li>Continue location of parking lot &amp; trailer-train/bus drop-zone in the landscape</li> </ul>
PROVIDE CONVENIENT VISITOR ACCESS - Distance to visitor parking for visitor access to the fort entrance.	<ul style="list-style-type: none"> <li>Maintain general parking &amp; train/bus drop-zone at fort entrance</li> </ul>	<ul style="list-style-type: none"> <li>General parking at new city facility</li> <li>Maintain handicapped parking &amp; train/bus drop-zone at fort entrance</li> </ul>	<ul style="list-style-type: none"> <li>General parking at new city facility</li> <li>Maintain handicapped parking &amp; train/bus drop-zone at fort entrance</li> </ul>	<ul style="list-style-type: none"> <li>Maintain general parking &amp; train/bus drop-zone at fort entrance</li> </ul>
PROVIDE COMPREHENSIVE VISITOR EXPERIENCE - Degree to which the alternative provides the visitor with more diverse experiences, including both Civilian and Military life in St. Augustine.	<ul style="list-style-type: none"> <li>All interpretive activities occur at the Castillo</li> <li>Primary focus is on military life</li> </ul>	<ul style="list-style-type: none"> <li>Construct visitor center in the park near headquarters to orient visitors &amp; expand interpretation of Castillo and St. Augustine</li> <li>Use 3 additional casemates to interpret military life at the Castillo</li> </ul>	<ul style="list-style-type: none"> <li>Construct visitor center in Spanish Quarter to orient visitors &amp; expand interpretation of Castillo and St. Augustine</li> <li>Use 2 additional casemates to interpret military life at the Castillo</li> </ul>	<ul style="list-style-type: none"> <li>Use 3 additional casemates to interpret military life at the Castillo</li> <li>Expanded opportunity to interpret military life at the Castillo</li> </ul>
<b>TOTAL IMPORTANCE OF ADVANTAGES</b>	<b>105</b>	<b>180</b>	<b>240</b>	<b>225</b>

# Castillo de San Marcos NM General Management Plan



# APPENDIX F: LIST OF PREPARERS & CONSULTANTS

*The following individuals contributed to the preparation of this GMP/EIS*

## **Castillo de San Marcos National Monument**

Dean Garrison, former Chief of Maintenance  
Luis Gonzalez, Site Supervisor  
Kim Kirk, former Chief Ranger  
Robin Leatherman, Chief of Maintenance  
Dave Parker, former Site Supervisor, Fort Matanzas National Monument  
Andrew Rich, Site Supervisor, Fort Matanzas National Monument  
Tom Sims, Fee Program Specialist  
Shirley Vellis, Chief of Administration  
Gordon Wilson, Superintendent

## **Southeast Regional Office Planning Team**

John Barrett, Planner  
Tim Bemisderfer, Landscape Architect  
David Libman, Planner  
Amy Wirsching, Planner

## **Southeast Regional Office Consultants**

The GMP/EIS planning team met with the following individuals in the Southeast Regional Office at the beginning of the GMP/EIS process to involve all NPS disciplines and program areas in the enumeration of planning issues, resource management concerns, and visitor experience priorities. Both Wally Hibbard and Fred Shott had prior management level experience at the park and many of the other consultants had been involved with various projects there.

Bob Blythe, former Historian  
Allen Bohnert, Regional Curator  
David Hasty, Historical Landscape Architect  
Wally Hibbard, former Program Manager  
Lucy Lawliss, former Historical Landscape Architect  
J. Anthony Paredes, PhD., former Regional Ethnographer  
Richard Ramsden, Chief, Architecture Division  
Dan Scheidt, Chief, Cultural Resources Division  
Fred Shott, former Chief, Facilities Management  
Tracy Stakely, Historical Landscape Architect  
Rich Sussman, Chief, Planning & Compliance Division  
Don Wollenhaupt, Chief, Interpretation Division

## **Tribal Consultations**

In accordance with the various laws, policies, and Executive Orders concerning consultation with and outreach to Federally recognized tribal governments, the Superintendent of Castillo de San Marcos National Monument sent letters to the following tribes inviting their formal participation in the park's general management planning process.

Alabama-Coushatta Tribe of Texas, Alabama-Quassarte Tribal Town, Apache Tribe of Oklahoma, Arapaho Tribe of Wind River Reservation, Wyoming, Caddo Indian Tribe of Oklahoma, Cheyenne-Arapaho Tribes of Oklahoma, Chickasaw Nation, Comanche Indian Tribe, Oklahoma, Coushatta Indian Tribe, Fort Sill Apache Tribe of Oklahoma, Jicarilla Apache Tribe of Jicarilla Apache Indian Reservation, New Mexico, Kialegee Tribal Town, Kiowa Indian Tribe of Oklahoma, Mescalero Apache Tribe of the Mescalero Reservation, New Mexico, Miccosukee Indian Tribe, Muscogee (Creek) Nation, Northern Cheyenne Tribe of the Northern Cheyenne Indian Reservation, Montana, Poarch Creek Indians, San Carlos Apache Tribe of the San Carlos Reservation, Arizona, Seminole Nation of Oklahoma, Seminole Tribe of Florida, Thlopthlocco Tribal Town, Tonto Apache Tribe of Arizona, White Mountain Apache Tribe of the Fort Apache Reservation, Arizona, and the Yavapai-Apache Nation of the Camp Verde Indian Reservation, Arizona.

