

# ISLAND RESOURCES FOUNDATION

## STUDY OF WATER ISLAND ECONOMIC DEVELOPMENT OPTIONS

March 1980

## ACKNOWLEDGEMENT

Island Resources Foundation wishes to express its gratitude for the truly extraordinary degree of cooperation and assistance that it has received from all of the people, agencies and organizations that have been contacted in the course of this study. The Virgin Islands Department of Commerce, our fellow contractors, other Virgin Islands government agencies, the Beach Management Corporation, and the people of Water Island have all been extremely generous with their time, understanding, information and patience. It is our hope that this study reflects the quality of assistance and support that we have received, and we would encourage broad dissemination of the study in order to support the dialogue that has been initiated.

Errors, omissions and misunderstandings are clearly our own. However, it is necessary to understand that this study labors under the usual burden of incomplete, conflicting and irrational data that affects every other quantitative study of the Virgin Islands. From the available sources we have had to select the most reasonable available data, supplemented by our own estimates and assumptions. It is our firm belief that the data presented here is sufficient for the purposes for which it is employed.

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CHAPTER ONE  
EXECUTIVE SUMMARY

Situated in the middle of St. Thomas harbor, the 490 acres of Water Island present a unique opportunity for comprehensively planned development. Owned by the United States Government, and managed under a lease which is due to expire in 1992, the island is clearly underdeveloped compared with the rest of St. Thomas. In spite of its proximity to the center of Charlotte Amalie, assessed property values, employment and population density on Water Island are only fractions of these factors for St. Thomas as a whole.

*undeveloped  
potential*

The major impediment to development at this time is the short term and uncertain final disposition of the Water Island lease. Without a long term lease, or clear title to Water Island property, it is almost impossible to secure financing for any development, including home construction. The lack of new capital not only will stifle new development, but also it may prevent the hotel complex from making the necessary investments to establish profitable operation.

*major  
obstacle*

Adjusting the terms of the lease, or providing clear title to current property holders, will have direct implications for future development, especially as it affects the availability of the 280 acres of Water Island that are currently undeveloped. There are three decisions involving future property rights that will be especially important:

*three  
property  
issues*

1. The extent of the "hotel property", i.e., that portion of currently un-sub-leased land which would be retained by the hotel. This decision will determine both the role of the hotel in future development (it now holds the master lease for the entire island), and the ease with which it can secure financing.
2. The disposition of the undeveloped properties not assigned to the hotel. The method by which these properties are managed, and the terms, conditions and proceeds of their sale are all important issues for future development.

3. The future development of the Sprat Bay Corporation, whose 37 members hold the sub-lease to nearly half of the undeveloped property on Water Island.

As part of the analysis conducted for this study, all of the potential uses of the undeveloped lands on Water Island have been examined. It is clear that the range of alternatives is greatly limited by the especially high costs of building and working on Water Island, which has to import all materials, equipment, and most labor from St. Thomas. Even among the economically feasible alternatives, however, there are substantial qualitative and quantitative differences in terms of the social and environmental impacts on the Virgin Islands.

*costly  
options*

The most significant finding of this study for the Government of the Virgin Islands may be that similar investments can have radically different impacts on both Water Island and the wider Virgin Islands community. The clearly defined interest of the Virgin Islands means that whatever ownership, property rights and management models are eventually chosen for Water Island, there is both a legitimate role and a public need for Virgin Islands involvement in the choices of particular development options. The objectives of most concern to the Virgin Islands are: to increase the rate of new investment; to increase the proportion of resident property holders on Water Island; and to use the island's natural resources to create permanent, new full-time employment for Virgin Islanders.

*different  
impacts*

*Virgin  
Islands role*

Based on an examination of all of the possible uses of undeveloped Water Island property, and an assessment of the social and environmental impacts of maximum development strategies, a ten year development program is recommended. This recommended development option involves essentially a continuation and acceleration of existing trends. The recommended option is designed to exploit the island's geographical advantages by promoting relatively labor intensive boating and watersports services, with a modern marina and boat yard complex to complement the hotel operation. Additional new proposals include

*recommended  
option*

the development of additional recreational beach areas, and a park and nature preserve on the island's eastern side.

The recommended ten year development option is described in detail in Sections IV and V of Chapter Four, below, but briefly, it includes:

- An increase in property value from \$19.5 million to \$39.9 million, implying a four-fold increase in the value of buildings and other structural improvements.
- An increase of 200 dwelling units (from 220 to 420), plus the permanent location of 30 charter yachts in the marina.
- A projected increase in the number of permanent, year-round jobs from 83 to 255, in addition to construction and seasonal employment increases. It should be noted that many of these new jobs are more desirable than the laborer and domestic and hotel service jobs that are now found on Water Island.
- The annual average population on Water Island would increase from 280 to over 750, with a proportionate increase in the number of declared permanent (tax paying) residents of the Virgin Islands.

The result of this level of development would be to bring Water Island to above the territorial property value average (based on 1977 assessments in "Comparative Growth Statistics"), and to the 1980 territorial average for the number of jobs per square mile. This is not bad performance for the low capital/low density development being proposed.

Finally, the development option proposed for this ten year program will by no means result in a "saturation" of the island's development potential. By concentrating major new facilities in already developed and readily accessible areas, over two hundred of the island's 490 acres will remain essentially undeveloped. Although the pace of development over the ten year period

would be many times that of the past twenty years, it should be within the absorptive capacity of the existing infrastructure. The proposed development strategy will result in a Water Island that will continue to present a wide range of choices and flexible management options to future policy makers.

In conclusion, the current underdeveloped state of Water Island is an important resource to the people of the Virgin Islands. Future development should be carefully managed to avoid unnecessary compromises to this resource and to maximize potential benefits (largely in the form of stable jobs and increased numbers of tax paying permanent residents).

CHAPTER TWO  
WATER ISLAND DEVELOPMENT HISTORY

SECTION I: W.I. CHRONOLOGY 1944 TO PRESENT

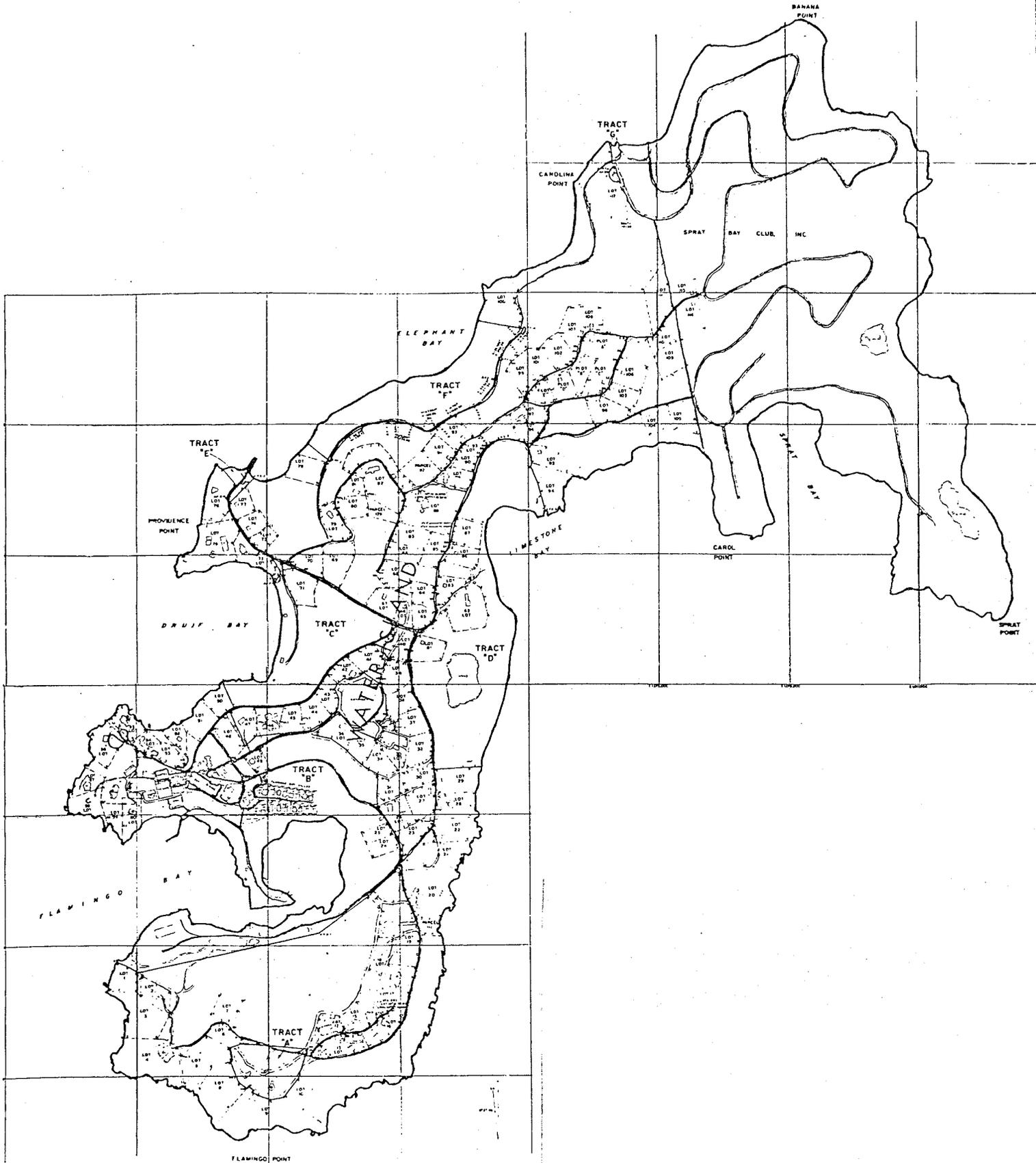
- June 19, 1944 U.S. Department of Defense acquires Water Island from the East Asiatic Company/West Indian Company for \$10,000 through condemnation.
- 1945-1950 Army constructs major military base on Water Island.
- 1950 Army vacates Water Island and turns it over to the Department of the Interior by revocable permit. Department of Interior assigns permit to St. Thomas Development Authority.
- August 1, 1951 St. Thomas Development Authority leases Water Island for thirty-five years to Water Island, Inc., for development of a tourist resort.
- July 11, 1952 President Truman signed Public Law 511 (82nd. Cong.) authorizing transfer of Water Island from the Department of Defense to the Department of the Interior.
- November 3, 1952 General Services Administration delegates authority to the Department of Interior to lease Water Island.
- December 10, 1952 Water Island, Inc. signs new twenty year lease (with 20 year renewal option) with the Department of the Interior.
- January 1, 1954 Water Island Hotel officially opens for business.
- January 26, 1954 First major sub-lease executed by Water Island Inc.
- July 1, 1956 Largest single sub-lease executed by Clarence Doheny for 156.5 acres in the northern part of the island.
- 1957 Flamingo Bay Corporation established to operate twelve efficiency apartments as part of the hotel.

- October 10, 1958 Clarence Doheny assigns his sub-lease to Warren H. Corning.
- May 2, 1960 Warren H. Corning sells his sub-lease to the Sprat Bay Club, Inc. for development as a residential housing community.
- 1962 Water Island Civic Association established to represent the interests of residential property owners.
- 1965 Water Island, Inc. opens up a channel between Flamingo Bay and the Lagoon, and starts development of a marina complex.
- December 3, 1965 Water Island, Inc. sells the Master Lease to the Water Island Hotel and Beach Club, Inc. headed by Edward J. McCardle.
- 1966 Ambitious new hotel expansion program initiated by Water Island Hotel and Beach Club, Inc.
- 1967 Water Island Colony Club hotel officially opened for business with sixty-three rooms and more under construction.
- March 21, 1972 Bill No. 5382 introduced in the V.I. Senate by Alexander Moorhead, Jr. calling for a Legislative petition to the Secretary of Interior requesting the transfer of Water Island to the Virgin Islands Government.
- April 1972 Comptroller of the Virgin Islands issues Audit Report questioning whether Water Island was being developed in the best interests of the federal and territorial governments.
- June 10, 1972 Citizen's Committee in St. Thomas petitions President Nixon to turn over Water Island to the Virgin Islands Government for use as recreational and living space.

- 1972 V.I. Legislature establishes a Water Island Commission to study the lease and other matters relating to the development of Water Island.
- January 1, 1973 Department of Interior renews Master Lease with Water Island Hotel and Beach Club, Inc. until December 1992.
- March 12, 1973 V.I. Delegate Ron DeLugo introduces Bill H.R. 5461 in the U.S. Congress authorizing the Department of the Interior to acquire some of the outstanding leasehold interests in Water Island and transfer the island to the Virgin Islands Government.
- 1977 Water Island Colony Club shuts down operation. Reopens in December as the Sugar Bird Hotel under the management of Beach Management Corporation headed by J. Robert Bishop.
- May 10, 1978 Beach Management Corporation requests the Department of the Interior to extend the Master Lease for twenty years to facilitate its development plans.
- August 4, 1978 Water Island Hotel and Beach Club, Inc. assigns the Master Lease to Beach Management Corporation under a contract-purchase agreement.
- February 15, 1979 Department of the Interior approves assignment of the Master Lease from Water Island Hotel and Beach Club, Inc. to Beach Management Corporation.

WATER ISLAND

MAP NO. 1



## SECTION II: DEVELOPMENTAL HISTORY

THE SETTING        Water Island, situated just off the south coast and within the greater harbor area of St. Thomas, is the fourth largest of the U.S. Virgin Islands, with a total of 491.5 square acres. Volcanic in origin, it has shallow soils of the Cramer gravelly clay loam variety, a dense, semi-arid vegetation and a rather steeply sloping terrain. A primary ridge line 200 to 290 feet above sea level runs down the center of the Island in a north-south direction.

Among the Island's outstanding natural features are rugged, steep cliffs along the southern and southeastern shorelines, some 10 sand or sand and gravel beaches, a number of small bays and peninsulas and four salt ponds with associated mangrove systems. There is limited variety of wildlife: a colony of Bahama Pin-Tail ducks inhabits the Limestone Bay Salt Pond; there are 20 to 30 Red Bill Tropic Bird nests on the south shore cliffs; imported Bob-White quail roam the island, and large green iguana can be found in abundance. Because of the absence of the mongoose, it is possible that many species rendered extinct by that predator on the other main islands may survive on Water Island.

Water Island allegedly received its name from the fresh water once found in association with its several salt ponds. A 1719 map by the Dutchman Gerald van Keulen shows a "fresh water pond" at a location just south of Caroline Point. It is likely that the existence of this pond drew the first European settlers to Water Island, for the same map depicts the house of one Albert de Ruyter in close proximity to it. Today that pond is dry, and a stone wall at its edge has been filled up with debris. There is a possibility that this fresh water source, and any others like it throughout the island, might once again be tapped.

*water*

The potential of the island's ground water resources has never been explored.

PRE-HISTORIC PERIOD           Based on the limited evidence available, human occupancy of Water Island seems to have begun around the time of Christ.

To date, archaeologists have found five Indian sites, all of which are located at sheltered bays along the western coastline (see Map No. 2 below). Pot shards, stone tools and other evidence recovered from very cursory surveys and excavations at these sites indicate small scale, casual occupation by itinerant fisher-folk and shell gatherers, rather than extensive, permanent settlement by agriculturalists<sup>1</sup>. Negroid skeletons have been found at two of these sites<sup>2</sup>, but there is debate over whether they were intrusive or not.

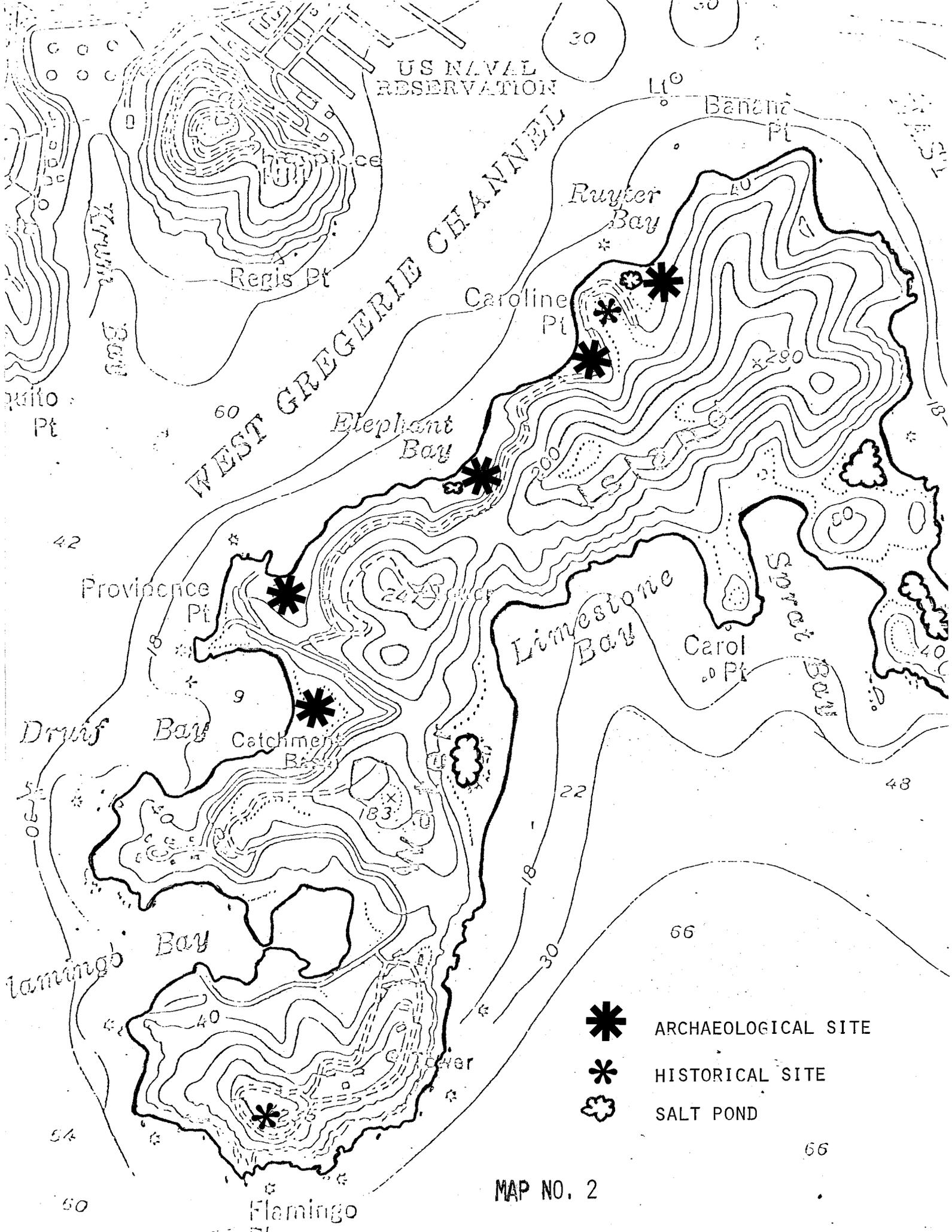
None of the five archaeological sites have been nominated to the National Register of Historic Places. However, the acting territorial archaeologist points out that three sites have not yet been systematically excavated, and that the Elephant Bay site may be of considerable importance because of the early Saladoid pottery found there during a recent exploratory dig.<sup>3</sup>

*five  
indian  
sites*

HISTORICAL PERIOD TO 1950           Information respecting human occupation and use of Water Island during the colonial period is difficult to come by.<sup>4</sup> A number of legends and tales have grown up around Water Island, as with many other offshore islands and cays. There are stories of pirates and buried treasure; accounts of grand mansions, luxuriant cane fields and ownership by a Hollenzollern prince. None of these, however, could be substantiated from the records on hand, and most appear to be more fiction than fact.<sup>5</sup>

The availability of easily accessible fresh water in sheltered bays may have attracted

US NAVAL  
RESERVATION



WEST GREGERIE CHANNEL

Banana Pt

Ruyter Bay

Regis Pt

Caroline Pt

Elephant Bay

Providence Pt

Limestone Bay

Carol Pt

Druid Bay

Catchment Basin

Flamingo Bay

Flamingo



ARCHAEOLOGICAL SITE



HISTORICAL SITE



SALT POND

MAP NO. 2

seafarers to the island well in advance of the actual settlement of St. Thomas, but no evidence is available to support this conjecture. The Island was, however, used by early settlers as a source of food. One of the first undertakings of the Danish colonizers who arrived on St. Thomas in 1672 was to stock Water Island with cattle and goats in order to insure themselves of an accessible supply of meat. This stock belonged to the Danish West India Company, which not only used it to feed its St. Thomas colonists, but also, in the early settlement years, marketed it to ships and neighboring colonies in exchange for exportable commodities like sugar and tobacco.<sup>6</sup>

*livestock*

By 1680 Water Island was reported to be well populated with livestock, and, in consequence, much frequented by ships and foraging expeditions from the nascent settlement at nearby Charlotte Amalie. Colonists also fished in the salt ponds, drugging the fish with a mixture of bark from the local stinkwood tree (Piscidia carthagenensis Jacq.) and lime mortar.<sup>7</sup>

The more well-to-do made outings to Water Island for both practical and recreational purposes. In 1686, for example, Vice-Governor Christopher Heins led a group of men and women on a hunting and fishing party to the island. Using a seine, they caught plenty of fish, but brought back little game, even though in the words of one participant, there were "many wild bucks and goats as well as some wild cows, bulls and calves, /and/ in the bays there are many pelicans, flamingoes, ducks and other birds."<sup>8</sup>

Although the Danish West India Company must have stationed some men on Water Island to prevent poaching, the earliest record of human habitation that could be found was the van Keulen 1719 map of St. Thomas Harbor, which depicts the house of Albert de Ruyter on a small hill overlooking Ruyter's Bay. By 1730, according to a map of that date, de Ruyter was operating a plantation at the northern part of the island.

