

THE BIG SPRING NATIONAL PARK MANAGEMENT PLAN, 2001-2003

ISLAND HARBOUR, ANGUILLA
(British West Indies)



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To be implemented by the
Big Spring Action Committee
and the Anguilla National Trust

Floyd Homer and Griffin Webster

30th July, 2001

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Protected Areas Advisor

And

Griffin Webster
Chairman, Big Spring Action Committee

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SUMMARY

The Big Spring site is one of two exciting limestone caves which were used by Amerindians in Anguilla several centuries ago. These caves are noted for the many well defined petroglyphs thought to date back to about 900 to 1200 AD. Further archaeological exploration of the site started in early June 2001 by a team of researchers led by Dr. Jim Petersen from the University of Vermont, USA. The results of this investigation will be made available to the Anguilla National Trust in due course.

Island Harbour residents had recently expressed a renewed interest in developing the site into a national park. This approach would facilitate new economic and recreational opportunities through the conservation of the biodiversity and heritage value of the site. Several planning meetings with the community were held in 2000 and 2001 which led to the preparation of this management plan, based more on the needs of the community but congruent with national developmental goals. The core of this draft plan was presented to a public gathering at Island Harbour on 9th June, 2001. About 70% of the people present, openly supported the plan (through a show of hands) and wanted to see it succeed. There were no objections to the proposal but several persons had some reservations on getting the funding to implement the plan.

The area to be designated as the Big Spring National Park will be used mainly for tourism, ecosystem and heritage protection, as well as recreation. The following management objectives are proposed:

1. To maintain the quality of the visitor experience and protect the integrity of the ecosystem and associated features
2. To develop opportunities for income generation primarily for Island Harbour and adjacent communities
3. To utilize the attributes of the site as a classrooms for education in science, history and culture
4. To heighten the awareness of the value of the site, especially through recreation and other social interactions

Several activities are proposed in fulfilment of these objectives, initially over a three year period. Wherever possible, an incremental and process driven approach is proposed for implementation of key activities so as to improve effectiveness and efficiency.

Implementation of the three-year management plan is estimated to cost about EC \$799,743. Revenue generation for the park will be from visitor use and is expected to cover the recurrent expenditure with surplus funds to be utilized for further development of this and other protected areas.

ACKNOWLEDGEMENT

Preparation of this management plan for the proposed Big Spring National Park was felt to be a critical step in the clarification and articulation of the aspiration of the people of Island Harbour and adjacent communities. Sensitization of the local community on the potential of the site was continued in 2000 and led to further planning sessions coordinated by the Big Spring Action Committee. We gratefully acknowledge the participation of the following persons in the preparation of this management plan: John Lloyd, Ken Smith, Desmond Boland, Kervin Harrigan, Terrisha Webster, Velona Gumbs, Amo Romney, Jamida Webster, Hamlet Harrigan, Frederick Harrigan, Arne Harrigan, Teresa Harrigan, Ingrid Fullington, Esan Fullington, Kent Webster, Daryl Stoddard, and Karim Hodge.

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This document is an output of the Darwin Initiative project “Capacity Building for Biodiversity Conservation in Anguilla”.

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INTRODUCTION

The Big Spring site is one of two exciting limestone caves which were used by Amerindians in Anguilla several centuries ago. These caves are noted for the many well defined petroglyphs thought to date back to about 900 to 1200 AD. Island Harbour residents had recently expressed a renewed interest in developing the site into a national park. This approach would facilitate new economic and recreational opportunities through the conservation of the biodiversity and heritage value of the site.

Several planning meetings with the community were held in 2000 and 2001 which led to the preparation of this management plan, based more on the needs of the community but congruent with national developmental goals. This core of this draft plan was presented to a public gathering at Island Harbour on 9th June, 2001. About 70% of the people present, openly supported the plan (through a show of hands) and wanted to see it succeed. There were no objections to the proposal but several persons had some reservations on getting the funding to implement the plan.

The first draft of the plan was sent for review to 24 key stakeholders, including Ministers and Permanent Secretaries of Government, Heads of Government Departments, the Big Spring Advisory Committee, the Anguilla Archeological and Historical Society and residents of the Island Harbour Community who participated in the planning process. A few substantial and useful comments were received and these were incorporated into the final draft for submission to the Government of Anguilla for endorsement.

RESOURCE DESCRIPTION

Name of Area and Location

The site will be called the Big Spring National Park. It is located in the northeast of the country on about 1,619m² of Crown Land (parcel # 89319B/49) in the village of Island Harbour.