Of these 25 tribes the following indicated an interest in consulting: Cheyenne-Arapaho Tribes of Oklahoma, Fort Sill Apache Tribe of Oklahoma, Mescalero Apache Tribe of the Mescalero Reservation, Miccosukee Indian Tribe, and the Northern Cheyenne Tribe of the Northern Cheyenne Indian Reservation.

Of these, one representative of the Fort Sill Apache Tribe of Oklahoma consulted in person for two days and two representatives of the Miccosukee Indian Tribe consulted in person for one day, and one representative of the Mescalero Apache Tribe of the Mescalero Reservation of New Mexico consulted by telephone.

# APPENDIX G: ECONOMIC BENEFITS

## Economic Benefit of Castillo de San Marcos NM to Local Area

### NPS Money Generation Model Estimates for FY 2005

Park	FY 2005 Visits	Park's Benefit to Local Area (\$000's)	Local Jobs Supported
Castillo de San Marcos NM	610,110	\$37,978	834

### Detailed Breakdown of Park's Local Area Benefit, FY 2005

Park	FY 2005 Visits	Non-local Visitor Spending (\$000's)	NPS Salary and Benefits (\$000's)	Non-local Visitor Spending + NPS Salary and Benefits (\$000's)	Jobs Supported by Visitor Spending	Jobs Supported by Park Payroll Spending	Jobs Supported by Visitor Spending + Park Payroll Spending
Castillo de San Marcos NM	610,110	\$36,194	\$1,784	\$37,978	783	51*	834

\*Includes both NPS jobs and jobs supported by NPS employees spending salaries and wages locally.

### Definitions

#### **FY 2005 Visits:**

Recreational visits in FY 2005 (NPS Public Use Statistics Office).

#### **Park's Benefit to Local Area:**

Dollars added to the local area (within approximately 50 miles) of the park from:

- Spending by visitors from outside the area on lodging, food, transportation, souvenirs, etc.;
- Park's NPS payroll, including salaries, wages, and benefits (NPS Accounting Operations Center).

#### **Local Jobs Supported:**

Number of part- and full-time jobs (including NPS jobs) supported by:

- Visitors spending money in the local area;
- NPS payroll;
- NPS employees spending salaries and wages in the local area

### Background

The Money Generation Model-Version 2 (MGM2) is a conservative peer-reviewed tool used by the NPS Social Science Program to estimate the contribution of visitor and park payroll spending to local areas within a 50-mile radius of parks. A good way to describe the MGM2 estimates is that they represent dollars that enter a local area's economy as a direct result of a park's presence and operation. MGM2 is managed through a partnership with Michigan State University.

NPS Social Science Program, Natural Resource Stewardship and Science Directorate  
 July 2006. For more information contact: Jim Gramann, Visiting Chief Social Scientist, (202) 513-7189,  
 James\_Gramann@partner.nps.gov

# APPENDIX H: REFERENCES

Brown, Jennifer D.

1997 *Castillo de San Marcos National Monument Historic Resource Study*. Southeast Regional Office, National Park Service. Atlanta, GA.

Florida Department of Environmental Protection (FDEP)

2004 Air Resource Management. WWW: (<http://www.dep.state.fl.us/air/>)

Lang, Kathryn A., Durham, Dale H., Ourada, Steve

1995 *Castillo de San Marcos and Fort Matanzas National Monuments Collection Management Plan*. Museum Services Division, Southeast Regional Office, National Park Service. Atlanta, GA.

National Park Service (NPS)

1993 *Statement for Management, Castillo de San Marcos National Monument*. Castillo de San Marcos National Monument, National Park Service. St. Augustine, FL.

2002 *Castillo de San Marcos and Fort Matanzas national Monument Long Range Interpretive Plan*. Castillo de San Marcos National Monument, National Park Service. St. Augustine, FL.

2003 *Timucuan Ecological and Historic Preserve & Fort Caroline National Memorial Collection Management and Storage Plan*. Cultural Resources Stewardship, Curatorial Services, Southeast Regional Office, National Park Service. Atlanta, GA.

Southeast Archeological Center

2002 *Previous Archeological Investigations and Recommendations for future Research at the Castillo de San Marcos and Fort Matanzas National Monument*. Southeast Archeological Center. Tallahassee, FL.

U.S. Census Bureau

2000 U.S. Bureau of the Census. WWW: (<http://www.census.gov/index.html>)

University of Florida, Institute of Food and Agricultural Sciences, Food and Resource Economics Department

2003 *Economics of Heritage Tourism in St. Johns County, Florida, 2001-02*. Tom Stevens, Alan Hodges, and David Mulkey

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As the Nation's principal conservation agency, the Department of the Interior has the responsibility for most of our nationally owned public land and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environment and cultural values of our national parks and historic places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to insure that their development is in the best interest of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.