*Albert  
de Ruyter*

By the end of the eighteenth century there were two plantations on Water Island: Carolina's Lyst, comprising the northern portion and Providence, comprising the southern part. According to title records found at the St. Thomas Recorder of Deeds Office, the two plantations were under separate ownership for the first sixty years or so of the nineteenth century. In the 1860's, they were consolidated under the single ownership of Joseph Daniel\*, a wealthy local merchant. Water Island remained in the possession of the Daniel family until 1905, when they sold it to agents of the East Asiatic Company.

*plantations*

The records are silent about what crops, if any, were cultivated on the two plantations. Nor are there any population statistics. There is evidence that Peter Tamaryn\*\*, a free negro

---

\* Title records clearly refute the legend that Daniel received Water Island from the British because of his services to them during their occupation on St. Thomas between 1807 and 1815. Daniel purchased Providence estate in 1850 and during the 1860's bought up parcels of Carolina's Lyst from members of the Woods family.

\*\* Peter Tamaryn is perhaps the most intriguing of all the owners of Water Island. He was the son of Mingo Tamaryn, the free negro commander of the Free Negro Corps formed by the Danes in 1721 to help them police against slave unrest. Mingo and his Corps helped quell the St. John slave rebellion of 1733-34, and in later years were employed to track down and subdue bands of runaway and rebel slaves. Peter took command of the Corps when his father died in 1765. See Kay Larsen, Dansk Vestindien 1666-1917 (Copenhagen, 1927) p. 87. It is not known how Peter acquired title to his estate. Conceivably he or his father came in to ownership by virtue of their loyal service to the Danish Crown.

*Tamaryn's*

who owned Carolina's Lyst, had, at the time of his death in 1806, twenty-nine slaves and an undisclosed number of cattle on that estate. The Daniels are also reported to have raised goats and cattle, although they are said to have valued the island more as a summer retreat and hunting preserve than as an economic investment.<sup>9</sup>

Little physical evidence of the plantation period has survived. Ruins of the Providence estate buildings, probably constructed by the Daniel family, can be found at Providence Point. Except for an old cistern, which is still intact, they have been incorporated into a private residence. Ruins associated with the de Ruyter/Carolina Lyst estate on the northern end of the island have been found by an Island Resources Foundation survey team. These latter ruins are of historical significance because of their association with the Tamaryns, one of oldest and most prominent free black families in the Virgin Islands.

*ruins*

The East Asiatic Company, a Danish joint-stock company which purchased Water Island through its agents in 1905 and in its own name in 1911, planned to spend large sums to develop it into a major coaling and bunkering facility. Behind this ambitious development program lay two motives: 1) to capitalize on the anticipated increase in St. Thomas commerce in consequence of the opening of the Panama Canal; 2) to capitalize on a practice, originated under the Daniel's, whereby the Russian, French and German Navies leased the island as a base of operations for winter maneuvers and gunnery practice.<sup>10</sup> Although in 1905 the Company sent out a team of engineers to design extensive new facilities, for reasons that are unclear<sup>11</sup> nothing came of the scheme.

*Danish purchase*

World War I and the subsequent sale of the Danish West Indies to the United States in 1917 put to rest the Company's plans for Water Island, although it did retain ownership until 1944, when the U.S. Government acquired it for \$10,000.00 through condemnation proceedings.<sup>12</sup>

The U.S. Government seized Water Island for the explicit purpose of establishing a coastal defence installation there. Title was vested with the Department of Defense, which immediately set to work constructing a large army base on the southern part of the island known as Fort Segarra. Some fifty-three structures, including barracks, gun emplacements, watch towers, underground bunkers and other military facilities soon appeared, as did an infrastructure of docks, roads, water, sewage and power systems.\* The total cost of this massive development effort was officially put at \$1,583,000.00,<sup>13</sup> although local gossip placed it closer to \$3,000,000.00<sup>14</sup> Buildings and infrastructure facilities constructed by the Army still standing by 1953 are shown in Map II.

*Fort Segarra*

When World War II ended, construction was abruptly halted and the defensive garrison was replaced by a unit of the Army's Chemical Warfare Division, which used the island to conduct secret experiments with poison gasses for several years.

After the Chemical Warfare Division abandoned the Island in 1950, the Army turned it over to the Department of the Interior by revocable permit for five years. In December 1951 the term of the permit was made indefinite, but it remained subject to revocation by the Army at any time.

*Interior permit*

The Department of the Interior, in its turn, assigned the permit to the St. Thomas Development Authority, an instrumentality of the territorial government, in the hopes that that body could negotiate a long-term lease with a prospective developer. It was at this point, in 1951, that Walter and Floride Phillips, a New York couple looking for a retirement home, appeared upon the scene.

*local control*

WATER ISLAND, INC.  
1951-1965

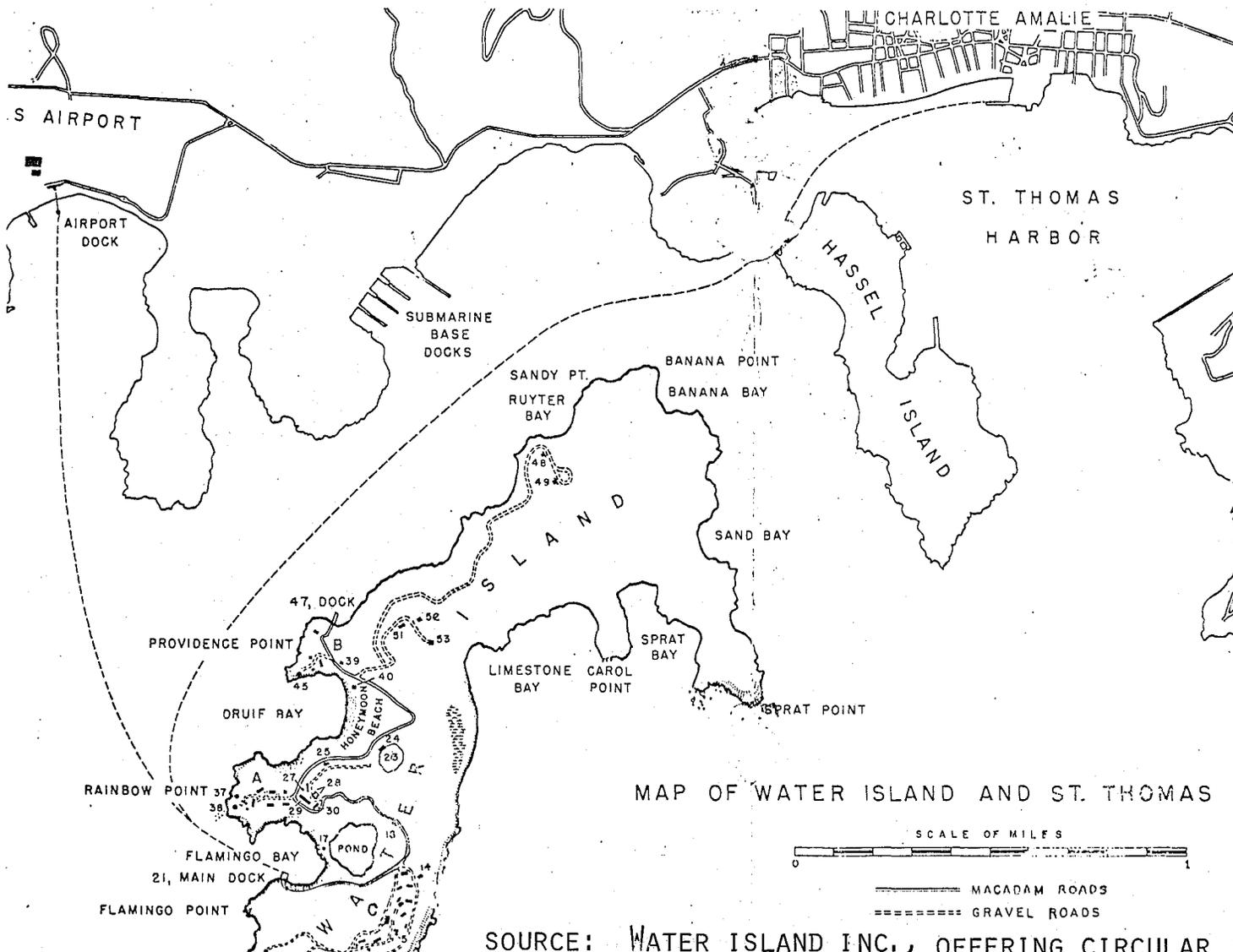
The Phillipses had heard about the availability of Water Island through Isidor Paiewonski, a St. Thomas businessman. After making an on-site inspection in March 1951, they joined forces

*Walter and  
Floride Phillips*

\*For a detailed description of improvements made by the Army, see page 21 below.

MAP NO. 3

ARMY FACILITIES IN 1952

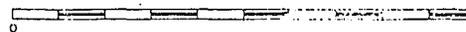


Building Number	DESCRIPTION
A	Located on Rainbow Point:
29	Main Building or "Club Building"
26, 31, 32, 33, 34, 35, 36	Buildings which can be converted into rooms
30	Employees Quarters and Workshop
27	Chlorinator
28	Outdoor Movie Theatre Booths
37, 38	Gun Emplacements
B	Located on Providence Point:
41, 42, 43, 46	Buildings which can be converted into rooms
39	Salt Water Cistern
40	Salt Water Pump House
45	Gun Emplacement
47	Dock
C	Located on Flamingo Point:
2, 3, 4, 8, 9, 10, 11, 13, 15, 22	Buildings which can be converted into rooms
14	Subleased for residential purposes
1	Underground Concrete Fort
5	Steel Observation Tower
	Located in other areas:
51, 52	Buildings which can be converted into rooms
53	Base end station (elevated)
16	Electric Power Plant
17	Salt Water Pump House
21	Main Dock
23	Water Catchment
24	Concrete Reservoir
25	Salt Water Cistern
48, 49	Underground Concrete Igloos

Due to lack of space, the numbers of individual buildings intended to be converted into rooms are not shown on the map but the groups are indicated by A, B and C.

MAP OF WATER ISLAND AND ST. THOMAS HARBOR

SCALE OF MILES



————— MACADAM ROADS

----- GRAVEL ROADS

SOURCE: WATER ISLAND INC., OFFERING CIRCULAR (1953) P. 8.

83

9

with two brothers from New York - Raymond and Edward Bill\* - to form a local corporation called Water Island, Inc., which signed a lease with the St. Thomas Development Authority on August 1, 1951.

Copies of the first lease are not locally available, and therefore have not been examined. The Department of Interior has stated:<sup>15</sup>

This lease was for an initial term of 35 years, with an option for the lessee to have an additional 25 years for a total of 60 years. The lease was drafted to accommodate the Water Island, Inc. development plan for the Island. This plan had two phases - short term and long term. The short term phase contemplated the expenditure of \$200,000 to rehabilitate and convert existing dilapidated Army barracks into a resort hotel with not less than 50 rooms and related facilities. It was anticipated that title to or full control over Water Island would eventually be acquired by the Development Authority and that, thereafter, the occupancy by lessee would be firm and no longer be subject to revocation by the Army. When that event occurred the lessee could then be expected to launch into its long range plan involving substantially increased investment for further hotel and residential development and construction. The initial \$200,000 was considered to be high risk capital because of the right of revocation by the Army. After that right was extinguished, it was felt that the term of the lease would be readily mortgagable to provide the money for the long range plan.

*first lease  
terms*

---

\* There were three other corporate officers: Dr. Roy A. Anduze and Mr. and Mrs. Harry Loucks, all residents of St. Thomas.

According to an account given by<sup>16</sup> Walter Phillips in 1956, the terms of the lease

were that the Army should retain ownership and give the developer a forty year (sic?) lease at a rental of \$3,000.00 a year. In return, the leaseholder had to agree to spend \$200,000 on improvements to the island and, within five years, provide fifty rooms of hotel space - the general idea being that such a development would contribute to the Virgin Islands tourist trade and provide employment for local labor.

Although less than pleased with the terms of the lease, the Phillipses signed it "just to get things going". Once it had been signed, they immediately turned their attention not only to having it changed, but to having the island transferred from the jurisdiction of the Army to the Department of Interior.<sup>17</sup>

The Phillipses had two main problems with their lease. In the first place they recognized that the Army's right of revocation would hamper even their short-term plans. Secondly, they feared that eventual transfer of the Island to the Virgin Islands Government might also be detrimental to their development scheme. As Walter Phillips explained to the Department of Interior in 1972:<sup>18</sup>

*lease  
constraints*

It was felt that a lease from the federal government would be stronger and result in greater development of Water Island .... We believed people would be more inclined to invest in subleases and develop the Island if the deal was from the U.S. government. We wanted to get Water Island removed from the vagaries and changeability of local politics.

The Phillipses, assisted by Governor Morris de Castro and members of the St. Thomas Development Authority, spent the better part of the next twelve months lobbying to have the Army transfer Water Island to the Department of

*transfer to  
Interior*

Interior. On July 11, 1952 President Truman signed Public Law 511 (82nd. Congress) authorizing the transfer. On November 3, 1952 the General Services Administration delegated to Interior the authority to lease the property. On December 10, 1952 Interior executed a new lease with Water Island, Inc.

The provisions of the 1952 lease, which have been discussed in a recent legal analysis by Arthur Pomerantz of St. Thomas, need not concern us here. The developmental framework which the lease mandates is, however, relevant, for it has largely determined the developmental process on Water Island during the past three decades.

Like its predecessor, the 1952 lease was explicitly intended to promote the Virgin Islands' economy. After affirming that the Island had been transferred from the Army to the Interior Department "so that it might be developed in such a manner as to contribute effectively to the economy of the Virgin Islands", the lease goes on to specify that "development of the area as a tourist resort appears to be the most effective use to which it may be put".

*resort  
development*

Section 1 is even more explicit on the nature of the preferred development. "The leased property and improvements," it states, "shall be developed into a resort area." Yet, although the lease seemingly restricts development to the tourist sector, it offers an extremely broad definition of what constitutes a "resort area", to wit:

Comprising dwelling and recreational facilities and ancillary service facilities and parts thereof may be devoted to residences, whether private or cooperative or otherwise, agriculture, horticulture, the breeding and raising of livestock and poultry and other purposes.

Moreover, Section 7 allows sub-lessees to engage in unspecified "commercial, revenue-producing purposes" providing the approval of the

Secretary of Interior is first obtained.

The latitude thus allowed is so great that Mr. J. Robert "Bud" Bishop, the current leaseholder, has stated that he believes he could establish light industries, such as watch manufacturing, so long as the tourists had access to the facility.

Despite the stated objective of creating a tourist resort complex on Water Island, the only tourist facility actually required by the lease was a fifty room hotel, which Water Island, Inc. agreed to have operational "through conversion of presently existing buildings or otherwise" by January 1, 1958. No investment or capital improvement level was established, although Section 4 obligated Water Island, Inc. to have a minimum paid in capital of \$200,000.00 within ninety days from January 1, 1953.

Once the matter of the lease had been resolved to its satisfaction, Water Island, Inc. turned its attention to Phase I of its development strategy - the establishment of a 50 room hotel resort. At this point a major difference of opinion arose between the Phillipses and their partners, the Bills, over the most appropriate development strategy. The Bills wanted to raise a large amount of investment capital in order to build an elaborate resort complex; whereas the Phillipses preferred a low-key, informal and simple operation, with a view to improving the existing facilities "on a sort of pay-as-you-go basis".<sup>19</sup> The disagreement was resolved when the Phillipses bought out the Bills for \$25,000.00. They then launched a public stock issue to raise \$269,000.00 needed to complete Phase I of their development program.

Water Island, Inc.'s hotel development program was based on converting the facilities left behind by the Army into a medium-size hotel operation that would accommodate one hundred guests. The 1953 stock offer described these facilities as follows:<sup>20</sup>

There are extensive improvements on Water Island which were built by the

United States Army during World War II. There are 33 single storied buildings with concrete foundations, concrete floors and concrete block walls, most of which are 22'8" in width and of varying lengths ranging up to 168'8". There is a water supply system, consisting of a water catchment area of 90,000 square feet of concrete and transite, with a covered concrete reservoir of 250,000 gallon capacity and water distribution mains; a power plant with three diesel-operated generators with total capacity of 45,000 watts and electrical distribution lines; a sewer system; a salt water system for flushing toilets. There are about 7 1/2 miles of roads, partly macadam and the remainder gravel. There are two docks and a telephone cable to the mainland of St. Thomas.