Physical Features

The key feature of the site is a depression (about 70m in diameter), formed from the collapse of a limestone cavern. A spring and shallow stream are located under a rocky ledge at about 5m below ground level. Along the ledge and on rocks adjacent to the ledge can be found 28 petroglyphs; most are in the style of simple faces. Loose rocks and rocky protrusions are abundant at the site and distributed among vegetation in various stages of regeneration.

Climate

Precipitation

Annual average rainfall for the island is about 970mm. The annual range is less than 460mm to greater than 2,050mm depending on the number and intensity of storms that pass through Anguilla. The minimum monthly rainfall can be less than 5mm for any given month, usually occurring from February to August. The maximum one-day rainfall can be as much as 360mm. (Data from Department of Agriculture Station in the Valley).

Temperature

Average monthly, ambient temperature ranges from 26.4°C to 29.8° C. Average dew point temperature ranges from 20.7° to 24.7° C (Halcrow Water, 2000).

Winds

Easterly winds are predominant, blowing at about 15 to 28km/h for most of the year. Winds can also blow from the Northeast, East Southeast and occasionally from the South. The island is periodically hit by hurricanes and tropical storms, the last three major hurricanes include Luis (1995), Georges (1997), and Lenny (1999). Even hurricanes and storms that pass near to the island can also cause some wind damage and torrential rain.

Plant Life

Since 1985, a total of 510 species of terrestrial plants from Anguilla have been collected and identified (Walker, 1997). Of these, 41 plants have been identified and listed for the Big Spring site, including nine species of trees, 12 species of shrubs, 11 species of herbs, three species of grasses/sedges, four species of vines and two species of cacti (Green, 2000).

Animal Life

A survey of fauna at the site has not yet been conducted, however, butterflies, lizards (Anoles) and birds have been observed. The shallow stream created by the spring has a small population of fish (guppies?) and crabs. It is not yet known if there are other aquatic species in the area.

HISTORY AND DEVELOPMENT

Archaeology

The petroglyphs at the Big Spring site were discovered in 1988 by John Lloyd, a resident of the area. Initially, 28 petroglyphs were documented by resident Archeologist Nik Douglas (Douglas, 1988). These were mainly simple face types thought to have been

carved into the rock by Arawak Indians. These carvings have in general, a westerly orientation and may have been created some time between 900-1200 AD. In 1989 C. N. Dubelaar visited the site and documented these petroglyphs in his 1995 publication “The Petroglyphs of the Lesser Antilles, The Virgin Islands and Trinidad”. In 1992 the site was further examined by petroglyph specialist Alain Gilbert who noted and mapped an additional 37 petroglyphs, some of which were superimposed over others (Douglas, 1992). Further archeological exploration of the site started in early June 2001 by a team of researchers led by Jim Petersen from the University of Vermont, USA. The results of this investigation will be made available to the Anguilla National Trust in due course.

Written and Oral History

Not much is widely known or documented about the site.

Recent Developments

Renewed efforts to clean up the garbage at the Big Spring site were started in 1996 and coordinated by the Anguilla National Trust. The National Trust Fund mobilized support from the corporate sector, including the hotels in 1997 for assistance in the construction of a fence around the property and for landscaping. Activity on the site seemed to have declined until 2000 when a Consultant was recruited through the Darwin Initiative to re-stimulate community interest and initiate management planning for the site.

A series of community meetings and meetings with government officials were held between July 2000 and June 2001, and led to the following outputs:

- Increased appreciation for the potential income generation value of the site;
- Renewed interest and commitment from residents to develop the site into a national park;
- Construction and erection of a sign “Proposed Big Spring National Park”;
- Preparation of a proposal for a local agency to fund the development of the site;
- Formation of the Big Spring Advisory Committee;
- Preparation of another proposal for a regional agency to fund development of the site;
- Preparation of a draft management plan for the site.
- Review and preparation of the final management plan.

Conservation Status

The area has no legal designation for conservation although there is some awareness among Government officials on the historic/archeological and potential economic value of the site.

Access

Primary access is via a new 4m wide unpaved road running perpendicular from the Island Harbour road to the western side of the site. Secondary access is by a 4m unpaved but drivable road that extends from the north side of the site to the Island Harbour road.

CURRENT HUMAN USE

Land Use

Much of Anguilla's land development to date has been largely ad hoc and un-regulated in the absence of a comprehensive land use policy and an established tradition of development control (Dept. of Lands and Surveys, 1996). The Big Spring site is located in a residential area of Island Harbour designated as Built Development in the national land use types.