*Army facilities*

Reputedly, the estimated market value of the entire installation was only \$60,000.00 in 1952.<sup>21</sup>

The Phillipses arrived in September 1953 to oversee the work of remodelling. After reactivating the Army's water, sewer and electric systems, they concentrated on converting a cluster of buildings on the Rainbow Point promontory into hotel rooms, restaurant, bar, kitchen and other facilities.

The development program effected consisted of converting the largest building (168'8" x 22'8") into a "Club House" containing a kitchen, dining room, lounge, lobby, bar, office and terraces for outdoor dining and dancing. Several nearby barracks buildings, measuring 96'8" x 22'8" were remodelled, so that each contained eight hotel rooms. Several other smaller structures in the vicinity were converted into staff quarters, workrooms, storehouses and a laundry.

*building conversion*

The Water Island Hotel officially opened for business on January 1, 1954. By that time thirty hotel rooms and two guest cottages, capable of accommodating fifty to sixty guests were available for use. However, whereas significant

*hotel*

One major reason that the hotel failed to expand after 1953 was the Phillipses' dedication to moving ahead with Phase II of their development scheme - residential development and construction. They viewed the attraction of permanent settlers to their island home as far more "challenging" and desirable than the operation of a hotel.

*residential  
development*

Certainly by 1956 they saw long-term residents as their primary objective. "We needed the hotel," explained Mrs. Phillips in 1956, "so that the prospective settlers could have someplace to stay while they picked out their site and built their home." And Walter Phillips explained at the same time that with respect to the hotel their ultimate goal was to have facilities for no more than one hundred guests.<sup>24</sup>

According to the Comptroller's 1972 Audit Report, between 1952 and 1966 Water Island, Inc. sold 121 sub-leases, comprising 298.02 acres for a total financial consideration of \$403,835 and total annual rent of \$3,075. The history of these sub-leases is documented in Table I below. The acreage involved ranged from 165 to .50 acres, although the vast majority (101) were about one acre plots. The bulk of the sub-leases were executed between 1956 and 1961 when 246.25 acres were sold to seventy persons.

*sub-leases*

The sub-lessees or "cottagers" acquired their lots for an "initial payment", which ranged from between \$2,500. to \$3,000. per unimproved acre in the 1950's to about \$3,500. in the 1960's. They also paid a nominal annual rent, usually about \$25.00, for the duration of their lease. Lots with old Army buildings on them went for an "initial payment" of about \$5,000. per acre.

It is not clear exactly what the "initial payments" were made for. Article 2 of the sub-leases states that these monies constitute full payment "for the possessory interest of the cottager". However, with respect to local tax subsidies, Walter Phillips has also taken the position that initial payments were not for a real estate transaction, but were prepayments of the cost of furnishing hotel services, were therefore

*initial  
payments*

progress had been made during 1953 with respect to hotel development, little was accomplished in the years that followed. In 1958, when the lease required that the fifty hotel rooms had to be completed, Water Island Hotel only had 31 rooms and 2 guest cottages, according to the TRAVEL AGENTS HANDBOOK issued by the Virgin Islands Department of Tourism and Trade for that year. In 1959, twelve newly converted efficiency apartments, under separate ownership,\* were added to the hotel's operation, but these were the only new additions made to the hotel between 1954 and 1965.<sup>22\*\*</sup>

*limited  
development*

By 1954 then, hotel development by Water Island had virtually come to a halt, a fact underscored by figures which show that between 1956 and 1965 only about \$4,000 was spent on building remodeling, compared to \$121,035 in prior years.<sup>23</sup>

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\* The twelve efficiency apartments added in 1959 actually belonged to the Flamingo Bay Corporation, established by George and Richard Freeman. (George Freeman was a Director of Water Island, Inc. from 1958 through 1974.) In 1957 the Freeman's acquired a sub-lease for four acres containing four unimproved buildings for \$21,475 (\$20,600 as full payment for possessory interest and \$875 as rent from 1957 to 1992). They were authorized by their sub-lease with Water Island, Inc. to operate their own hotel, bar and restaurant. The Freeman's invested about \$125,000 to convert two of their four barracks into efficiency apartments, and they signed a management contract with Water Island, Inc. whereby the latter agreed to manage the apartments and provide services in exchange for 40 percent of the profit.

*Flamingo Bay*

\*\* During 1965 Water Island, Inc. spent \$178,779 on marina development in Flamingo Bay. A channel was opened up between Flamingo Bay and the Lagoon. The Bay and the Lagoon were dredged and two buildings were constructed, one as a dining room, bar, kitchen and the other as a maintenance shop for cars and boats.

part of the hotel operation and consequently were eligible for local tax subsidies.\*

The sub-leases were sold to individuals, almost all of whom intended them for residential use. Four of the sub-leases had buildings on them that had been remodeled by Water Island, Inc. Five others contained unimproved buildings. The vast majority of the lots were vacant, and many were left undeveloped by the sub-lessees. In 1972 (when the first figures became available) 62 of 121 sub-leased parcels were still vacant. Others were improved into residences or apartment units. In 1972 there were 58 homes, 4 apartment buildings (with a total of 32 rooms) and 1 duplex. In 1972 only 25 of the sub-lessees were permanent residents.

The largest sub-lease, comprising about 156.5 acres (as surveyed by the Department of the Interior in March 1978) in the northeastern part of the island, was executed with Clarence Doheny on July 1, 1956. Two years later this sub-lease was assigned to Warren H. Corning, who in turn assigned it to the Sprat Bay Club, Inc. on May 2, 1960. Sprat Bay Club, Inc. was formed as an exclusive residential housing project which sold sub-leases as shares to its members. By 1972 thirty-five families owned shares approximating 80 acres. The remaining 80 acres of land had been set aside as open space, a natural area (40 acres around Sprat Point) roads, beaches and other common use facilities. In 1972 only four owners had built residences, the remainder were undeveloped and vacant.

*Sprat Bay*

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\* The U.S. Comptroller's office has taken exception to the fact that V.I. tax subsidies have been allowed for the "initial payments" on the grounds that these cannot be construed as part of the hotel operation. Walter Phillips has contested that opinion and has refused to repay the subsidies. As of 1980, the issue remains unresolved, and is currently before the courts.

TABLE I: WATER ISLAND SUB-LEASES 1954-1966

YEAR	NO. OF SUB-LEASES	NO. OF ACRES LEASED	TOTAL AMOUNT RECEIVED	AVER. COST PER ACRE OF LAND	NOTES
1954	3	4	18,500 <sup>1</sup>	9,250 <sup>1</sup>	1. For two acres of land, each with one remodeled building. The other two acres were sold in consideration for architectural services.
1955	8	10.45	35,600 <sup>1</sup>	2,929 <sup>2</sup>	1. Includes sale of 3.7 acres with 3 buildings, 2 remodeled for \$16,000. 2. Calculated on sale of 6.75 unimproved acres for \$19,600.
1956	10	175.5 <sup>1</sup>	53,500	2,467 <sup>2</sup>	1. Includes one sale for 165 acres. 2. Calculated on sale of 10.5 acres for \$25,900.
1957	15	18	61,900 <sup>1</sup>	2,793 <sup>2</sup>	1. Includes sale of 4 acres with 4 unimproved buildings for \$20,000. 2. Calculated on sale of 14 acres for \$41,900.
1958	9	8.5	22,335	2,628	
1959	12	17.5	44,800 <sup>1</sup>	3,446 <sup>2</sup>	1. Excludes undisclosed sum received for 4.5 acres. 2. Calculated on 13 acres for \$44,800.
1960	12	13	40,500	3,115	
1961	12	12.75	37,500	2,941	
1962	6	6	17,500 <sup>1</sup>	3,500 <sup>2</sup>	1. Includes sale of one acre for special considerations. 2. Calculated on 5 acres for \$17,500.
1963	10	9 <sup>1</sup>	31,500 <sup>1</sup>	3,500 <sup>1</sup>	1. Excludes one sale for 1600 sq. ft.
1964	9	9	31,900	3,378	
1965	10	9	30,500 <sup>1</sup>	3,500 <sup>2</sup>	1. Includes sale of 2 acres for special consideration. 2. Calculated on 7 acres for \$28,000.
1966	4	3.5	12,000 <sup>1</sup>	3,429	1. Includes \$5,150 paid to W.I. Hotel and Beach Club, Inc.

Source: U.S. Comptroller of the Virgin Islands, Audit Report No. 356-72-99 (1972), Exhibit B.

Phillips justified his preference for permanent settlers on the following grounds:<sup>25</sup>

It was felt that persons living here the year round or for extended stays would provide a much more stable and dependable type of business than transient tourists, who would be here for only a few days. This type of customer would tap an entirely different market than the transient hotel guest. Furthermore, since they would give a substantial investment, their interest would tend to be permanent. Thus, if the sublessees paid for the construction of the houses, this would permit a much greater development than would be possible from the sources of the Hotel alone. The construction of these houses provided employment to large numbers of workers and considerable business to suppliers of materials. The persons occupying them year round or for varying periods not only provided business for the Hotel but gave employment to various types of workers, and business to local merchants supplying food, supplies, furniture, taxicabs and services. But one of the great advantages so far as the local economy is concerned, is that they pay their income taxes here, which stay in the Treasury of the Virgin Islands.

Considerable controversy has arisen over whether the residential development program initiated by Water Island, Inc. after 1954 was in conformance with the development objectives of the lease. In 1972 the U.S. Comptroller argued that Water Island was being developed principally as a residential area and not as a tourist resort, as required, and therefore questioned whether the lease had been complied with and whether such development was in the best interests of the Virgin Islands.<sup>26</sup>

*controversy*

Walter Phillips defended his emphasis on residential development by pointing out that his original scheme, accepted by Governor Morris

de Castro, the St. Thomas Development Authority and subsequently the Department of the Interior, explicitly called for the establishment of a "cottage" type resort which would involve hotel rooms, as well as privately owned apartments and residential units. This type of development was allowed and explicitly protected by the 1952 lease. The sub-leases, he claimed, provided for the structures built on them to be part of the resort operation and the sub-leases were entitled to hotel services.<sup>27</sup>

It is beyond the scope of this report to enter into the legal arguments surrounding this matter. It is clear, however, that in terms of development Water Island, Inc. de-emphasized hotel operations in the strict sense and focused on the expansion of residential units throughout the island. Whether these residential units were actually part of the hotel operation is open to question. Certainly the fragmentary evidence available suggests that relatively few of the sub-lessees actually made their private residences available to hotel guests.

On December 3, 1965 Water Island, Inc., with the approval of the Department of Interior, sold its Master Lease with all its assets, rights and obligations to the Water Isle Hotel and Beach Club, Inc. The sale price was \$645,160, according to Water Inc.'s Annual Report for 1965.

*sale of lease*

During the fifteen years it held the lease, Water Island, Inc. had made a substantial contribution to the development of Water Island. Between 1952 and 1965 it had spent a total of \$465,064 on improvements, most of which went to remodeling the old army buildings as part of the hotel. Employment opportunities for thirty-five to sixty-five persons had been created.<sup>28</sup> A base of services, including water, sewers, electricity, telephone, garbage disposal, mail distribution, roads and ferry transportation, had been established. While overall profits were not as substantial as either the developer or Interior may have wished, they were nonetheless sufficient to keep the Corporation in business. The net worth of the Corporation itself grew from \$106,990 in 1952 to \$700,646 in 1965. Table II

summarizes salient financial information for Water Island, Inc. between 1956-1965. The increased corporate assets for these years were due to equipment and furnishing acquisitions, rather than capital construction which had basically been completed by 1955.

TABLE II: SELECTED FINANCIAL DATA, WATER ISLAND, INC.  
1956-65.

YEAR	GROSS INCOME- HOTEL ROOMS	GROSS INCOME- SUB LEASES	GROSS INCOME- APTS.	TOTAL GROSS RECEIPTS	NET ANNUAL PROFIT BEFORE TAXES	NET ASSETS
1956	42,805	N/A	-0-	71,962	7,072	288,740
1957	54,280	65,095	-0-	122,643	44,717	290,742
1958	55,775	31,535	-0-	104,104	17,151	251,938
1959	70,347	51,809	10,701	138,396	37,102	364,147
1960	67,684	47,425	10,503	145,078	31,198	400,092
1961	102,643	35,376	15,065	160,842	71,665	498,436
1962	113,201	17,451	9,712	105,170	830	483,223
1963	80,705	44,075	10,082	135,029	26,426	511,224
1964	83,574	24,578	21,377	120,113	11,628	527,482
1965	93,086	37,408	19,464	160,318	53,622	729,032

Source: Water Island, Inc. Annual Reports. Annual Reports for the years 1952-1954 could not be located.

The most obvious developmental legacy under Water Island, Inc. was the spread of private residences and the settlement of some twenty families throughout the island. Residential expansion was heaviest along the ridgeline between the underground fort and catchment hill,

where there was already a high concentration of old Army buildings. But, by the 1960's the residential units also began to spread northward along the central ridgeline. Several roads were opened up to the northern end of the island, but only four houses had been built in that sector.

WATER ISLE HOTEL &  
BEACH CLUB, INC.  
1966-1980

The advent of Water Isle Hotel and Beach Club (hereafter WIHBC) marked a radical departure from the development philosophy and pattern of

*new  
philosophy*

Water Island under Walter and Floride Phillips.

The Phillipses had come to Water Island seeking a retirement home, not an investment. In order to obtain a favorable lease to their own island in the sun they had to obligate themselves to develop it as a tourist resort. Once they had gotten a medium sized hotel operational - the minimal development required by their lease - they concentrated on establishing a residential community, a goal more in keeping with their personal interest in Water Island. Under the Phillipses, development, whether hotel or residential, proceeded at a casual, carefully modulated pace. "After all," Walter Phillips once observed, "the original idea behind this was to take it easy."<sup>29</sup>

Edward J. McCardle, President and guiding spirit of WIHBC, was another kettle of fish altogether. A high-powered, well-capitalized, stateside businessman and developer, owner of the highly successful Pheasant Run Lodge in Illinois, he viewed Water Island as a prime investment opportunity by which he could capitalize on the 1960's tourist boom in the Virgin Islands.

*E.J. McCardle*

Ends dictate means. Whereas the Phillipses emphasized residential development as the basis of a cohesive, relaxed community life style, McCardle stressed the hotel and expanded facilities for transient tourists as the engine of his profits. McCardle's concept of a resort complex, which harkened back to that of the Bills, contrasted sharply with that of the

*grand plans*

Phillippes. "We are planning a riviera on the Caribbean," he informed one Illinois newspaper. "When our construction is complete," he continued, "we will have the largest, most luxurious resort in the islands."

McCardle's overall development plan called for an investment of \$2,000,000 to create three multi-storied hotels capable of housing 800 guests, restaurants, 300 Mediterranean style villas, a shopping center, private yacht and tennis clubs, a boat harbor and marina.<sup>30</sup>

McCardle initially focussed on expanding the existing hotel, which was renamed the Water Island Colony Club. Between 1966 and 1968 WIHBC spent about \$2,000,000 on construction of four large hotel buildings (three of which were three stories high), all of which were clustered around the old hotel complex on Rainbow Point. The Flamingo Bay marina was completed and a deep water dock erected in the Bay just below the Hotel. A number of private villas were also constructed in the vicinity of the hotel overlooking the lagoon behind Flamingo Bay.

*hotel expansion*

Water Island Colony Club officially opened for business in 1967 with sixty-three rooms in operation and more under construction. By 1970, one further building had been added and the Hotel offered 110 rooms, three cottages (with a total of eight bedrooms) and 22 villas (38 bedrooms), making it one of the largest hotels in the Virgin Islands at that time.

*large hotel*

But as with so many other developers in the 1960's, McCardle's reach had exceeded his grasp. Whereas, he had projected a total investment of \$2,000,000 for his entire project, the first phase alone had cost approximately \$2,600,000 by 1970. Thereafter, investments fell off markedly and no new facilities were added.

Moreover, hotel business did not live up to expectations. Gross receipts soared to \$1,313,190 in 1968, but the amount steadily declined in subsequent years, sinking to a low of \$170,721 in 1977. Between 1966 and 1978 the resort

*economic problems*

operation only made a net profit in three years (1969-1971). Corporate assets, which stood at \$2,694,091 in 1971, plunged to \$1,884,560 in 1976. Financial data for WIHBC between 1965 and 1978 is summarized in Table III.

Reviewer ratings of the Hotel were not favorable. For example, the 1969-70 version of FIELDINGS GUIDE TO THE CARIBBEAN, praised the new ambiance, but its reviewer concluded: "Good potential; hasn't quite jelled yet." The 1973-74 FIELDINGS found the hotel lacking in nearly every respect: the grounds were dirty, the staff surly, service poor and the entire package grossly overpriced. "Something must be done," stated the reviewer, "to correct the massive operational shambles that plague the facility."

*poor ratings*

Meanwhile, McCardle was doing little to promote further residential development on Water Island. Between 1965 and 1978 only three new sub-leases, totaling 2.25 acres were sold, for total initial payments of \$48,000, plus total annual rent of \$300. In the same period, while 24 new villas had been constructed, just 10 were sold to private individuals, only one of whom was a permanent resident. It should be noted, however, that since 1972 the number of homes has grown from 58 to 73, and the number of permanent year round resident cottagers from about 50 to 100. The overall resident population has increased steadily as well, to an estimated annual average of 170 to 250 persons, depending on the season.

McCardle's economic problems were compounded by social and political troubles. Exclusivist and discriminatory attitudes, policies and actions by WIHBC from 1965 onward enraged many Virgin Islanders, who began to question a federal lease which reserved a substantial land mass for the exclusive benefit of a white enclave community. In 1972 a citizens committee wrote to President Nixon urging that Water Island be turned over to the Virgin Islands Government for living and recreational space. These sentiments were echoed in a letter from

*political difficulties*

TABLE III: SELECTED FINANCIAL DATA - WATER ISLE HOTEL AND BEACH CLUB, INC.  
1966-1978

YEAR	TOTAL GROSS RECEIPTS	TOTAL INCOME	PAYROLL	REPAIRS AND MAINTEN.	NET PROFIT	TOTAL PROPERTY AND EQUIP. VALUE	TOTAL ASSETS
1966	125,323	140,247	49,611	9,259	-35,031	N/A	1,208,297
1967	237,314	-77,357	67,194	47,411	-123,777	N/A	1,786,461
1968	1,313,190	477,639	255,353	128,550	-53,000	1,878,283	2,066,261
1969	1,244,467	510,928	215,724	66,911	+ 698	2,233,084	2,444,342
1970	1,076,944	433,104	174,723	54,497	+30,897	1,930,353	2,614,855
1971	1,138,860	569,375	191,320	75,199	+83,166	1,930,353	2,694,091
1972	not avail.	N/A	N/A	N/A	N/A	N/A	N/A
1973	1,028,262	321,286	277,983	137,988	-51,923	1,749,809	2,512,675
1974	289,775	118,969	69,784	50,762	-47,573	1,633,944	2,228,170
1975	245,458	97,219	61,357	71,632	-37,273	2,513,036	2,021,567
1976	314,905	109,411	76,545	50,461	-16,509	2,522,516	1,884,560
1977	170,721	-243,830	N/A	42,408	-148,436	2,286,384	2,189,617
1978	183,593	-3,779	N/A	N/A	-3,779	N/A	N/A

Source: Water Isle Hotel and Beach Club, Inc. Annual Reports

Senator Percival H. Reese to Secretary Rogers C. Morton, and a Bill was introduced in the V.I. Legislature petitioning the federal government to transfer Water Island to the Virgin Island Government at the expiration of the twenty-year lease in December 1972.

In 1972, the V.I. Senate established a Water Island Commission to investigate all aspects of the Water Island lease "so that the people of the Virgin Islands, through duly elected representatives, may have available factual information for the formulation of policy and an official position with regard to the renewal of the Water Island lease and other matters pertaining to the future use and development of Water Island."

*study  
commission*

After examining the evidence and conducting public hearings the Commission concluded that the lease appeared to be valid and had been complied with by the two holders of the Master Lease. However, it lamented the highly favorable terms of the lease, and questioned whether by granting exclusive and poorly defined developmental rights to a solitary developer, the federal government had acted in the best interests of the people of the Virgin Islands.<sup>31</sup>

Despite public outcry in the Virgin Islands and a 1972 Audit Report by the U.S. Comptroller questioning whether heavy emphasis on residential development was in accordance with the intention of the lease and in the best interest of both the territorial and federal governments, the Department of the Interior renewed the Master Lease without any changes, for a period of twenty years, starting January 1, 1973.

*lease renewal*

Resolution of the lease question did nothing to improve the hotel's financial picture, which went from bad to worse. National recession and local socio-racial unrest which helped to slow down the Virgin Islands tourism economy in the mid-1970's, combined with mismanagement, and poor marketing to accelerate the hotel's decline. Starting in 1974, the hotel operated on an irregular basis, and a number

*hotel  
shutdown*

of employees were dropped from the payroll, which fell from \$277,983 in 1973 to a mere \$69,784 the following year. By 1977 problems had intensified to such an extent that the hotel actually shut down operations, and suffered a net operating loss of \$148,436.

The hotel reopened in December 1977 with a new name - Sugar Bird and under the new management of Beach Management Corporation, a Delaware group headed by J. Robert "Bud" Bishop, which had acquired a fifty percent interest in WIHBC on a management basis.

*new  
management*

In December 1978 Water Island Hotel and Beach Club, Inc. was liquidated into its parent organization, Water Island Hotel and Beach Club, Ltd. On August 2, 1979 the Department of the Interior approved the assignment of the Master Lease from Water Island Hotel and Beach Club, Inc. to Water Island Hotel and Beach Club, Ltd.

Meanwhile, on August 4, 1978 Water Island Hotel and Beach Club, Inc. had sold its interest in the Master Lease to Beach Management Corporation, subject to approval by the Department of Interior. The sale price was \$2,183,000 - a figure which has since risen to \$2,883,000 because of complications in closing the transaction.

*lease sale*

Beach Management Corporation asked Interior not only to approve the assignment of the Lease, but to renew it for twenty years (later changed to forty years to facilitate financing), plus implement over \$600,000 in improvements. (See Appendix I for Beach Management Corporation's letter request.) Virgin Islands Governor Juan Luis wrote to Interior's Office of the Territories on June 16, 1978 in support of a twenty year extension.

*lease  
extension*

On February 15, 1979 Interior approved the assignment of the lease to Beach Management Corporation. Accordingly, a proposed lease was worked out along lines suggested by Beach Management Corporation. It provided for a higher

minimum rent, guarantees that the hotel would be open year around and would be kept in good repair, construction of new sewer lines and a sewage treatment plant, compliance with the local free beach law, and releasing the federal government from any obligation to purchase hotel improvements at the termination of the lease.

*proposed  
lease changes*

Interior forwarded the proposed lease to the General Services Administration, which declined to approve it on the grounds that a higher level of rent was called for and that the question of compensation for the possessory interests should first be resolved.

While Interior and the GSA exchanged correspondence, memorandums and legal opinions on the matter, the Virgin Islands Government wrote to Interior that it wanted to be party to the renegotiation process, and, through the concern of Rep. Phillip Burton, the U.S. Congress also became involved. In consequence of widening interest in the future of Water Island the federal government has asked the Government of the Virgin Islands to carry out an extensive study of the legal and economic issues involved in transferring ownership to the Virgin Islands Government. Further federal action has been deferred until the results of the study are known.

*widening  
interest*

Most of the discussion surrounding Water Island during the past decade has concentrated on legal (lease) or political (status) issues. In the last two years attention has centered almost exclusively on the legal obligations of the federal government under Section 10 of the Lease and how these might be renegotiated. Little serious consideration has thus far been devoted to how Water Island can best be developed in the socio-economic interests of the Virgin Islands, which, after all, was the rationale of the original lease.

Nothing in the public discussion has encouraged Virgin Islanders to view Water Island as a basic development resource. During the 1972 lease renewal controversy there was a spontaneous expression of local concern for the future of Water Island. An ad hoc Citizens Committee

proposed that the island be used to expand "living and recreational space" for Virgin Islanders. Others suggested locating low income housing projects there.<sup>32</sup> The only development recommendation made by the Water Island Commission was that the Virgin Islands Government should designate any Sprat Bay Club, Inc. property it might acquire "perpetually as open space (greenbelts, outdoor recreation, wildlife preserves, etc.)"<sup>33</sup> All of these development alternatives were predicated on the assumption that title would pass from the federal to the territorial government. When that transfer did not occur and when Interior renewed the lease for an additional twenty years, local public opinion fell silent.

*local  
development  
ideas*

For its part Interior has never deviated from the developmental strategy it prescribed in the 1952 lease (itself a compromise with the Philippses). In 1972 Interior renewed the lease without any alterations despite the fact that many Virgin Islanders openly doubted whether the hotel/residential pattern squared with local socio-economic interests, despite the conclusion of the Water Island Commission "that the impact which the Department of the Interior expected would be made on the economy of the Virgin Islands has not in fact been realized,"<sup>34</sup> and despite the U.S. Comptroller's Report questioning the economic desirability of future residential development. Nor does it appear that the alternative development options suggested by Virgin Islanders at the time were given serious consideration.

This predilection toward the status quo has conditioned Interior's position with respect to the lease renewal requested in 1978 by Beach Management Corporation. Interior's position vis a vis future development was summed up by C. Brewster Chapman, Jr., former Assistant Solicitor for Territorial Affairs, who wrote to Ruth van Cleve on July 5, 1978:<sup>35</sup>

It seems, in realistically analyzing the problems created by Section 10 of the lease, that the current uses, improvements and operations on Water

Island will always be substantially as they are today.

Consequently, in its negotiations with Beach Management Corporation, Interior did nothing to modify the vague, "tourist resort" development program outlined in the original 1952 lease, and required only that the hotel be open year round and properly maintained. Inasmuch as Beach Management Corporation apparently submitted no proposed long-term development plan as part of its request for an extension, and is currently taking the position that it cannot formulate such a plan until the issue of the lease is resolved and short-term financing obtained, Interior's precipitate support for the proposed new lease can hardly be considered a commitment to insuring that future development will promote the socio-economic well-being of the Virgin Islands.

*precipitate  
action*

Meanwhile, development of any sort on Water Island has come to a virtual standstill. Within the last decade not one new residential lot has been sold. Given the uncertain status of the lease prospective homeowners hesitate to build and find it impossible to obtain mortgages at any terms. The hotel continues to operate at a net loss (in 1979 it has an overall occupancy rate of 46 percent), and its plans to upgrade existing facilities are stymied by the lengthy lease renegotiation process. (See statement from Beach Management Corporation in Appendix II.)

*no progress*

SECTION III: FOOTNOTES

1. Bullen, Ripley P. "Ceramic Periods of St. Thomas and St. John Islands, Virgin Islands," The William L. Bryant Foundation American Studies, Report No. 4 (1962), pp. 34-35.
2. Buxton, L.H.D., J.C. Trevor and Alvarez H. Julien, "Skeletal Remains from the Virgin Islands," MAN, Vol. XXXVIII, No. 47, pp. 47-51; Hatt, Gudmund, "On Pottery from the Virgin Islands," Ibid, pp. 52-53; Steward, T.D., "Negro Skeletal Remains from Indian Sites in the West Indies," MAN, Vol. XXXIX, No. 52, pp. 48-53.
3. Personal communication from Emily Lundberg, Office of Archaeological Services, V.I. Department of Conservation and Cultural Affairs. The five archaeological sites, all of which are located in micro-planning district B, are potential obstacles to future development, since they are subject to federal laws governing cultural resources on federal properties, including: Antiquities Act of 1906 (P.L. 59-209; 34 Stat. 225; 16 U.S.C. 431-433); the National Historic Preservation Act of 1966 (P.L. 89-665); 80 Stat. 915; 16 U.S.C. 470); the National Environmental Policy Act of 1969 (P.L. 91-190); Stat. 852; 42 U.S.C. 4321-4327); Executive Order 11593 of May 13, 1971 (36 FR 8921, 16 U.S.C. 470) and the Archaeological and Historic Preservation Act of 1974 (P.L. 93-291; 88 Stat. 174; 16 U.S.C. 469). It should be pointed out that to date none of these laws have ever been enforced on Water Island.
4. The only historical account of Water Island is Phillips, Walter H. "History of Water Island," The Daily News (St. Thomas), August 1, 1965, p. 67-68, which is generally informative and reliable.
5. Most of the legends are pandered in Cochran, Hamilton, These Are The Virgin Islands (1937), p. 5, 44-49; see also Phillips, ibid. and J.C. Work, A Short History of the Virgin Islands (N.D.), p. 29.
6. Westergaard, Waldemar, The Danish West Indies under Company Rule (1671-1754) (1917), p. 43.
7. Brønsted, Johannes, (ed.), Vore Gamle Tropekolonier, vol. I (1966), p. 134.

8. Ibid.
9. Ibid.; Richard Thruelsen, "An Island of Their Own," The Saturday Evening Post, December 1, 1956.
10. Ibid.; U.S. Consular Despatches, St. Thomas, Payne to Pierce, 4 Feb. 1904; 5 June 1905; The Bulletin (St. Thomas) 11 Feb., 14 Feb., 7 March, 29 May 1905. The American consular representative in St. Thomas shared a prevailing opinion that the East Asiatic Company (reportedly controlled by Germany's Hamburg-American Steamship Line) was actually fronting for the German Government, which was surreptitiously endeavoring to establish a German commercial and naval base in St. Thomas. If this assumption was correct, the Company may have acquired Water Island in order to guarantee its long-term availability for the exclusive use of the German Navy.
11. It is likely that the scheme was given up because the East Asiatic Company acquired the West India Company Ltd. around the same time, and decided to concentrate on expanding and upgrading the docking and coaling facilities at Long Bay.
12. Although the East Asiatic Company, through its agent the West India Company, signed a stipulation that the condemnation was a "friendly taking" and waiving all rights of appeal, it may well be that the Company still has a claim to Water Island on the grounds that the waiver was signed under duress and that ownership was protected by Treaty rights. Mr. Klav Thomsen, current Director of the West Indian Company, has suggested an interest in investigating this matter.
13. U.S. Comptroller of the Virgin Islands, Audit Report No. 356-72-99 "Report of Lessees' Compliance with the Provisions of Lease for Water Island", (1972) p. 8. It is not clear where the Comptroller obtained this figure, or whether it reflects both material and labor costs.
14. Thruelsen, op. cit.
15. U.S. Department of Interior Files (hereafter DOIF), C. Brewster Chapman, Jr., to Herman Marcuse, Department of Justice, May 29, 1979.
16. Thruelsen, op. cit.

17. Ibid.
18. DOIF, Walter Phillips to Thomas F. Dunn, 15 August 1972.
19. Thruelsen, op. cit.
20. Offering Circular, New Issue, of Water Island, Inc. January 13, 1953, p. 4.
21. U.S. Comptroller of the Virgin Islands, op. cit., p. 8.
22. The 1963 Fodor's GUIDE TO THE CARIBBEAN stated that Water Island Hotel offered 31 hotel rooms, 12 efficiencies and 2 cottages.
23. Information taken from the Annual Reports of Water Island, Inc.
24. Thruelsen, op. cit.
25. DOIF, Walter Phillips to Thomas F. Dunn, 15 August, 1972.
26. U.S. Comptroller of the Virgin Islands, op. cit.
27. DOIF, Walter Phillips to Thomas F. Dunn, 15 August, 1972.
28. Water Island file, Industrial Incentive Division, V.I. Department of Commerce.
29. Thruelsen, op. cit.
30. Item in the Helen Auble Collection, Island Resources Foundation, Inc.
31. Report of the Water Island Commission, September 22, 1972.
32. Information from the records of the Water Island Commission in possession of Mr. Alton Adams, Jr., Chairman of the Commission.
33. Report of the Water Island Commission, September 22, 1972, p. 12.
34. Ibid, p. 7.
35. DOIF, Memorandum from C. Brewster Chapman, Jr. to Director, Office of Territorial Affairs, July 5, 1978.

CHAPTER THREE

PHOTO SURVEY OF WATER ISLAND

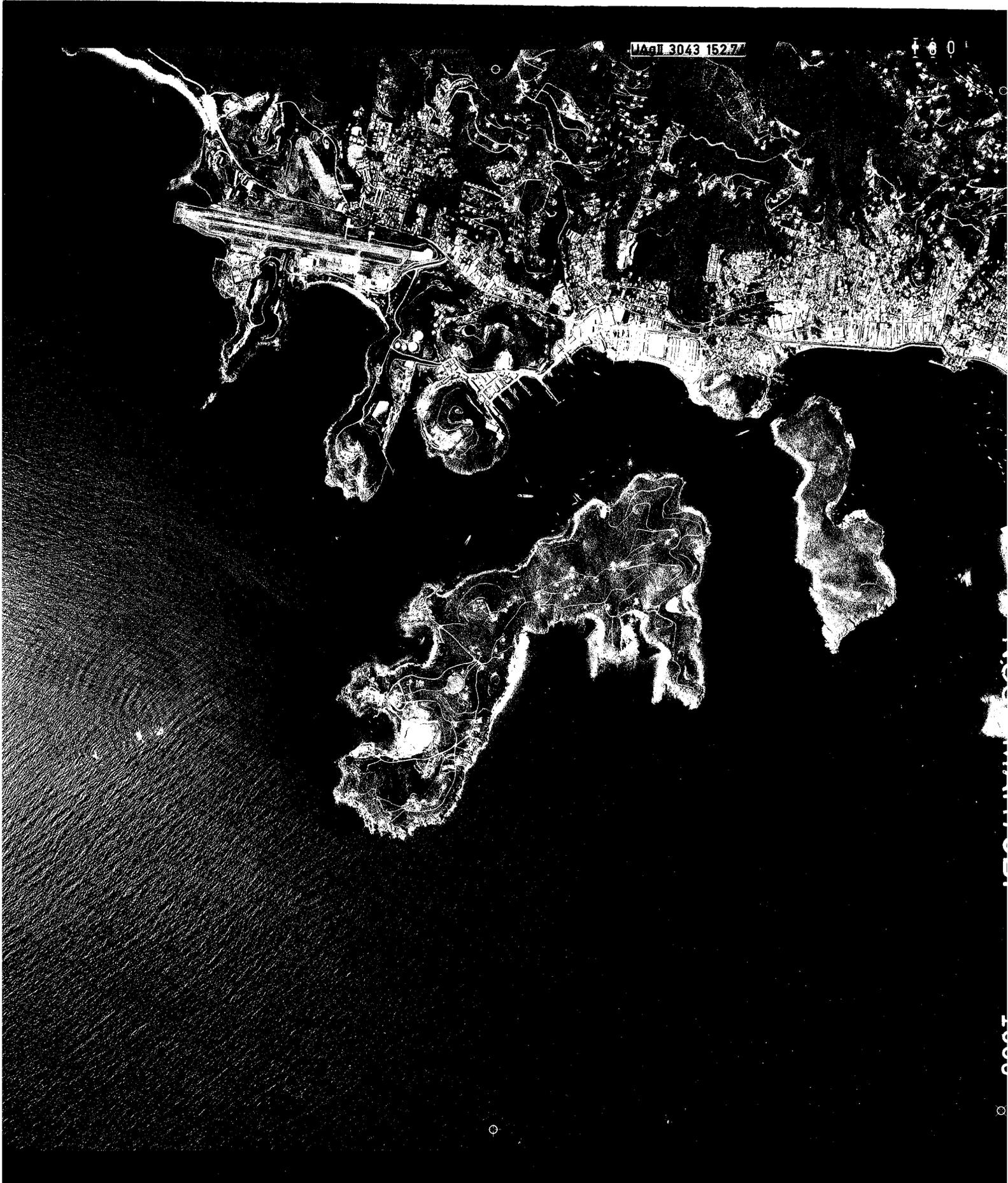
This chapter begins with a March, 1978, National Ocean Survey aerial photograph of Water Island which clearly shows its relationship to St. Thomas and the current level of development. The only significant difference between this photograph and current conditions is a much higher density of yachts anchored in Honeymoon Bay, and along the West Gregorie channel. In addition, most of the wrecks, including the Cartenser Senior, which is clearly visible under water in this photograph, have been removed.

The thirty-two photos which follow have been selected to illustrate major physical aspects of Water Island, ranging from the beach and shoreline areas to housing and the old Army installations. The photographs are identified by their "micro planning district" location. The micro planning districts are identified on the map at the beginning of Chapter Four, Section IV.

Xerographic reproduction of these photographs is not very satisfactory. However, photographic originals are also being supplied to the Virgin Islands Department of Commerce where they may be inspected for detailed features.

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PHYSICAL ELEMENTS OF WATER ISLAND



1. Flamingo Point at southern extremity of Water Island

(MPD\*-C)

2. Eastern shoreline above Limestone Bay, looking south toward Flamingo Point. Note semi-arid scrub vegetation typical of this coastline.