The spring was used as a washing area up to about 35 years ago, shortly after, it was reportedly used as a garbage dump (Dubelaar, 1995). There have been several awareness activities over the past few years including a clean-up campaign that have led to the site no longer being used as a dump. There is however, some evidence of grazing by goats in the area.

There are infrequent tours of the site for visitors, undertaken by a few knowledgeable guides but this is not well organized. Future demand for use of the site as a tourist attraction can be high but will depend on the marketing and management of the attraction.

DESCRIPTION OF MANAGEMENT ISSUES

Institutional Capacity

There is currently no government agency delegated with the management responsibility for any terrestrial area designated as a protected area. None of the existing government agencies have the capacity to manage protected areas. Although the Physical Planning Department may designate conservation areas or national parks when its draft legislation is enacted, however, the management of such areas is unclear.

The Anguilla National Trust is an NGO with the legislative mandate to manage protected areas, however, it is currently understaffed and underfunded to take on such a responsibility.

Community Participation

There have been several unsustainable attempts at community mobilization for the protection and development of the Big Spring site over the past 10 years. The Big Spring Action Committee is a group formed in 2000 and is comprised of persons from Island Harbour and adjacent communities who are interested in action for the development of the Big Spring site. This group emerged after a similar group from Island Harbour which was formed in 1995, became dormant. Sustaining local action for the conservation of the site will minimize its degradation and improve appreciation of the value of this local resource.

Tenure and Use

The parcel of land on which the Big Spring site is located, belongs to the Crown and is not actively managed by any Government agency. If the area will be managed by any agency whether government, non-government or private; then the site has to be vested in that agency and designated for conservation measures.

RELEVANT POLICIES

There are several policy documents produced and adopted within the last two years that provide broad guidance for the sustainable use of natural resources in Anguilla. These are the:

- UK White Paper on Partnership for Progress and Prosperity
- St Georges Declaration
- The United Front's policy document (manifesto)
- Strategic Country Programme 2000/01 to 2001/03

UK White Paper on Partnership for Progress and Prosperity

Chapter Eight (Sustainable Development-the environment) of the UK White Paper on Partnership for Progress and Prosperity (FCO, 1999) proposes the following policy objectives:

1. To promote sustainable use of the Overseas Territories natural and physical environment, for the benefit of local people;
2. To protect fragile ecosystems such as coral reefs from further degradation and to conserve biodiversity in the Overseas Territories;
3. To promote sustainable alternatives to scarce resources or species which are used for economic purposes;
4. To enhance participation in and implementation of international agreements by Overseas Territories (OT).

The document further indicated that: “the role of Overseas Territory Governments, supported by the UK Government, is to develop appropriate, applicable and affordable environmental policies, legislation and standards. These are the basis for integrated environmental management systems to enable them to monitor and evaluate progress towards achieving their environmental objectives and lessons learnt can then be fed back into policy development”.

St Georges Declaration

The St George’s Declaration of Principles for Environmental Sustainability in the OECS was signed by the Government of Anguilla in April 2001. This document prescribes 21 principles which should govern the conduct of Governments in the Organisation of Eastern Caribbean States. The principles directly relevant to protected areas include:

- Principle 2: Integrate Social, Economic and Environmental Considerations into National Development Policies, Plans and Programmes
- Principle 3: Improve on Legal and Institutional Frameworks
- Principle 4: Ensure Meaningful Participation by Civil Society in Decision Making
- Principle 5: Ensure Meaningful Participation By The Private Sector
- Principle 6: Use Economic Instruments for Sustainable Environmental Management
- Principle 7: Foster Broad-based Environmental Education, Training and Awareness
- Principle 11: Ensure the Sustainable Use of Natural Resources
- Principle 12: Protect Cultural and Natural Heritage
- Principle 13: Protect and Conserve Biological Diversity

The United Front’s Manifesto

The current ruling party, the United Front had prepared a manifesto which was adopted by the Government as the national policy document. In the section entitled “Economic and Social Development Programme”, the following issues were identified for attention:

- Establishing policy, legislation and regulations for the control and monitoring of the marine resources zone
- Continuing protection measures to improve the position of species on the endangered list
- Protection and conservation of endangered terrestrial and marine flora and fauna
- Environmental awareness and education
- Restoration and maintenance of cultural and historic artifacts
- Regional and international collaboration and networking on environmental management and sustainability initiatives.