(MPD-C)



3. Limestone Bay and salt pond, looking east. Note the fringing mangrove system, largest on the island.

(MPD-C)



4. Sprat Bay beach and beach house  
(MPD-C)

5. Sand Bay salt pond  
(MPD-C)



6. Beach at "Caroline Point Bay". Note the dry stream bed which enters the bay between the two wooden tables. Behind the narrow beach is the old de Ruyter fresh water pond (now dry) and well  
(MPD-B)



7. Beach at Elephant Bay

(MPD-B)

8. Elephant Bay salt pond, with mangroves

(MPD-B)



CULTURAL ELEMENTS OF WATER ISLAND



9. Water Island Botanical Garden, established and maintained by Walter Phillips

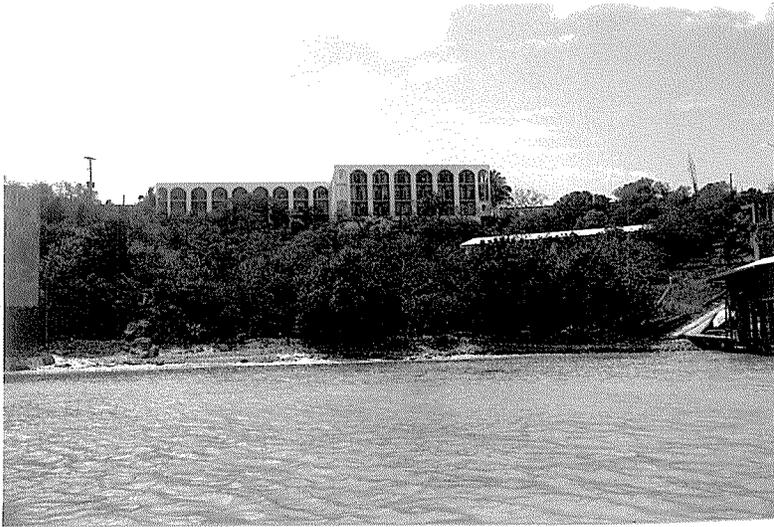
(MPD-A)

10. Entrance to underground fort and gun emplacement atop Flamingo Point

(MPD-C)



HOTEL FACILITIES

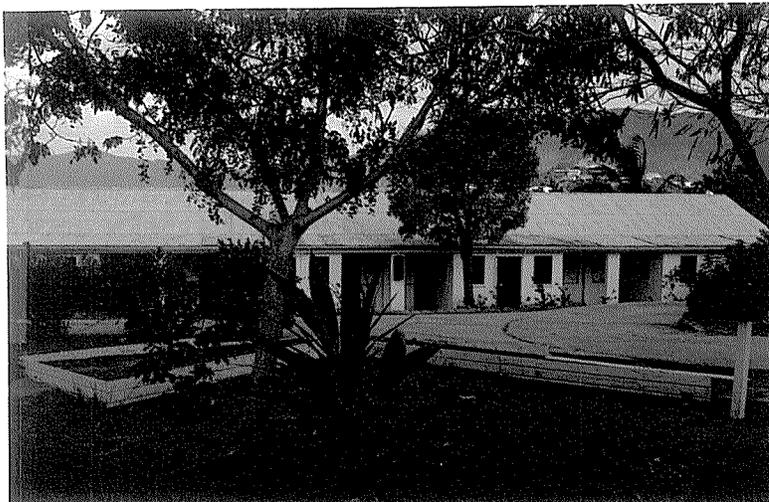


11. Sugar Bird Hotel seen from Honeymoon Bay

(MPD-B)

12. Post-1965 Sugar Bird Hotel buildings

(MPD-B)

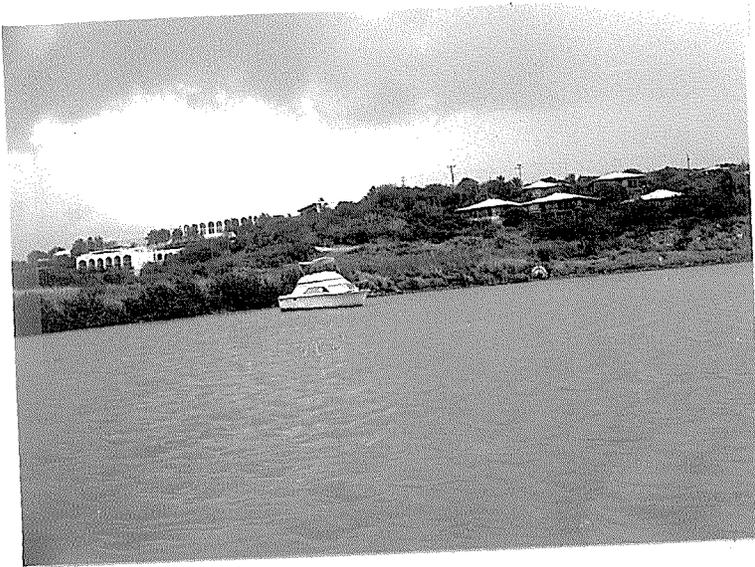


13. Sugar Bird Hotel: converted Army barracks

(MPD-B)

14. Sugar Bird Hotel and Villas seen from Flamingo Bay Pond

(MPD-B)

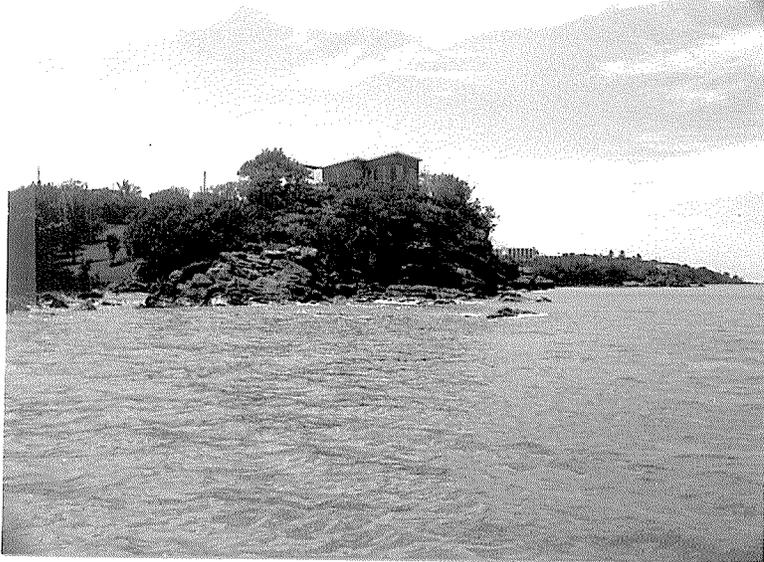


15. Sugar Bird Villas

(MPD-B)



RESIDENTIAL FACILITIES



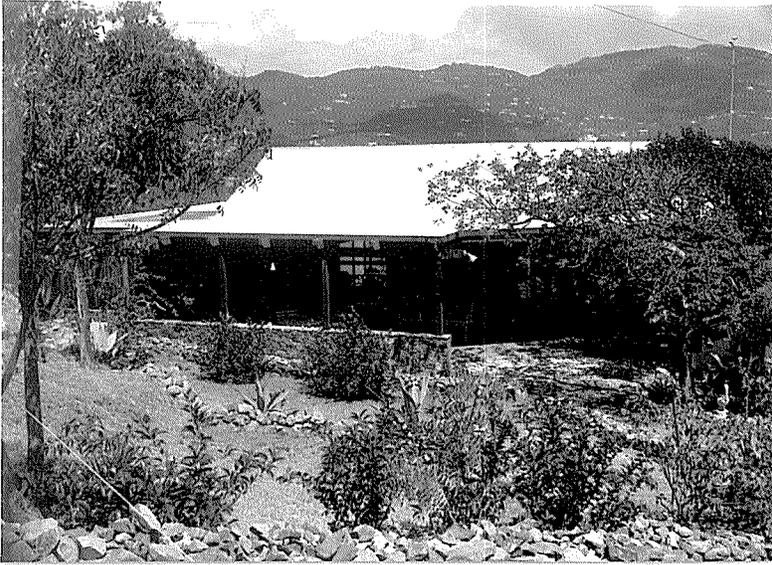
16. Private home in converted  
Army building at  
Providence Point

(MPD-B)

17. Private home, combining  
a converted military  
tower with new construction

(MPD-A)



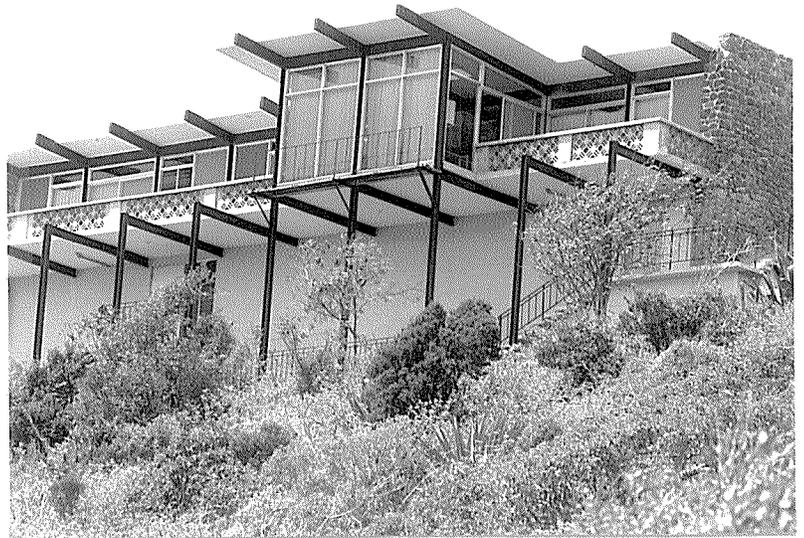


18. Typical medium sized private home of recent construction

(MPD-C)

19. One of the largest and newest private homes located on Sprat Bay Corporation property

(MPD-D)



INFRASTRUCTURE



20. Concrete water catchment, built by the Army

(MPD-A)

21. Gas storage tanks, near Flamingo Bay marina

(MPD-B)



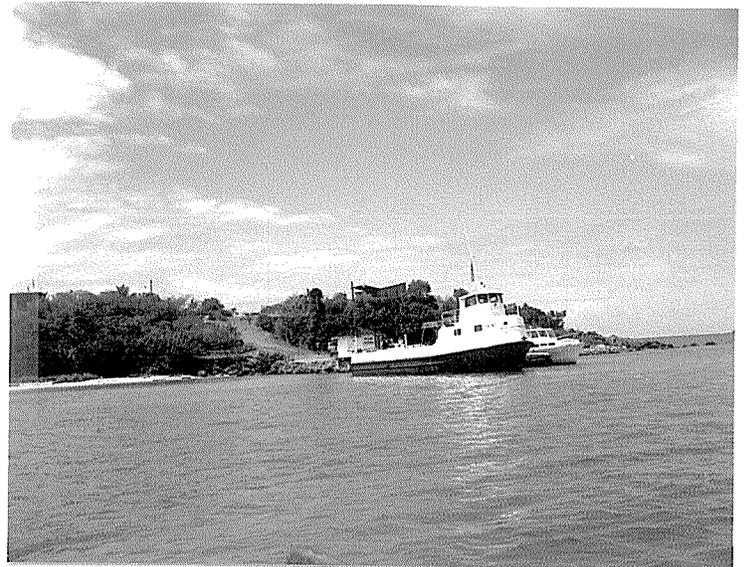


22. Open garbage dump, Flamingo Bay. This dump serves the entire island.

(MPD-B)

23. Main ferry and cargo dock at Providence Point

(MPD-B)





24. Hotel surrey truck, connecting the hotel with the ferry dock

25. One of the few concrete roads, the approach to Honeymoon Beach

(MPD-B)



26. Unpaved residential road, privately maintained by Water Island residents

MARINA FACILITIES



27. Sugar Bird Hotel dock at Flamingo Bay. Note hotel warehouse and open garbage dump in the background

(MPD-B)

28. Flamingo Bay marina seen from the hotel. Note private residences and apartments converted from Army barracks in the background

(MPD-B)



29. Flamingo Bay marina

(MPD-B)



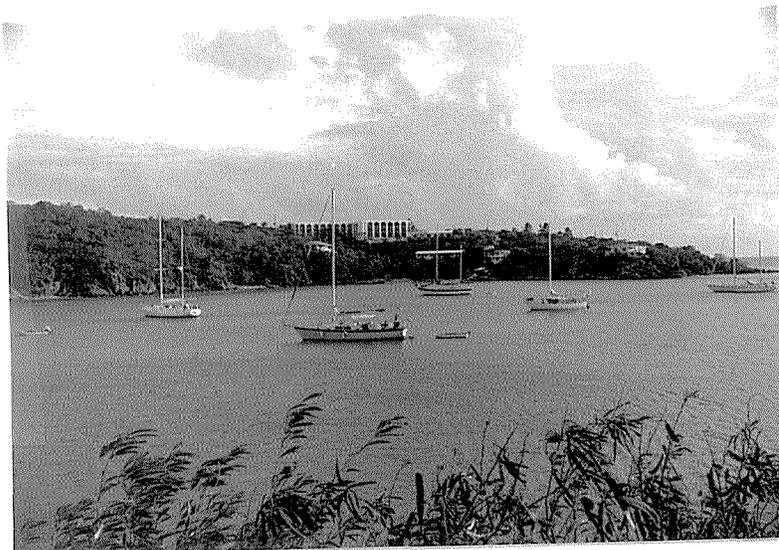


30. Yachts at Flamingo Bay marina

(MPD-B)

31. Private Sprat Bay Corporation dock at Ruyter Bay

(MPD-B)



32. Yachts in Honeymoon Bay

(MPD-B)

CHAPTER FOUR  
ECONOMIC DEVELOPMENT OPTIONS

## SECTION I: INTRODUCTION

This chapter addresses Water Island development from three different perspectives. Section II is an explanation of four guidelines for assessing any development proposal. Based on both the general characteristics of small tropical islands, and on the specific conditions of the Virgin Islands, these guidelines provide a general framework for assessing both social and environmental effects.

Economic and institutional constraints on development are discussed in Section III, with special emphasis on costs, property rights, and a management model for future Water Island development.

Section IV is devoted to a detailed examination of alternative economic uses and development scenarios for each of the four micro planning districts on Water Island. The major use categories in the maximum mixed use scenarios for each district are evaluated in terms of the developmental guidelines.

Section V summarizes all of the micro planning district data for Water Island as a whole and presents recommendations and conclusions.

Section VI lists sources and references for Chapter Four.

## SECTION II: DEVELOPMENT GUIDELINES FOR WATER ISLAND

In order to assess development options for Water Island, it is necessary to establish a general framework, or guidelines, that address development issues in terms that are relevant to the Virgin Islands. Borrowing from previous works on other tropical island systems, we have identified four general guidelines:

1. Development must be geared to the minimum practical disturbance to the social and biological ecosystem.
2. Development must be directed at alleviating existing stresses in the human and natural environment. Proposals should be carefully assessed to ensure that they do not inadvertently contribute to critical stress factors.
3. Development proposals should specifically contemplate the potential effects of catastrophe.
4. Development projects should be self-contained, modular and time-phased to permit re-evaluation and adjustment based on changing conditions and new information.

Before discussing the derivation of these guidelines in detail, several general points need to be emphasized.

- The guidelines are "pro" development... they are predicated on the assumption that major development in the Virgin Islands should take place.
- The guidelines are specific to the Virgin Islands ... they are based on an interpretation of actual conditions in the territory, which differ substantially from neighboring areas such as Puerto Rico and St. Martin.

*pro-  
development*

*specific*

- The guidelines are incomplete .. but they are sufficient to provide an initial basis for assessment, and a framework for more detailed standards and criteria that can arise from on-going planning and land use programs.
- The guidelines are comprehensive, in that they cover both the social and physical environment. In their derivation and priorities, the guidelines owe more to social factors; in their organization and analytical processes, the guidelines owe more to the biological sciences and systems analysis.

*incomplete*

*comprehensive*

#### INSTABILITY

Ecologists of both the biological and the sociological persuasion have begun to realize that island systems in general are qualitatively different from the models that have been developed to describe system behavior for large continental areas. A major element to the qualitative differences is the fact that island systems generally lack the "buffers" provided by large land areas and large biological and social communities. This lack of buffering implies that the basic equilibrium conditions of island ecologies are intrinsically less stable than similar continental systems.

*unbuffered*

Contributing to this basic tendency in the Virgin Islands is the extraordinary dependency of the social, political and economic systems on outside factors. There are innumerable studies and examples that can be used to illustrate the point, including the economic analyses of Jerome McElroy of the V.I. Department of Commerce, but perhaps none is more graphic than the fact that born Virgin Islanders are a minority in the territory, at the same time that more Virgin Islanders live on the mainland than in the Virgin Islands.

*external  
dependence*

The biological processes of small tropical islands are also far more fragile than their temperate counterparts. The Virgin Islands are

*fragile  
environments*

chips of lava and coral in the middle of the ocean. The tropical oceans are not very productive, because warm water holds relatively little dissolved oxygen. Reef systems generate a great variety of life, but they are sensitive to changes in water flow, water clarity, suspended solids and physical damage. Destruction of the reef can lead to both the loss of large quantities of sea life, and to physical damage to adjacent shorelines. The terrestrial environment is almost as fragile as the sea, with special problems caused by thin erodible soils, highly variable rain and groundwater resources.

It is possible to over-dramatize the fragility and instability of the Virgin Islands. There is a great deal of resilience in both the social and biological communities. There are qualities of flexibility and adaptability that go far to compensate for the lack of large scale buffers. The critical point to appreciate is that the Virgin Islands, in common with a multitude of small tropical island systems, are both quantitatively and qualitatively less robust than is assumed by most temperate, continental development models. This lack of stability is most evident in a high propensity for irreversible damage as the result of even trivial impacts.

*resilient*

Given these conditions, any development strategy must pay special heed that the ecological systems are not unnecessarily disturbed. As planning and research proceed, areas of critical concern will emerge which demand special attention. The Coastal Zone Management Act has already established special provisions for selected areas of the coast. The focus on these special areas should not overshadow the fact that the inherent fragility of small island ecosystems demand continuing care and sensitivity for all forms of development in all areas.

STRESS      In addition to the delicate balance that exists in general for small tropical island ecologies, the Virgin Islands are especially affected by the high degree of stress that exists under current

*stress plus instability*

conditions. These two factors of instability and stress are distinct; it is the combination of instability and high stress that creates especially difficult choices for development in the Virgin Islands. Few areas are faced with such fragile ecosystems and such high levels of stress.

Examples of the highly stressed ecology of the Virgin Islands abound. The following list is only illustrative of the range of stress factors and indicators:

- Both population growth and density are extremely high in relation to absorptive capacity and the natural bearing capacity of the islands;
- Over twenty-five percent of the population is enrolled in school, with over half dropping out before graduation;
- Higher volumes of tourism and retail trade appear to be returning less money to the local economy;
- Real wages have declined significantly over the past decade;
- Major elements of social capital infrastructure and public services have experienced significant decline over the past five years;
- Populations and species diversity in both the terrestrial and marine environments have declined noticeably;
- Indices of tourist satisfaction and return visits have declined;
- Crime rates and other indices of socio-pathology are high.

*stress  
examples*

The significance of these stress indicators is based on the notion that high stress brings an ecological system to a threshold, which results in a new definition of the equilibrium

of the society. Invariably, this new equilibrium results in a lower level of "resource" (i.e., energy, comfort, money, or amenity) that is available to distribute among the members of the community. In other words, ecological models of stress and change reveal that the processes are not smoothly changing relationships. Beyond a certain level of stress the total system "falls" to a lower plateau, with a diminished ability to satisfy all of the demands placed upon it. Recognizing this principle, and the existing high levels of stress in the Virgin Islands, development guidelines have to avoid increasing stress wherever possible (e.g., self-contained water and sewage systems), and should actively seek to alleviate stresses (e.g., job creation, increased taxes, environmental rehabilitation, etc.).