Strategic Country Programme 2000/01 to 2001/03

The Strategic Country Programme (2000/01 to 2002/03) was the outcome of discussions between the Government of Anguilla and the Government of the UK in June 2000. The Environment Section of this policy document aims to support the livelihoods of the people of Anguilla through sustainable management of the environment. This will be achieved through five objectives, which are to:

1. Ensure that appropriate, applicable and affordable environmental policies and processes exist within government which support the sustainable management of the environment.
2. Ensure that key coastal and terrestrial habitats are protected and used sustainably.
3. Ensure sustainable use of inshore and offshore fish stocks.
4. Facilitate adherence to the obligations of applicable regional and international environmental treaties and agreements.
5. Plan for the restoration of the Valley water lens to a pollution free source of water.

The activities relevant to protected areas prescribed in the Action Plan for implementing these objectives include:

- Promotion of high quality environmental appraisal within planning and development processes to ensure that environmental opportunities, as well as risks, are integrated into all development activities.
- Establishment of an effective and well resourced protected areas system for key terrestrial and marine habitats.
- Establishment within government of the principle of co-management with the private sector for natural resources.
- Support development of capacity (including information management) within the Government of Anguilla, to sustainably manage the natural resource base.
- Development and management of national parks and heritage sites.
- Development of appropriate environmental legislation.

These action points provide useful guidance on some of the priorities that require attention. However, in order to conserve and ensure sustainable benefits of natural resources to Anguillians and other stakeholders, national policy should not allow for any development that significantly degrades the quality of local ecosystems or which impairs the potential of such ecosystems to generate long-term economic benefits.

MANAGEMENT ACTIVITIES

Goals

One of the national goals of the Government of Anguilla is for “Long term stable, sustainable and environmentally sound economic growth and development with high average per capita income, full employment and low inflation”.

The creation of opportunities for economic and educational benefits while ensuring the preservation of cultural and natural heritage was the local goal identified by the people of Island Harbour and adjacent communities who attended the management planning meeting for the Big Spring site.

Objectives

The area to be designated as the Big Spring National Park will be used mainly for tourism, ecosystem and heritage protection, as well as recreation. The following management objectives are proposed:

1. To maintain the quality of the visitor experience and protect the integrity of the ecosystem and associated features
2. To develop opportunities for income generation primarily for Island Harbour and adjacent communities
3. To utilize the attributes of the site as a classrooms for education in science, history and culture
4. To heighten the awareness of the value of the site, especially through recreation and other social interactions

Several activities are proposed in fulfillment of these objectives which recognise the issues affecting management of the park. Wherever possible, an incremental and process driven approach is proposed for implementation of key activities so as to improve effectiveness and efficiency.

Activities

Objective 1. To maintain the quality of the visitor experience and protect the integrity of the ecosystem and associated features. This objective will be implemented through the following activities:

1. Improve access and safety of key features within the site

This will involve the relocation or securing of loose rocks and the construction of a safe footpath through the vegetation.

2. Construction of a viewing platform

A wooden broad walk and viewing platform will be constructed over the main rocky access path to the petroglyphs. This will minimize trampling in the area of the petroglyphs and restrict physical visitor access to the petroglyphs.

3. Determine the feasibility of rehabilitation of the spring

The inflow of water that feeds the little channel at the site may be able to be manipulated to improve stream flow, which may give rise to limited bottled “Big Spring Water” if feasible.

4. Maintain and enhance the health and richness of native vegetation

The health and diversity of the vegetation can be improved by management intervention in order to increase the visitor enjoyment and attract more local wildlife.

5. Determine the best method for preservation of the petroglyphs and implementation of appropriate method

The petroglyphs have been at the site for about 1000 years; although some of them are more susceptible to natural erosion and algal growth than others, expert advice will be needed to guide their preservation.

6. Repair existing fence surrounding the area

The existing fence was broken in several places during construction of the adjacent access road and extensive repairs are necessary.

7. Posting of regulatory and interpretative signs

Appropriate signage is necessary to assist in the regulation of activities at the site and to help improve awareness on the significance of the site.

8. Establish a Park Warden System

Management of visitor use will require the design and implementation of a system of procedures that will guide the Park Wardens in their duty.

9. Establish solid waste management system

A system for the collection and disposal of solid waste, primarily garbage associated with visitors viewing and taking pictures of a site, will be designed and implemented.

10. Construct a visitor facility with amenities

A small building will be constructed to serve as an office for the staff and as an interpretation center for orientation of visitors. Toilet facilities and a car park for visitors and staff will also be included.

Objective 2: To develop opportunities for income generation, primarily for Island Harbour and adjacent communities.

1. Develop a marketing plan for the site

A consultant with expertise in developing marketing plans for similar ventures will be contracted to prepare the marketing plan for Big Spring.

2. Identify potential income earning opportunities

Residents from the area and adjacent communities will be encouraged through a workshop session to identify income earning opportunities related to servicing the needs of visitors to the park., e.g. crafts, t-shirts and souvenirs, food and beverage, etc.

3. Develop a financial plan for the site

A consultant with expertise in developing financial plans for similar ventures will be contracted to prepare the financial plan for Big Spring.

4. Promote income earning opportunities for action by the community

Income earning opportunities identified in the financial plan will be promoted to the residents of Island Harbour and adjacent communities. Assistance to residents in planning for implementation of the income earning recommendations will also be provided.

Objective 3: To utilize the attributes of the site as a classroom for education in science, history and culture.

1. Acquire information on and document the history, culture and ecology of the site
A consultant will be hired to pull together all information (local and international), relevant to Big Spring and prepare a chronological account of Big Spring.

2. Train teachers on how to utilize the site for educational activities

A series of workshops for teachers will be held to promote the information collected on Big Spring and to demonstrate how the site could be used as a classroom for components of the CXC syllabus.

Objective 4: To heighten the awareness of the value of the site, especially through recreation and other social interactions.

1. Create awareness materials

A Marketing/Public Relations Consultant will be hired to develop professional audio and visual materials for the promotion of Big Spring.

2. Host media events and participate in marketing seminars

Local media promotions of Big Spring will be conducted periodically. Participation in local, regional and international tourism marketing seminars will also be undertaken.

3. Acquire adjacent parcel of land

A parcel of land near the site will be acquired for expansion of the facility.

4. Develop a recreational facility on the adjacent parcel

A recreational facility will be constructed on the adjacent parcel to accommodate visitor spillover from Big Spring and to provide for indoor recreation and community development activities for Island Harbour youths and residents.

5. Promote a programme for recreational activities for local communities

A programme of community development activities, focusing on youth and constructive recreation will be developed and promoted.

Awareness and Interpretation

The awareness communications on the value of the features of the park to Anguilla should be unambiguous and packaged with consideration to the nature of the target group. Representatives of the target group could also be involved in drafting the messages to improve effectiveness of design. Tour Operators, Hoteliers, Schools, Tourism Board, and Government Decision Makers are among the groups with highest priority for awareness.

The development of effective education/awareness activities requires that the following questions be considered during the planning process (Fazio and Gilbert, 1981):

1. What do you want to accomplish in realistic and reasonably measurable terms? That is, do you want to simply build awareness or do you want some change in behaviour or practice?
2. What are the expected results that will help you know if you are achieving your objectives?

3. What are the internal policies that need to guide the initiative?
4. What are the problems that need to be addressed?
5. What are the socio-economic and environmental trends that provide the context for the initiative?
6. What groups are you trying to reach and what are some of their characteristics? For example, with some groups, literacy or language may be a problem; for young people materials need to be catchy and cater to their level of understanding.
7. What is the message you need to convey to the selected target groups?
8. Is the message 'packaged' so that it is most likely to achieve the expected results to improve knowledge, persuade, change behaviour, etc?
9. What is the best communications channel to use to reach those target groups with your message?
10. Have you put it all together by matching the message, target group and media in implementation of the initiative?
11. Have you developed a means of evaluating the initiative?
12. Are you open to feedback and have you established channels to receive that feedback?
13. Did the activity have the desired effect? Consider both long and short term impacts.
14. Are you reasonably willing to make changes if necessary as a result of the feed back and results?

Monitoring and Research

The management objectives of the park include the maintenance of the quality of visitor enjoyment and the biological diversity of the site (i.e. adequate populations of all plants and animals found in the area) and ecosystem functions. Toward this end, monitoring and research activities will be designed to provide information on the status, and changes over time, of environmental quality together with type, intensity and impacts of uses.

Quality Control/Assurance

The efficiency and effectiveness of management activities can be improved if there is close supervision by a senior and experienced person to ensure that appropriate methodologies and information are used in a timely manner. Attention to details must be encouraged especially in the procurement of materials and services, execution of field work (particularly target levels of what should be measured and reliability of the results), interaction with stakeholders, follow-up, and in the preparation of relevant reports. The Executive Director of the Anguilla National Trust will have overall responsibility for quality control/assurance of project activities but may call upon specific technical expertise to assist as needed.

Continuous improvement in the performance of staff should be encouraged. Method Study and Work Measurement can be employed to identify the scope for improvement, as long as there is genuine commitment to progressive change. Method study involves

examining in detail how work is currently carried out, and challenging every aspect of it; whether it needs doing at all, and whether it is done in the right way, at the right time and by the right people. The study continues by developing improved methods and ensuring their implementation. Work measurement involves accurate observation and timing of work, with the aim of establishing performance standards (Peel, 1995).