#### CATASTROPHE

Apart from the "routine" stress factors evident in the Virgin Islands, there is a special need to consider the possibility of catastrophe. The combination of instability and stress discussed above implies a special vulnerability in the Virgin Islands to any disaster. In addition, there is considerable evidence that many different kinds of catastrophe are more probable in the Virgin Islands than in other areas. The risk of hurricane is well known as an example; a recent study by the Disaster Preparedness Office indicates a high probability of major earthquake in the Virgin Islands. The extremely high volume of oil shipments through the Hess Oil Virgin Islands Corporation refinery in St. Croix creates a significant risk of major oil spill or tanker accident. The islands have already seen indications of the impact of major episodes of social or political unrest on the tourism base of the economy. And there is increasing local sensitivity to the potentially disastrous consequences of relatively minor shifts in energy, economic or political relationships between the Virgin Islands and the mainland North American systems.

*probable  
disasters*

The fundamental difference between stress effects and catastrophe for the purpose of development guidelines is the difficult matter of

weighing risk factors against the costs of prevention and avoidance. For the purposes of evaluating specific development options on Water Island it is sufficient to highlight the special dangers and risks implied by high density, high energy development options, especially in light of prolonged isolation that can accompany a major catastrophe. However, from the standpoint of the wider community, a great deal of thought needs to be given to the range of potential catastrophes that could affect the Virgin Islands, and realistic steps taken to avoid, ameliorate and plan the recovery from their consequences.

*needs risk  
analysis*

#### UNCERTAINTY

In addition to instability, stress and catastrophe, development guidelines for the Virgin Islands need to be especially sensitive to the problems of uncertainty. Because the Virgin Islands ecology is subject to the interaction of so many external factors, it is extremely difficult to project long term trends or to predict the consequences of present actions. Examples range from the reliability of weather forecasts, to calculating the maximum sustainable yield of the lobster fishery, to evaluating the alternative benefits of chartering planes to the Virgin Islands versus spending more money on advertising.

Uncertainty has been used to justify indecisiveness and imprecision in development guidelines, which is unfortunate. There is a need, under conditions of uncertainty, to avoid unnecessary decisions, but this is a specific strategy which is very different from vacillation and conflicting standards. Under conditions of extreme uncertainty, development guidelines should require conservative estimates of input and return to justify specific proposals; the development process itself should be as self-contained as possible; and it should be modular and time-phased to permit reassessment, redirection or termination at specific points in the development process.

*uncertainty  
not indecision*

CONCLUSION            In conclusion, development guidelines for the Virgin Islands need to reflect the unique ecological factors which affect both human and natural systems in the Territory. The major factors are a delicate ecological equilibrium, a highly stressed human and natural environment, a high potential for catastrophe and a high degree of variability and uncertainty in measuring and predicting development effects. Based on these factors, development guidelines for the Virgin Islands, which should be applied to development alternatives for Water Island, include:

1. Minimal disturbance of the (human and natural) ecology;
2. A specific strategy to minimize additional stress and to alleviate existing stresses in the ecology;
3. Provision for the possibility of natural or man-made catastrophe;
4. Conservative, time-phased and modular development plans to permit reassessment and redirection.

### SECTION III: DEVELOPMENT CONSTRAINTS

In addition to the imposed constraints established by guidelines, there are a great many restraints on Water Island development which result from natural, economic, and legal factors. Water Island property holders responding to a survey were quite explicit about the constraints that they see (see Chapter Five). In their responses, they cited the existing lease and associated financing problems, the high costs of building and living on Water Island, difficulties of access, problems created by the climate and terrain of Water Island, and a variety of other problems.

These are all real issues, but they take on a different significance when viewed from the standpoint of public policy alternatives. The issue of the extra costs involved in development of Water Island is doubly bothersome - it affects both building and operating major government services, and the cost-of-living factors faced by residents. Both of these elements have difficult political and social consequences. The disposition of existing property rights and the design of a management model for future development are equally complex issues.

The purpose of this section is to highlight the major consequences of these three issues, and to indicate some of the trade-offs that are available to policy makers. It should be understood that there are no "right answers" to these issues. Decisions will have to come from a determination of the long term economic development goals and negotiation of the interests of the several parties.

**COSTS**        As a small, isolated island, Water Island suffers many of the problems faced by the Virgin Islands in general, but accentuated because of its small size and dependence on St. Thomas as the basic source of supplies and services:

- Supply lines are long, tenuous and complicated;
- Transportation to St. Thomas is time consuming, costly and unreliable;
- Labor sources are generally not available and specialty skills are hard to acquire;
- Land resources are extremely limited;
- Rainfall is sparse and variable;
- Communications and electrical power systems are not reliable.

*cost factors*

The economic consequences of these factors are somewhat stark. Based on estimates provided by Alton A. Adams and Associates, and corroborated by Water Islanders, construction costs are 20 to 40 percent above St. Thomas levels, and basic maintenance costs are 50 percent higher (because even more transportation is involved).

Development patterns that create even moderate stresses require disproportionate amounts of capital infrastructure, such as water provision, sewage disposal, special solid waste disposal systems, and extraordinary energy demands. In other words, any investment on Water Island is necessarily more capital intensive than on the mainland. This higher capital intensity is multiplied, however, by an even higher marginal repair and maintenance cost, and a decrease in reliability.

*capital intensive*

For example, on St. Thomas, it is currently estimated that a mile of paved, 24 foot wide road can be built for approximately \$269,000.00 and a calculation for annual maintenance would be \$21,500.00 (8 percent) per year. On Water Island, the same road would cost at least \$350,000.00, and the annual maintenance costs will run \$42,000.00 (12 percent).

Therefore, over a twenty year period, the same road getting the same use and the same maintenance on St. Thomas will cost \$699,000.00 per

*70% higher*

mile, and on Water Island it will cost \$1,190,000.00, a difference of 70 percent.

When costs of this magnitude are compared with the modest potential of new real estate tax revenues (\$146,000 per year, based on current assessments), the dilemma of publicly financed infrastructure is clear. However, it should be equally clear that forcing developers to bear these infrastructure costs only increases the basic cost to the consumer, and has little long term effect on the operating and maintenance costs of service delivery that government must bear.

The high cost structure of Water Island has equally negative implications for private development. For example, agricultural development is virtually prohibited by the combination of inappropriate natural resources, high factor costs and transportation problems. A small measure of import substitution is possible through the development of home garden plots, but even these require a pool of under-employed labor (retirees, housewives or children), a relatively high level of technical assistance (because of the marginal growing conditions) and stocks of seed and plant treatment supplies that are not always available on St. Thomas.

*agriculture*

Another troublesome example is presented by the case of moderate and low cost housing. With construction costs on Water Island over \$65 per square foot, as compared with \$50 on St. Thomas, it would require an extraordinary amount of subsidy to make housing on Water Island available to middle income people. In addition, the residents - or some other public authority - would still have to bear the extra costs of transport systems on St. Thomas, on Water Island, and ferry service between the two.

*housing*

The hard reality of high costs on Water Island is a major stumbling block for many potentially attractive development alternatives. It is a problem both for programs which strive to address broad social needs such as housing and agriculture, and for investment schemes which underestimate costs and overestimate benefits.

*higher costs,  
fewer benefits*

PROPERTY RIGHTS           The greatest impediment to development on Water Island is the landholding pattern set by the Master Lease. Under the present lease, which expires in 1992, it is virtually impossible to secure financing for any major investment on Water Island, including home construction. Therefore, maintenance of the existing lease, even under a change in ownership of the island, will have no constructive effect on development. It may, however, prevent the hotel property from securing necessary financing to conclude the pending sale, and to make a number of needed repairs.

There is, of course, only one Master Lease, assigned to Beach Management Corporation. Within this general lease, however, there are a variety of individual interests that need to be considered. There are five main categories of landholding on Water Island:

- The hotel properties;
- Individual, developed properties;
- Individual, undeveloped properties;
- The Sprat Bay properties;
- Unsubdivided lands.

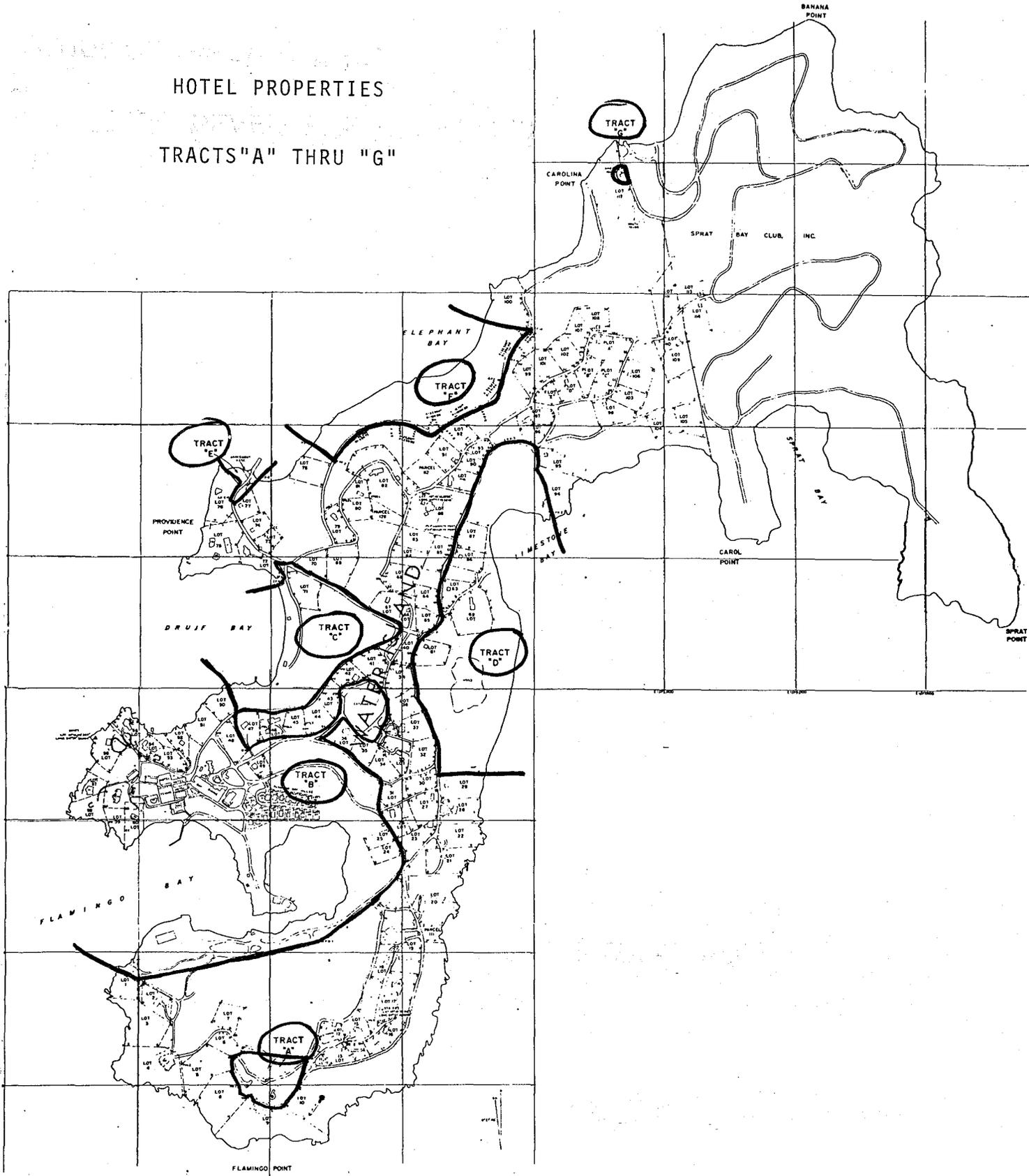
The resolution of long-term rights to each of these classes of land will determine the future development of Water Island.

Broadly defined, and in literal agreement with the Master Lease, the hotel properties can be construed to include all land not otherwise subleased on Water Island. In a negotiation with the Department of the Interior on extension of the lease, the Beach Management Corporation identified Tracts "A" through "G" (see attached map) as properties that would be critical to the development of the resort and associated facilities. These seven tracts comprise over 75 acres.

*hotel  
property  
options*

A stricter definition, based only on existing hotel development and direct support, would include only Tract "B", with Tracts "C" and "E" reserved as public beach and dock areas. Tract "B" is approximately 34 acres, including the

HOTEL PROPERTIES  
TRACTS "A" THRU "G"



undeveloped periphery of Flamingo Bay.

Determination of the extent of hotel property must be conditioned by several factors:

- The existing hotel/villa/marina complex is probably not economically viable under current circumstances. The hotel is small in relation to the high cost, highly competitive Caribbean market; deferred maintenance has created high operating costs; the marina facilities are too small for efficient operation; there is an urgent need for major new investments in water and sewage treatment; and the recent irregular hotel operation has eroded the base of return visitors. (See Bishop letter attached to this section.)
- Future investment and management options are greatly enhanced by inclusion of a larger amount of "developable" property.
- The hotel is the actual or potential source of significant public services to other Water Island property holders (e.g., water, sewage, solid waste, transport, etc.). Again, this capacity is enhanced if the hotel assumes control of more property.
- Currently developed hotel properties (Tracts B,C and E) already account for 37 percent of the total property values of Water Island, and 52 percent of the assessed value of all buildings and other improvements on the island (including the villas).

There are approximately 146 separate property holders on Water Island (including Sprat Bay Corporation members and villa owners). Half of these (73), representing 20 percent of the island's area, have built residences on the

*private  
sub-leases*

island (with some cottages and apartments). Although the number of dwelling units (93) on these 73 improved properties has remained relatively constant over the past five years, the number of full-time residents has gradually increased. The increase comes from both a larger number of homes being occupied year round, and a number of families with children who have established themselves on Water Island (in part as a response to the tight rental market in St. Thomas). Currently, nearly half of the private residences are occupied on a year round basis.

The average value of improvements for residential properties is slightly more than \$45,000 per acre, which is nearly twice the average value of improvements per acre for the island as a whole (see table below). Based upon questionnaires returned, each residence generates approximately one-fifth of a job in direct employment.

*improved  
properties*

For improved properties in general, and especially for permanently occupied residences, the terms and conditions under which future property rights are determined is of key importance. Responses to the questionnaire sent to all property holders indicated considerable variation among all classes of property holder about the terms under which they felt they should receive clear title (see Chapter Five).

Over half of the property holders on Water Island hold sub-leases (or participate in the Sprat Bay Corporation) on property which is unimproved. (A few unimproved parcels adjoin residences owned by the same person.) Nearly all of the owners of unimproved lots are not permanent residents of the Virgin Islands.

*unimproved  
property*

Acquisition costs of unimproved properties have been between \$3,500.00 and \$5,000.00 per acre. Current land values are assessed at nearly \$20,000.00 per acre. The average unimproved sub-lease was purchased twenty years ago, and had been held by its current holder for thirteen years. There are 55 lots (61.9 acres) that are undeveloped sub-leased properties on Water Island. In addition, there are approximately

PRIVATE DEVELOPED SUB-LEASES  
(including Sprat Bay members)

District	Improved Properties	Dwelling Units (est.)	Acres	Value of Improvements
A	37	45	41.80	\$44,350/acre
B*	13	22	11.96	63,563
C	15	18	26.14	34,962
D	<u>8</u>	<u>8</u>	<u>8.92</u>	<u>66,569</u>
TOTAL	73	93	88.82	\$46,416

\* Excludes hotel properties

83 lots (about 83 acres) that are undeveloped in the Sprat Bay Corporation properties held by individuals.

The Sprat Bay Corporation is both a special case of a large number of unimproved properties, and the single largest sub-lessee (156.5 acres) on Water Island. The 37 members of the corporation have purchased all of the 90 one acre lots that the corporation has set aside for development. The remainder of the property is roads, commonly held areas such as the dock on Ruyter Bay and the club house and tennis courts on Sprat Bay. In addition, the corporation has stated that a forty acre tract on Sprat Point will be set aside as a nature preserve and will be donated to a national group such as the Audubon Society. Of the 37 members, seven have built homes, one of which is occupied most of the year.

*Sprat Bay Corporation*

The Sprat Bay Corporation has no intention of developing commonly held properties, or permitting members to develop their individual lots as other than single family residences. The process by which a member could sell either an unimproved lot or the buildings on an improved parcel are not clear, but presumably they would be governed by the rules for membership in the

*restricted sales*

corporation.

There is no evidence that the Sprat Bay Corporation will come to an end at the termination of the current Master Lease. In other words, unless some other arrangements are made, there is every indication that the northern one-third of Water Island will continue as a private residential resort.

*Sprat Bay  
continues*

A large part of the land on Water Island has not yet been divided into individual lots or development tracts (in many cases there is no meaningful distinction between some of the hotel tracts - e.g., "D" or "F" - and unsub-leased property).

*unsubdivided  
property*

The issue of the control and disposition of the unsubdivided properties (which may amount to over 100 acres) is central to future development of the island. It is also the other side of the prior question of the role of the hotel in the island's development.

These properties can be "given" to the hotel, or they can be managed by some other authority or agent of the island's owner, or they can be simply sold to the highest bidder.

In summary, there are five different categories of property holding on Water Island:

- hotel property - from 34 to 75 acres;
- improved sub-leases - approx. 90 acres;
- unimproved sub-leases - from 62 to 145 acres;
- Sprat Bay Corporation - 156.5 acres;
- unsubdivided land - from 90 to 150 acres.

A precise definition of the extent of each of these categories will aid in the selection of a development management strategy. For example, if the hotel property includes the bulk of the unsubdivided land on the island, then the sale or lease of the hotel land will become the primary instrument for further development. Or, if it is determined that intensive development of the north end of the island is important, then the lease termination and management strategy must address the special interest of the Sprat Bay Corporation.

MANAGEMENT      The issues delineated above all  
OPTIONS           point to the need to adjust  
                    Water Island property rights to  
                    conform to a development strat-  
                    egy which optimizes those fea-  
                    tures most desirable to the Government of the  
Virgin Islands. There are a variety of instit-  
utional mechanisms which can be employed to man-  
age the development of Water Island. These are  
not limited to the Government of the Virgin Is-  
lands, and they are not necessarily mutually  
exclusive.

The following list is meant to highlight the  
range of management options that could be em-  
ployed to achieve the economic development op-  
tions.

The federal government has a number of land man-  
agement options that could be used to fulfill  
many of the economic development objectives.

*federal  
options*

Incorporation of Water Island into the Virgin  
Islands National Park is probably the most re-  
strictive alternative available to the federal  
government. The National Park is established  
to serve national purposes, primarily environ-  
mental preservation. It is not an appropriate  
mechanism for further development involving in-  
creased use or higher residential densities.  
Two alternative existing mechanisms that appear  
to offer greater flexibility would be to declare  
Water Island a National Recreational Area or a  
National Seashore. Either mechanism offers a  
broader range of development opportunities and  
a management objective that is more sensitive  
to the needs of the local and regional commu-  
nity. Specifically, designation as a National  
Recreation Area or National Seashore would per-  
mit the National Park Service to manage Water  
Island in a way that would maximize its recrea-  
tional value to both residents and visitors.  
For example, hotel and camping facilities could  
be developed, as well as extensive marina and  
boat services, while leaving other areas for  
residences, camping and preserves.

*recreational  
area*

*National  
Seashore*

Finally, there are a number of "tailor made" alternatives that can be established by legislation to create a special federal authority or autonomous institution for Water Island development. These options could be self-financing and they could be used as models for other development programs in the Virgin Islands and in the region. In addition to these direct management options, there are obviously a wide range of federal assistance and grant-in-aid programs that can be used to support Water Island development activities.