In terms of information needed for management or for communicating various aspects of the programme to various target groups, the Executive Director of the Anguilla National Trust can be guided by answers to the following questions (Peel, 1995):

1. What kind of information will the project supply; a) regularly, b) occasionally, c) when asked for?
2. Is the accuracy of this information satisfactory?
3. For each kind of information, is it; a) essential, b) useful, c) occasionally handy, d) useless?
4. What additional information do we need?
5. How often do we need it?
6. How can we get it most efficiently?

INSTITUTIONAL ARRANGEMENTS

Management responsibility for the proposed Big Spring National Park is dependent on the Government of Anguilla vesting the land at Big Spring in the Anguilla National Trust. Section 6 of the National Trust Ordinance (1988) provides for the declaration of such areas as inalienable and to be managed for the benefit of Anguillians. Following discussions with the Chief Minister and representatives of the Organisation of Eastern Caribbean States/Natural Resources Management Unit in May 2001, the Chief Minister indicated the government's willingness to vest the Big Spring site in the National Trust. Supporting correspondence from the Anguilla National Trust to the Chief Minister officially requesting the transferal, was sent in on 9th May, 2001. Subsequently, a memo from the Chief Minister's office, dated 6th July, 2001 confirmed that the Executive Council has agreed to vest the Big Spring parcel of land in the Anguilla National Trust.

The Big Spring Action Committee (BSAC) is in the process of getting itself legally registered under the appropriate legislation in Anguilla. On registration, BSAC becomes a legal entity and will be delegated with the responsibility for the operation of the Big Spring National Park. BSAC proposes to raise the necessary funds to hire a professional Project Manager or a Protected Area Manager who would have day-to-day responsibility for the implementation of this management plan.

ADMINISTRATION AND MAINTENANCE

Staffing

Implementation of this management plan will require the recruitment of the following key staff:

- Project Manager/Protected Areas Manager (one)
- Park Warden/Tour Guide (two)
- Receptionist/Secretary (one)

The Project Manager may have to be recruited regionally or internationally if a sufficiently qualified and experienced candidate cannot be found locally. Foreign recruitment will mean that the remuneration/benefit package will be greater than for a local hire if the right personnel has to be encouraged to relocate to Anguilla. The contract for the Project Manager should be for duration of at least three years.

A suitably qualified Anguillian should be recruited or seconded to the project at the beginning of the third year of the project to serve as an understudy to the Project Manager. This person would then be expected to serve as the Project Manager from the fourth year of the project.

The Park Wardens and Receptionist should all be suitably qualified locally hired personnel. Additional relevant training will be provided for all staff as needed.

Maintenance

Maintenance of park infrastructure (platform, trails, building etc) and equipment (truck, radios, camera, etc) will be the responsibility of the Park Wardens, maintenance of office equipment will be the responsibility of the Receptionist/Secretary. Equipment and infrastructure should generally be inspected at least monthly to determine the need for servicing.

Equipment

The major field equipment required for operation of the park will include a digital camera, VHF radios and a pickup truck. Office equipment will include desks, tables, chairs, computers and printer, fax machine, telephone, cupboards and shelves.

Budget

Below is the projected annual cost for the management of the Big Spring National Park.

Objective 1: To maintain and protect the integrity of the ecosystem and associated features.	Year 1	Year 2	Year 3	TOTAL (EC\$)
1. Improve access and safety of key features within the site	3,000	0	0	3,000
2. Construction of a viewing platform	38,000	0	0	38,000
3. Determine the feasibility of rehabilitation of the spring	7,500	0	0	7,500
4. Maintain and enhance the health and richness of native vegetation	3,000	1,000	1,000	5,000
5. Determine the best method for preservation of the petroglyphs and implementation of appropriate method	7,500	0	0	7,500
6. Repair existing fence surrounding the area	6,000	0	0	6,000
7. Posting of regulatory and interpretative signs	10,000	0	0	10,000
8. Establish a Park Warden System	5,000	0	0	5,000
9. Establish solid waste management system	5,000	0	0	5,000
10. Construct a visitor facility with amenities	60,000	0	0	60,000
Sub-total	142,000	1,000	1,000	144,000
Objective 2: To develop opportunities for income generation primarily for Island Harbour and adjacent communities				
1. Develop a marketing plan for the site	7,500	0	0	7,500
2. Implement the marketing plan	30,000	15,000	15,000	60,000
3. Identify potential income earning opportunities	300			300
4. Develop a financial plan for the site	7,500	0	0	7,500
5. Promote income earning opportunities for action by the community	1,500	0	0	1,500
Sub-total	46,800	15,000	15,000	76,800
Objective 3: To utilize the attributes of the site as a classroom for education in science, history and culture				
1. Acquire information on and document the history, culture and ecology of the site	2,000	3,000	1,000	6,000
2. Train teachers on how to utilize the site for educational activities	0	3,000	3,000	6,000
Sub-total	2,000	6,000	4,000	12,000
Objective 4: To heighten the awareness of the value of the site, especially through recreation and other social interactions				
1. Create awareness materials	5,000	10,000	0	15,000

2. Host media events and participate in marketing seminars	0	10,000	10,000	20,000
3. Acquire adjacent parcel of land	40,000	0	0	40,000
4. Develop a recreational facility on the adjacent parcel	0	60,000	0	60,000
5. Promote a programme for recreational activities for local communities	0	3,000	3,000	6,000
Sub-total	45,000	83,000	13,000	141,000
TOTAL	235,800	105,000	33,000	<u>373,800</u>

OTHER COSTS

Staff

Project Manager (1)	48,000	49,500	51,000	148,500
Park Warden/Tour Guide (2)	19,200	19,978	20,787	59,965
Receptionist/Secretary (1)	12,000	12,486	12,992	37,478
Sub-total	79,200	81,964	84,779	245,943

Training

Short courses	10,000	10,000	0	20,000
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Equipment and Maintenance

Furniture (desks/chairs/filing cabinets, etc)	5,000	0	0	5,000
Pickup truck (including insurance)	55,000	10,000	10,000	75,000
Telephone/Fax/Computer/Printer	7,000	1,000	1,000	7,000
Sub-total	67,000	11,000	11,000	89,000

Supplies

Stationary, etc.	5,000	5,000	5,000	15,000
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Utilities

Water/Electricity/Telephone/Fax/Internet	5,000	7,000	8,000	20,000
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Miscellaneous

	12,000	12,000	12,000	36,000
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TOTAL	178,200	126,964	120,779	<u>425,943</u>
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Estimated total cost for implementing the 3-year management plan for the Big Spring National Park

**EC\$
799,743**

Table 1. Projected 3-year budget for the management of the Big Spring National Park.

ANNUAL COSTS (EC\$)	Year 1	Year 2	Year 3	Total
Recurrent Expenditure	101,200	116,964	120,779	338,943
Capital/other Costs	312,800	115,000	33,000	460,800
Total	414,000	231,964	153,779	<u>EC\$799,743</u>

Table 2. Annual costs showing recurrent expenditure (staff salaries, utilities, supplies, maintenance), separated from capital and other costs.

Recurrent expenditure for the project in the first year will be a little over EC\$101,000 and will increase to almost EC\$121,000 by the third year of operation, largely due to salary increments and utility increases.

Potential Revenue Generation

Revenue generation will be primarily through visitor fees. Between 1998-2000 the average number of tourists (visitors staying for more than 24 hours) in Anguilla, amounted to 44,787 persons per year. These visitors are a potential source of revenue if the Big Spring National Park is appropriately marketed to this target group so as to encourage them to visit the park.

A willingness-to-pay survey among tourists on the island was carried out by the Anguilla National Trust in 2000. The preliminary results indicated that about 50% of the respondents were willing to pay up to US\$10 for tours of national parks. A further 35% of the respondents were willing to pay up to US\$25 for such tours.

If at least 30% of the tourists can be persuaded to visit the Big Spring National Park and an entrance fee of US\$5 (about EC\$15) is charged per person, then the estimated income from this source would be EC\$201,541.

Another source of income could be from excursionists who come from St Maarten/St Martin and spend most of the day touring the island. If at least 15% of this target (which amounts to about 7,200 annually) could be encouraged to visit Big Spring, then potential revenue from this source could be EC\$108,000.

There should be a reduced local rate for Anguillian visitors of EC\$5. Members of the National Trust could also get a further reduced admission fee of EC\$3. School children in uniform could be given free admission. At this time, it is uncertain how many Anguillians would be willing to pay for admission to a national park.

EVALUATION

No implementation schedule is provided for this management plan because the accuracy of such scheduling is dependent on the capacity of staff and local administrative bureaucracy. The Big Spring National Park staff and BSAC will decide on which elements of the plan they wish to give priority on an annual basis. This will also depend on acquisition of funding, the level of additional training for, and the learning curve of individual staff members.