*special  
legislation*

Local management options for development are restricted as long as the federal government retains control of Water Island. Basic land use controls, such as zoning and the V.I. Coastal Zone Management Act, may not be enforceable on the island, although there has been a high degree of voluntary compliance by Water Island residents. Enforcement authority and compliance procedures for the Clean Air Act and the Clean Water Act are not clear, and have not been exercised. In the positive area of incentives, the hotel has received industrial incentives in the past, and has recently applied for new subsidies, based on its new management plan.

If Water Island is relinquished by the federal government, or transferred to the Government of the Virgin Islands, many different forms of development management become potentially feasible.

*local  
options*

- A "Water Island Development Authority" is the most obvious route. Given the mixed successes of semi-autonomous authorities in the past, however, it is not one that is likely to meet with great approval by current property holders or potential investors. The great advantage of the development authority option on an isolated site such as Water Island is that it provides a mechanism for financing and procuring public services that would otherwise have to be provided directly by public agencies, paid out of general revenues.

*development  
authority*

- Controlled land sales (or long term leases) embodying specific restrictions and performance standards would be another possible route, especially appropriate to individual home sites.
- Rigorous permit regulation through the Coastal Zone Management Program would be another management mechanism. This could be especially effective if it were tied to a previously endorsed (by CZM) concept plan for Water Island development.
- The island could be handled as a special project within the Property Division of the Department of Property and Procurement, but this is well beyond the usual property management issues handled by this agency.
- The local government could also attempt to duplicate the federal government's experiment, and convey Water Island in toto to a single private developer. It is not unreasonable to assume that this model could work to achieve real progress and local benefits, especially with the advantages of local accountability and continuous performance monitoring that were lacking in the original Department of Interior lease. Nevertheless, control of the lease holder will be a problem.
- Finally, the local government could simply leave Water Island to be developed as dictated by normal market forces, holding such lands as desired for parks and other public purposes. Given the current high level of concern about growth management and the protections afforded by existing zoning and environmental restrictions, this would hardly seem to be an invitation to unregulated growth.

*private  
developer*

*laissez-faire*

SUMMARY Water Island is currently underdeveloped as a result of property restrictions and management processes that have been fostered by the lease arrangements from the Department of the Interior. Maintenance of the lease until its term in 1992 will stifle further development, and may promote unproductive speculative investments in short term sub-leases.

The high costs characteristic of developing and living on Water Island do not preclude development in the same sense as the lease, but they do impact the kind of development that is likely to occur, and the level of public services that the local government can afford to support.

Termination of the existing ownership or lease arrangements must be accompanied by a resolution of the multiple classes of property rights on the island, and a management model to guide future development. Only with both of these issues under control can the future development of the island be directed to provide optimum benefits and future flexibility.

ATTACHMENTS #1 & 2

TO

CHAPTER FOUR  
SECTION III

Sugar Bird

Beach and Tennis Club

BOX 5157 - WATER ISLAND, CHARLOTTE AMALIE, ST. THOMAS, V.I. 00801  
TELEPHONE: (809) 774-1213 or 774-1413

24 April 1980

Ben Posner, Ph.D.  
Island Resources Foundation  
P. O. Box 33  
Red Hook Center  
St. Thomas, VI 00801

Dear Dr. Posner:

The following information regarding the activities of Beach Management Corporation as it may relate to the ongoing impact study is submitted per your kind invitation to J. Robert Bishop, General Manager.

Please find enclosed relevant documents arranged sequentially followed by a narrative description (addendum) and summation.

Addendum:

Because the objections of GSA to the proposed new lease were not resolved, Beach was unable to meet its closing deadline of 30 April 1979, thereby causing the purchase price of the lease and leasehold improvements to be increased from \$2,183,000.00 to \$2,883,000.00, this amount to be paid on or before 30 April 1984. During this period of approximately five years, Beach continues to operate the resort, assumes responsibility for all provisions and requirements of the present lease and must pay the seller \$25,000.00/month. Additionally, because of the problems encountered in GSA, Beach was forced to release its lenders from their contractual obligation to finance this project.

Ben Posner, Ph.D.  
page 2

During the first thirty months of operation, Beach has exerted every effort to meet its commitment to the Department of the Interior to upgrade and operate the resort as a first class establishment. This has been a very difficult time for us because of a number of factors, some of which are listed below:

- a) the unexpectedly extensive degree of deterioration of the physical plant at acquisition with the consequently increased cost of renovation and repair,
- b) the unexpected high cost of legal services necessitated by the protracted negotiations with governmental bodies, and
- c) heavy physical damage to the property and consequent reduction in occupancy as the result of hurricanes David and Frederic in August and September 1979.

These above factors have required the commitment of substantial additional funds from the owners of BMC bringing their total personal cash commitment to well over one million dollars.

On the positive side it may be noted that BMC, in the face of the above-described obstacles, has made substantial progress, to wit:

- a) Sugar Bird Beach and Tennis Club is now open the year round, thus converting what was a sporadic, uncertain employment picture into a steady, consistent one.
- b) After incurring heavy operating losses during the first 18 months of operation, Beach was able to show an operating profit during the past 12 months.
- c) During the past season we have given employment to an average of 125 Virgin Islands residents with a total annual payroll of over \$800,000.00.

Ben Posner, Ph.D.  
page 3

- d) In addition to payroll monies, our operation is responsible for the injection of approximately \$2,000,000.00 into the St. Thomas economy in the form of goods and services purchased by Beach and those purchased by our guests.
- e) We have been able to contribute substantial sums of money to promote tourism in the U. S. Virgin Islands.
- f) We have become actively involved in civic affairs.
- g) Harmonious relations with local governmental agencies have been established.
- h) Regular ferry service between St. Thomas and Water Island has been developed and improved.

Beach now has valid data indicating that the profit to be generated by the hotel resort as it now exists, at levels of occupancy comparable to other similar hotels in St. Thomas, is insufficient to service the long term debt incurred by the purchase price of the lease of the entire island and the leasehold improvements. Therefore, if we are to remain viable we must be permitted to widen our base of business activity to include:

- a) expansion of the existing hotel facility to other parts of the island,
- b) the measured sale of additional subleases for individual home construction,
- c) development of the marina facility, and the
- d) construction of additional restaurant facilities.

Ben Posner, Ph.D.  
page 4

Summation:

We believe that the record of our performance to date establishes our capabilities and our integrity. A careful assessment of our current position, however, indicates that we have arrived at a critical point. Sound business principles dictate that we should contribute no more personal money to this obviously risky venture unless we are able to obtain a long term lease on the property or a suitable mechanism is devised whereby we are able to obtain fee simple title. In either case, the owner of the island whether it be the Department of the Interior or the U. S. Virgin Islands will benefit as follows:

- a) the burdensome provisions in Section 10 of the present lease would no longer be an issue, and
- b) increased revenues from the entire island complex will result.

If one or the other of the above (long term lease or acquisition of title) does not occur, the alternatives as we see them are probably only two:

- 1) failure to close by 30 April 1984 because of the lack of long term financing with reversion of the operation and property to the seller, with the requirements of Section 10 remaining in force, or
- 2) a successful operation by BMC to the termination of the present lease in 1992 with the requirements of Section 10 in force.

Ben Posner, Ph.D.  
page 5

It is our hope that the foregoing will provide you with significant information to be used in completing your study.

If we can be of further help, please feel free to call upon us.

Respectfully yours,



Edward J. Bishop  
President  
Beach Management Corporation

EJB/m

Enclosures

May 10, 1978

Mrs. Ruth Van Cleve, Director  
Office of Territorial Affairs  
U. S. Department of the Interior  
Washington, D. C. 20240

Dear Mrs. Van Cleve:

This letter is being written to you on the advice of Mr. Brewster Chapman and concerns our relationship with Water Island, a property of the Department of Interior.

Our group consists of three members of our family, J. Robert Bishop, Alfred Votypka and Edward J. Bishop, organized to do business in the Virgin Islands as "Beach Management Corporation".

By way of background, we were challenged by the situation at the Hotel on Water Island, as we found it, in February 1977, at the height of the tourist season, essentially closed and in need of much basic repair and renovation. We learned that the hotel had been, for all intents and purposes, only partially functional during the previous three years. After much study and lengthy negotiations with the master lease holder (Pheasant Run, Inc. - Mr. McArdle), we made a commitment to operate the Island complex on a trial basis for one year, with an option to purchase a 50% interest in the lease if our initial experience in management proved to be favorable.

Our group advanced \$200,000 in cash for operational and promotional expenses and Pheasant Run contributed \$200,000+ in renovation and capital improvements. The resort, (renamed "Sugar Bird"), opened for the winter season on December 15, 1977 under our (Beach Management Corporation) management, with J. Robert Bishop and his wife, Mary, living on the premises. Overall, our initial experience has been favorable. Startup was slow but we were able to show a profit during February and March. During this period of time it became evident to us that with continuous, on-site, owner-management the operation could be made profitable. It was also ascertained that the eventual operation of the resort complex, as a first-class establishment, will require additional expenditures of between \$500,000 and \$700,000 to provide for the construction of acceptable methods of sewage

Mrs. Ruth Van Cleave, Director  
U. S. Department of the Interior

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May 10, 1978

and waste disposal, a desalinization plant, and an independent source of electrical energy adequate to supply the resort complex and the 80+ homes on the Island. We also came to believe, after discussing the matter with numerous governmental representatives in St. Thomas, residents on Water Island and representatives of lending institutions, that our efforts to rehabilitate the resort and develop the Island would more likely be successful if we were able to purchase the entire lease rather than a fractional interest in it.

Our belief that we can be successful in this venture is based on the following concepts of operation and ownership:

1. An owner-manager in continuous residence on Water Island.
2. Year-round, continuous, rather than the sporadic seasonal operation that it has been in the past. This will insure a more stable employment pattern and should improve our image with our present and potential clientele, as well as improve our relationship with involved travel agencies.
3. Active cooperation with the local Virgin Islands government and citizenry.
4. A commitment to excellence, of facilities, food and food service.
5. A commitment to bring the Island and resort "up to code" in areas of sewage and waste water disposal. In this connection we have authorized Mr. Don Francols, Assistant Director of the Division of Natural Resources in St. Thomas, to prepare a detailed survey of the total energy requirements of Water Island, and this has been completed.
6. A commitment to provide our own electrical energy through the use of conventional generators. We plan to investigate the feasibility of the use of solar and wind energy to generate electrical power.
7. A systematic, measured development of the Island, i.e., homesites, hydroponic farming, aquaculture, etc., with care being exercised to preserve the natural beauty and quietude of the Island.

It is anticipated that implementation of the above concepts will result in rehabilitation of the resort complex and the

Mrs. Ruth Van Cleve, Director  
U. S. Department of the Interior

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May 10, 1978

orderly development of the Island. On the basis of our initial experience, we believe that it is valid to project conservatively the total dollar contribution of "Sugar Bird" to the St. Thomas economy to be approximately 1.2 to 1.4 million dollars per year. In February and March we were employing 120+ St. Thomians, many of whom (waiters, maids, etc.) were on welfare prior to being so employed.

In order to consummate this transaction and to permit debt service, along with developmental funding from operating profits, we will require long-term (25 year) financing. The principal items of concern that have been voiced by potential lenders are several:

1. The shortness (14 years) of the remaining term of the lease.
2. What some regard to be ambiguities in Section 10 of the lease.

We, therefore, in light of the foregoing considerations, ask your sympathetic understanding of our problems and your support.

Specifically, then, if we are to be successful in carrying out our program for Water Island, we must request the following from you:

1. Consent to the assignment of the entire lease to us. (Mr. McArdle has indicated his willingness to do this.)
2. An extension of the lease. We must ask for a 20-year extension for the following reasons:

Representatives of lending institutions, such as Savings and Loans, banks, insurance companies, etc. indicate that under federal and some state laws a leasehold mortgage loan may only be made if the unexpired term of the lease is 10 years longer than the term of the mortgage. Thus, if we are to obtain a 24-year term on our mortgage loan, the total lease must be at least 34 years. Since the remainder of the term of this lease is 14 years, we will need a 20-year extension.

Mrs. Ruth Van Cleve, Director  
U. S. Dept. of the Interior

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May 10, 1978

3. A statement setting forth the interpretation of the Department of the Interior of the provisions of Section 10 of the lease.

After meeting with numerous representatives of many lending institutions, it is clear that if we are to obtain the necessary financing to implement our proposed program for Water Island, the relief requested of you in this letter is required.

We realize that the foregoing is a lengthy, convoluted description of a complex situation but we sincerely feel that with your support we can turn the resort and Water Island around, so to speak, and make it one of the finest resort areas in the Caribbean.

Inasmuch as time is of the essence in our negotiations with Mr. McArdle, we will appreciate knowing your thoughts on these matters at your earliest convenience.

Respectfully yours,

BEACH MANAGEMENT CORPORATION

Edward J. Bishop, President

EJB:vp

17884 Beach Road  
Lakewood, Ohio 44107

#### SECTION IV: MICRO PLANNING DISTRICT DEVELOPMENT OPTIONS

For purposes of analyzing specific development opportunities, we have defined 4 "micro planning districts", as identified on the map on the following page. Each micro planning district has a unique pattern of existing land use and a distinctive physical character. Whenever possible, the boundaries follow logical features such as roads, ridges and drainage basins. The micro planning district boundaries do not, however, follow property lines. Specifically, the Sprat Bay Corporation property includes all of District D, and part of Districts A, B and C.

Major physical features, recent development patterns and projected development options are outlined for each of the micro planning districts. After surveying the maximum intensity potential options, and assessing them in light of the development guidelines presented in Section II of this chapter, a description is presented of a recommended development option. The recommended option is intended to be economically feasible, in accord with the guidelines, and sensitive to the constraints discussed in Section III. In Section V of this chapter the development options are summarized for all of Water Island.

*options  
assessment  
recommendation*

DISTRICT A            District A is the geographical  
FEATURES            and residential backbone of  
                         Water Island. Running from the  
                         former pillboxes and gun em-  
                         placements of World War II on  
the south, and including portions of the Sprat  
Bay Corporation holdings on the north, District  
A includes approximately 115 acres of land and  
most of the island's road system.

Terrain in District A ranges from moderate to steeply sloping, with a number of ridge and hilltop plateaus. The area is generally well ventilated by trade winds. Soils are thin and rocky, and support a variety of tropical,

semi-arid second-growth forest. Natural vegetation is interspersed with a wide variety of imports, many established during historic settlement of the island. Walter Phillips' Botanical Garden includes a worldwide collection of tropical flora, including orchids, euphorbia and aloe varieties.

There is no shoreline in District A, and there are no known natural water resources other than rainfall.

DISTRICT A  
DEVELOPMENT

District A includes many of the roads and buildings left on Water Island after the abandonment of Fort Segarra in 1946. Therefore, many of the existing homesites (and rental apartments) were acquired and developed around these existing facilities in the early fifties. The 37 developed properties in District A include most of the islands' permanent residents.

Development of District A follows the original plan of one acre, individual homes very closely. There are 72 sub-leased lots in the district, averaging \$41,300 in value (land and improvements), plus an undetermined number of Sprat Bay properties.

It is estimated that there are a total of 43 housing units in the district, with approximately half of them occupied by declared permanent residents of the Virgin Islands.

Economic impacts of District A development on the Virgin Islands are relatively small. The most immediate and direct effect is the payment of income taxes to the local treasury by permanent residents. Increasingly, the housing resources of Water Island are being used by Virgin Islands residents who are employed on St. Thomas; but these are still very small numbers and will be limited by problems of commuting and cost. Employment impacts are limited to a small number of gardeners, laborers and domestic workers, estimated at less than one worker per four dwellings. However, this employment

*small  
impact*

DISTRICT A DEVELOPMENT ALTERNATIVES

UNDERDEVELOPED <sup>1</sup>	USE <sup>2</sup>	MAXIMUM Acres	POSSIBLE Units <sup>3</sup>	Infrastructure Needs	COMMENTS
73 acres	A1	N.A.			No 40 acre tracts
	A2	5	3 hydro- ponic gardens	Water, capital intensive	
	B,C,I	N.A.			Business, commercial etc., sited in District B
	P	20		Nature trails exhibits	
	R1-2	60	120 dwell- ings	5 m. "primary" road <sup>4</sup> 5 m. 2 <sup>nd</sup> ary road <sup>4</sup>	Also 30 parking spaces
	R3-5	40	800 dwell- ings	Transit system, water/sewer, ferry	Solid waste problem, police/fire service

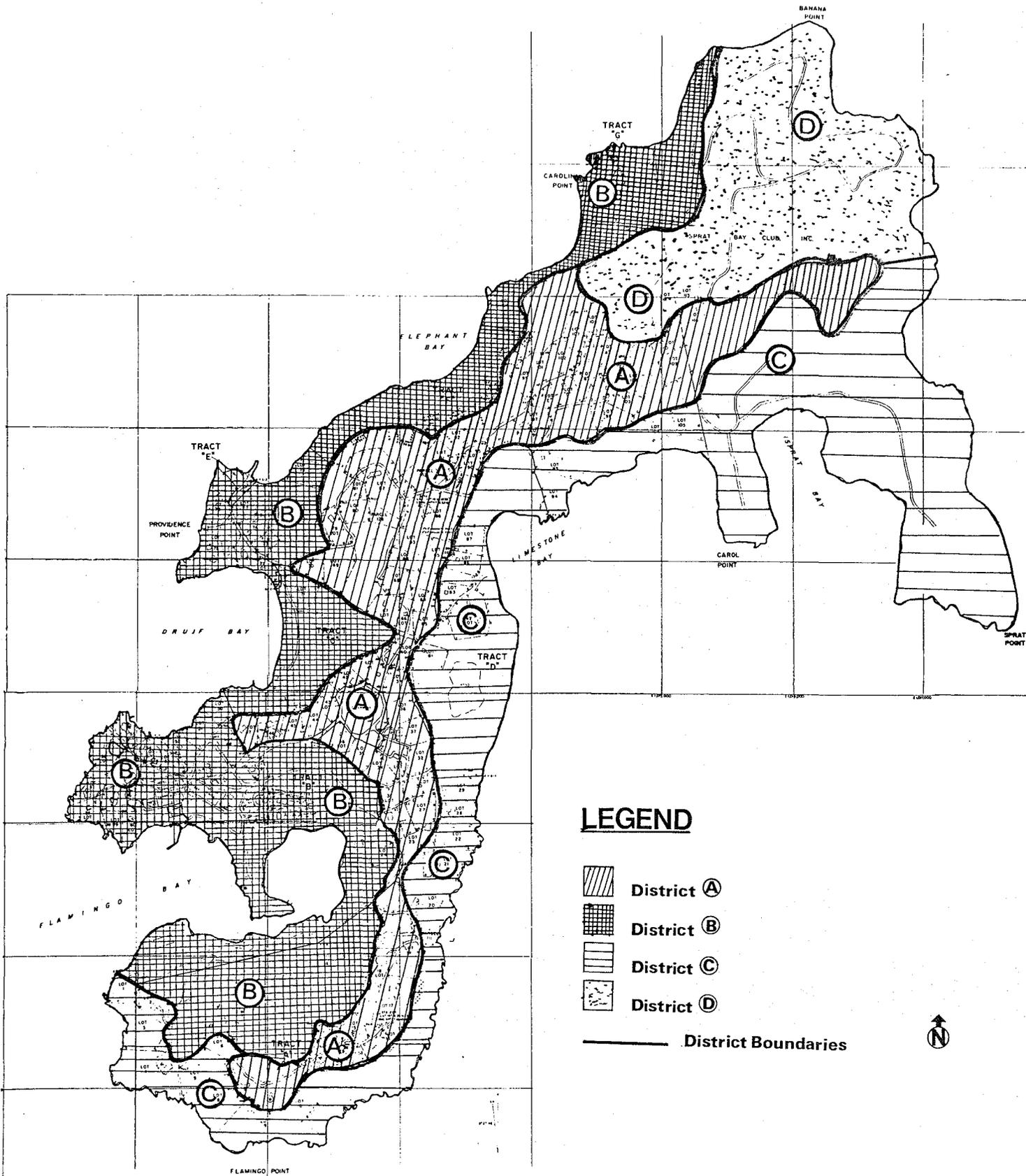
1. Undeveloped land includes both unimproved lots, and unpartitioned lands.
2. For convenience, "use" is defined in accordance with V.I. zoning categories.
3. Generally, maximum possible developemnt is based on topography, not economic feasibility.
4. Upgraded, existing roads.