Progress on implementation of the management plan should be reviewed quarterly or at least twice per year so that difficulties in execution of activities could be identified and resolved and slippage in timely outputs could be controlled. It would be useful to prepare quarterly work-plans and implementation schedules for the staff. This will guide operational efficiency, however, overall annual work-plans could be prepared to further assist in evaluation of progress.

Progress can be measured by achievement of tangible outputs within a given timeline. The use of indicators of progress can provide an easy means of verifying achievement, linking programme activity to outputs. Several indicators are proposed below for each programme activity:

Activity	Indicators of Progress
Improve access and safety of key features within the site	<ol style="list-style-type: none"> 1. Access trails identified and demarcated 2. Loose rocks secured in place or removed 3. Safety barriers in place
Construction of a viewing platform	<ol style="list-style-type: none"> 1. Design of platform finalised 2. Contractor selected 3. Construction of platform initiated 4. Construction of platform completed
Determine the feasibility of rehabilitation of the spring	<ol style="list-style-type: none"> 1. Consultant selected 2. Consultant's feasibility report prepared
Maintain and enhance the health and richness of native vegetation	<ol style="list-style-type: none"> 1. Number of plant maintenance sessions per quarter 2. Number of plants replaced or added per month
Determine the best method for preservation of the petroglyphs and implementation of appropriate method	<ol style="list-style-type: none"> 1. Consultant selected 2. Consultant's report prepared 3. Consultant's recommendations implemented
Repair existing fence surrounding the area	<ol style="list-style-type: none"> 1. Contractor selected 2. Fence repaired
Posting of regulatory and interpretative signs	<ol style="list-style-type: none"> 1. Consultant for design of signs selected 2. Number and type of signs produced 3. Number and type of signs installed
Establish a Park Warden System	<ol style="list-style-type: none"> 1. Duties of Wardens identified 2. Uniforms procured 3. Wardens trained 4. Procedures Manual developed
Establish solid waste management system	<ol style="list-style-type: none"> 1. Collection and disposal procedures defined 2. Collection bins put in place

Construct a visitor facility with amenities	<ol style="list-style-type: none"> 1. Design of facility prepared 2. Contractor selected 3. Facility constructed
Develop a marketing plan for the site	<ol style="list-style-type: none"> 1. Consultant selected 2. Marketing plan prepared
Implement the marketing plan	Recommendations implemented
Identify potential income earning opportunities	<ol style="list-style-type: none"> 1. Meeting with key stakeholders held 2. Report identifying income earning opportunities prepared
Develop a financial plan for the site	<ol style="list-style-type: none"> 1. Consultant selected 2. Financial plan prepared
Promote income earning opportunities for action by the community	<ol style="list-style-type: none"> 1. Workshop organized and held in the community 2. Information brochures prepared and made available
Acquire information on and document the history, culture and ecology of the site	<ol style="list-style-type: none"> 1. Sources of relevant information identified 2. Copies of documents procured 3. New documentation prepared
Train teachers on how to utilize the site for educational activities	<ol style="list-style-type: none"> 1. Number of teachers contacted and confirmed interest 2. Training session organized and held
Create awareness materials	<ol style="list-style-type: none"> 1. Consultant selected 2. Awareness materials prepared
Host media events and participate in marketing seminars	<ol style="list-style-type: none"> 1. Number of media events held per year 2. Number of seminars attended
Acquire adjacent parcel of land	<ol style="list-style-type: none"> 1. Agreement to sell 2. Purchase of land initiated 3. New land ownership documentation
Develop a recreational facility on the adjacent parcel	<ol style="list-style-type: none"> 1. Design of recreation facility prepared 2. Construction initiated 3. Construction of recreation facility completed
Promote a programme for recreational activities for local communities	<ol style="list-style-type: none"> 1. Meetings held to design programme 2. Recreational programme designed 3. Number of media releases on activities 4. Number of community meetings held
Staff training	<ol style="list-style-type: none"> 1. Number and type of training activities per quarter 2. Mechanism to facilitate in-house learning developed
Quality control/assurance	<ol style="list-style-type: none"> 1. Number of planning sessions held per month 2. Number of detailed review of tasks and activities per month 3. Number and type of corrective actions required per month
Equipment procurement	<ol style="list-style-type: none"> 1. Specifications of equipment identified 2. Number and type of equipment procured
Equipment maintenance	<ol style="list-style-type: none"> 1. Number and type of equipment inspected per month 2. Number and type of maintenance activity carried out per month

Table 3. Indicators of progress of management activities in the Big Spring National Park.

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