In the following table, the maximum levels of development for individual use categories have been combined within the constraints of the 73 available acres, and allowing for overlapping claims on the same pieces of land.

For purposes of comparison, the current development of District A is also shown. (Note that this represents land use, not zoning, which is primarily W1 over most of District A.) Projected values of the development options are based on current construction costs as presented by Alton A. Adams and Associates. For low and high density (R1-2 and R3-5 respectively) residential construction, two basic assumptions have been used: low density housing will average \$ 80,000 per house and high density housing will average \$52,000 per unit - both factors are extremely conservative. For residential options, value is added for a pro-rata share of business and commercial development that would be supported by District A's share of the total residential population (see Section V).

*explanation  
of cost  
factors*

# WATER ISLAND MICRO-PLANNING DISTRICTS



## LEGEND

-  District A
-  District B
-  District C
-  District D

— District Boundaries



is generally on a year round basis. Vacation rentals are handled by stateside or Water Island-based agents.

At the same time that they generate relatively little economic impact on the Virgin Islands (with the exception of income taxes paid locally), Water Island residents of District A also make relatively little demand on local public services. Roads are maintained by Water Island residents; there are no regular public safety, fire, water or sanitation services provided to Water Island; and other services are generally utilized at a lower rate than most other areas of the Virgin Islands.

DISTRICT A        District A consists of approxi-  
OPTIONS            mately 115 acres of developable  
                    land, valued at \$4.75 million.  
                    Thirty seven parcels of 42 acres  
                    are already developed. There  
are approximately 45 dwelling units on these 37  
parcels, worth a total of \$2.9 million. This  
discussion of development options focusses on  
the 73 acres of land with no improvements. At  
the present time, this land is divided into 35  
different parcels, with an estimated land value  
of \$25,200 per acre or \$1.8 million for all un-  
improved property.

The table below summarizes the maximum possible development that can occur on the 73 acres of undeveloped land in District A, for each of the relevant land use categories defined by the Zoning Act. (A definition of each category is attached to this section.)

The estimates of the maximum acreage, and the density of development on those areas are based on field surveys of actual conditions in the district, and an assumption that the best available design and construction technologies will be employed. These estimates do not involve detailed considerations of economic feasibility, although clearly inappropriate uses, such as commercial and industrial activities in District A, have been ignored.

DISTRICT A DEVELOPMENT OPTIONS  
MAXIMUM MIXED USE SCENARIO

Use Category	EXISTING				PROJECTED			
	Land (acres)	Value (1,000's)	Units	Jobs	Land (acres)	Value (1,000's)	Units	Jobs
A1		\$				\$		
A2					5	141	3	3
B/C								
I								
P								
R1-2	42	2,907	45	11	57	8,778	75	24
R3-5					40	73,010	800	345
W1								
W2								
Total Developed	42	2,907	45	11	102	81,929	878	372
Undeveloped:	73	1,844			13	328		
Total	115	\$4,751	45	11	115	\$ 82,257	878	372

Within District A, development options are quite restricted because of the dispersal of available land throughout the district, the rugged terrain of the central ridge, and the lack of a shoreline or existing infrastructure to support or encourage other forms of development. There is no evidence that there is a market for 800 units of high or medium density housing, which would require extensive transportation services and costly water, sewage

and solid waste disposal systems. The total housing resources projected for District A are, however, well within the housing needs projected for St. Thomas over the next ten years by the Virgin Islands Planning Office "Comprehensive Housing and Land Use Planning Elements" (3300 units, 1980 to 1990).

DISTRICT A ASSESSMENT Having established a maximum limit for potential development in District A (however abstract or improbable), it is now possible to provide a preliminary assessment of these options in the context of the development guidelines presented in Section II, above.

The following table summarizes judgements about the developmental impacts of the "maximum mixed use scenario" for District A, in terms of each of the four developmental guidelines, which are:

1. To minimize disturbance to the human and natural ecosystems;
2. To alleviate existing stresses, and to avoid contributing to critical stress factors;
3. To cope with effects of potential catastrophe;
4. To permit time-phased, modular development.

It should be noted that the agricultural development option (based on intensive, probably hydroponic, cultivation of vegetables and possibly flowers) is highly rated, but it is not known to be economically feasible. The high density residential option is seen to have significant negative impacts on three of the four guidelines. Both residential options are seen to be at least somewhat negative in terms of instability and stress, partly because of the risks associated with building on the steep terrain and partly because of a lack of positive impacts, such as significant job generation.

DISTRICT A DEVELOPMENTAL ASSESSMENT  
MAXIMUM MIXED USE SCENARIO

DEVELOPMENTAL GUIDELINE:

Use Category	Acres	#1 Instability	#2 Stress	#3 Catastrophe	#4 Uncertainty	COMMENT
A1						
A2	5	3	4	5	3	Economic feasibility suspect
B/C						
I						
P						
R1-2	57	2	2	3	4	Lower density, more positive
R3-5	40	1	1	1	3	
W1						
W2						

Values

- 1 = Negative impact on any level of development.
- 2 = Moderately negative impact, could be neutral or positive at lower levels or with special planning etc.
- 3 = Neutral or unknown impact.
- 4 = Moderately positive impact, could be neutral or negative at higher levels.
- 5 = Positive impact at any level of development.

As with all summaries and generalizations, there are a variety of individual exceptions or special opportunities that can modify these judgements substantially. For example, a major nursing home facility could be a high density residential option with considerable offsetting advantages in terms of stress and stability factors. Nevertheless, it should be recognized that these ratings do represent general strengths and liabilities that need to be considered in the specific instance. (And, in passing, it might be noted that the strong negative impact of high density residential development in the face of potential disasters becomes doubly significant for the nursing home example.) Finally, these ratings are simply aids to decision-making. There are a variety of political, social and economic factors which could generate overriding pressure or incentive for a development alternative that otherwise would seem to have major negative impacts. In

*exceptions*

these cases, the ratings at least highlight critical issues that need to be addressed in the design and implementation of the proposed project.

DISTRICT A  
RECOMMENDATIONS

Extension of the existing pattern of low density, scattered-site residential development is the recommended option for District A.

In large part, this is a conclusion based on a process of elimination:

- District A is an unproven site for agricultural enterprises, although the option should remain open.
- Higher density developments create several problems in District A, ranging from the aesthetic issue of negative visual impact (from St. Thomas), to the costs of providing water, sewage and transportation services, to the less measurable, but nonetheless real, downslope impacts and risks occasioned by construction on the unstable, steep upland slopes of the island, all of which are implicit in the assessment ratings discussed above.

The principal obstacle to development in District A is the lack of long-term property rights, which not only precludes securing outside financing, but also encourages speculative investment in short-term sub-leases.

Given resolution of the property rights issues, it is projected that in ten years time, 39 additional homes and seven apartments, worth an estimated \$4,600,000.00, will be constructed in District A. This will result in ten new full-time jobs (at minimum wage levels), and a roughly proportional increase in income taxes paid by new full-time Virgin Islands residents.

DISTRICT B            District B comprises 106 acres  
FEATURES            on the western shore of Water  
                      Island from Flamingo Bay on the  
                      south to north of the Sprat Bay  
                      Corporation dock area. It is  
indented by two deep bays (Flamingo and Honey-  
moon or Druif) and a series of scalloped bays  
and beaches facing the Sub Base - Crown Bay  
area of St. Thomas.

Slopes range from gentle beach areas to rocky  
points 15 to 50 feet above the water, to steep  
upland slopes adjoining District A. The dis-  
trict is crossed by a number of runoff channels  
(usually dry), the largest of which served as  
the ground water source for the de Ruyter well  
in the early 18th century.

*water  
resource*

Although the area is generally characterized  
by rocky, Cramer soils, some of the valley bot-  
toms have accumulated sediments and organic  
material. Vegetation is slightly more luxur-  
iant than over the rest of the island. Palm  
trees have been planted along Honeymoon Bay  
and other shoreline areas.

District B contains most of the known historic  
and prehistoric sites on Water Island. Two  
large salt ponds have been destroyed since 1950:  
the pond behind Honeymoon Bay has been filled  
and the pond behind Flamingo Bay (which had  
been heavily impacted by Army activities) was  
cut open and partially dredged for a marina.  
Honeymoon Bay beach was extensively modified  
during the early fifties to provide a broad  
sand beach, in place of the rocks and cobble  
that characterized the northern portion of the  
bay.

*archaeological  
sites*

There are a number of environmental stresses  
threatening District B that can be eliminated  
with careful planning. Direct sewage discharges  
near shore in Flamingo Bay, off Ship Wreck Point,  
and from other, smaller sources threaten water  
quality standards. Overuse of Honeymoon Bay as  
a boat anchorage, recreational boating site, tour  
boat landing and recreational beach threatens  
both domestic tranquility and water quality.  
Poor management and saturation of the current  
dump site creates an unhealthy condition, con-  
tributes to air pollution, and has contaminated

*pollution*

groundwater resources. (It has been suggested that this site was a disposal area for toxic chemicals during the Army occupation, but this is not verified.)

DISTRICT B DEVELOPMENT            District B contains the bulk of the former Army facilities that were developed into resort properties both on the present hotel site and in other vacation apartment complexes. Except for the private Sprat Bay dock, all other docks or bulkheaded areas are based upon sites used by the Army or dredged out of Flamingo Bay Lagoon in the mid-sixties.

District B encompasses slightly over one-fifth of the land area, and nearly one-half of the estimated value of all Water Island property. District B also contains well over half of the dwelling units on Water Island.

District B is the only area of Water Island with uses that are not residential or undeveloped. Approximately one-third of the 106 acres are hotel/commercial/waterfront uses, in addition to the purely recreational and natural beach areas.

Flamingo Bay is surrounded with property used by the hotel:

- The "deep water dock" and adjacent warehouse are used for heavy freight deliveries to the island. The bulkheaded pier has been filled and damaged by recent storms and is in need of repair.
- Behind the warehouse is the dump which serves as the solid waste disposal area for Water Island. It is being managed as a "pseudo-sanitary" landfill. Large volumes of wet garbage and irregular fill procedures lead to frequent fires and lots of flies and other vermin.

*Flamingo  
Bay*

- The Flamingo Bay Lagoon was partially dredged for an 8 acre marina in the mid-sixties. The entry channel was cut through stone on the south side of the lagoon. Although currently used to serve charter boats and smaller motor boats of Water Island residents, the Lagoon has refilled over a considerable area, and storm surges have partially filled the entrance channel. Vessels with over six foot draft cannot use the lagoon at all.
- The access road to the marina and gas dock is also the site of the hotel's propane storage tank (loaded direct from the Tropigas barge) and the salt water intake from the toilet flushing system in the hotel. It is also the proposed site for a tertiary treatment plant. Hotel and villa effluents are currently discharged directly into Flamingo Bay or the West Gregorie Channel.
- The finger pier at the hotel has depths of up to 15 feet along half of its length, and is most appropriate for short term use loading and discharging passengers on yachts. It is subject to surge and is not sturdy enough to stand regular use by ferries.
- The hotel/villa complex includes 99 habitable rooms, 15 villas available for at least part time rental, and several other out buildings. The hotel has as many as 16 additional rooms which could be rented after extensive repairs.
- The commissary ("The Pantry") run by the hotel is regularly used by Water Island residents. There is also a "mail room" which serves as the distribution and collection point for Water Island postal service. (The USPS delivers and picks up mail from

a locked box at the Sub Base landing for the ferry. There is no on-island mail delivery. Responsibility for sorting the mail is rotated among Water Island residents.)

- The hotel property also includes the 2 acre catchment and 250,000 gallon cistern built by the Army. Depending on rainfall and the hotel occupancy rate, it is estimated that this catchment and cistern supply about 70 percent of the hotel complex's need for potable water.

The estimated value of the properties surveyed above is over \$6.5 million (including land), which is one third of the total estimated value of the island.

The land area, exclusive of Honeymoon Beach, between the hotel and the ferry landing at Providence Point is mostly private residences and apartments.

The improved Honeymoon Beach area includes the filled salt pond and the adjacent hillside. There is a beach bar which provides equipment rentals, food and drinks and washroom facilities. A \$46,000 beach house at the northeastern corner of the bay was destroyed by waves from Hurricane David.

Because of its natural beauty and attractive beach, Honeymoon Bay has become the preferred yacht and charterboat anchorage on Water Island. Since 1973, the number of boats regularly anchored in Honeymoon Bay has increased from three or four to fifteen or more. Waterskiing and three to four-time-a-day visits by the tourist barge, Kon Tiki, are leading to over use of the bay and beach. At the same time, recreational use of the beach on weekends by St. Thomas families and seining for bait fish in the bay has greatly decreased.

*Honeymoon  
Bay*

Water barge deliveries to the hotel cistern are also made at Honeymoon Bay, by means of a pipe that runs from the shore to the catchment cistern

at the top of the ridge. Pumps on board the Waterhaul barge provide the motive force for raising the water from the bay to the cistern.

The ferry landing at Providence Point is the major point of entry to the island. The concrete dock is served by two boats run by the hotel - The Saint, which also ferries trucks and cars and other heavy equipment, and the South Wind, which can carry up to forty passengers. Regular Water Island residents usually drive to the ferry landing and leave their cars there while visiting St. Thomas. (Some residents also have a car on St. Thomas. Most use taxis.) Hotel guests are carried back and forth on a safari bus or a van. The road connecting the ferry dock and the hotel is the only "primary" road on the island.

*ferries*

From 7 am to 11 pm, the ferry provides hourly service. Access to the ferry service is guaranteed to sub-lessees, but twice in the past four years ferry service has been totally suspended when the hotel closed for the summer. In both cases, the Water Island Civic Association arranged for small boats to provide passenger service. The current costs of ferry service to residents is \$2 per trip (each way) or \$25 for a monthly ticket. The hotel states that it is losing money on this service.

The area of District B north of the ferry dock is largely undeveloped. It includes "Tract F", identified as potential future development property by the hotel, some privately held plots, and a piece of Sprat Bay Corporation property that includes the private pier and storage shed.

Since the clearing of wrecks and submarine scrap by the Army Corps of Engineers, the shallow bays along the West Gregerie Channel have become more popular as anchorages for yachts and charter boats. There are at present no shoreside facilities on Water Island servicing these boats, although they can easily cross the channel to the Sub Base area for supplies and entertainment.

District B accounts for most of the employment on Water Island. At season peak, approximately

145 people are employed - 115 of them by the hotel. However, this is reduced to 60 during the off-season periods (and much less if the hotel closes, as it has in the past). Ninety percent of these employees live in St. Thomas and commute by ferry. Some of the charter service employees live on boats anchored in Flamingo Bay.

In addition to the tax revenues generated by employees, the hotel complex pays taxes, although it currently is applying for subsidy and exemption benefits under the Industrial Incentive Act. Additional economic linkages of District B with St. Thomas include the income taxes paid by the 15 to 18 permanent residents, and the purchase of tourist goods and services by the (estimated) 3,000 visitors to the hotel, apartments and private homes each year.

*economic  
impacts*

DISTRICT B            The following table demonstrates  
OPTIONS                the diversity of development  
                          options that are available in  
                          District B. Although only 45  
                          acres are identified as unde-  
veloped, it should be noted that there are  
large areas of hotel property in Tracts "B"  
and "C" which are also available for more in-  
tensive development.

The potential business and commercial options are dependent on the amount of on-island residential development that will occur. (As explained previously, the value of business development and the jobs derived from it are counted within the low and high density residential options.) If there is a great deal of residential development, especially at the north end of the island, it would be reasonable to establish a second commercial center there; the main business center would be in the vicinity of the Flamingo Bay complex.

This series of alternatives also mentions the need to consider additional infrastructure on St. Thomas, to support the transportation needs of Water Islanders. At the present time, seven

*St. Thomas  
impacts*

DISTRICT B DEVELOPMENT ALTERNATIVES

UNDEVELOPED	USE	MAXIMUM Acres	POSSIBLE Units	Infrastructure Needs	COMMENTS
45 acres	A1	N.A.			No large tracts
	A2	15	4 gardens	Irrigation, transport	
	B,C	10	2 centers	Transport, docks, warehouse, etc.	Depends on resident population
	I	N.A.			
	P	30	2-3 sites		Beach, recreation
	R1-2	30	180 dwell- ings	6 m. 2 <sup>nd</sup> ary roads	
	R3-5	30	1200 dwell- ings	5 m. primary roads, ferry, water/sewage, solid waste, transit	Parking on mainland problem
	W1	25	4 facili- ties, hotel marina, ship- yard, 2 <sup>nd</sup> marina, etc.	Dredging, dock, transport, water, sewage, solid waste, police/fire	250 room hotel 150 slip marina boat yard 1 small marina

or eight of the permanent residents on Water Island maintain cars on St. Thomas. In addition, workers on Water Island also need parking for their vehicles. With much greater levels of development and employment, parking and transportation systems on St. Thomas will become significant factors in the overall development scheme.

The following table spells out one of the more plausible maximum mixed use scenarios for District B. It should be recognized, however, that because this district includes the main access and service centers for the rest of the island, there is a great deal of inter-dependency between District B options, and the other districts.

In formulating this scenario, priority was given to the more labor intensive (W1) use categories. In addition, major dock and storage facilities to support other development options in other districts were included.

DISTRICT B DEVELOPMENT OPTIONS  
MAXIMUM MIXED USE SCENARIO

Use Category	EXISTING				PROJECTED			
	Land (acres)	Value (1,000's)	Units	Jobs	Land (acres)	Value (1,000's)	Units	Jobs
A1		\$				\$		
A2								
B/C					5	( 2,738) <sup>1</sup>	2centers	(60) <sup>1</sup>
I								
P								
R1-2	15	1,043	27	5	20	3,117	40	8
R3-5	3	1,001	23	1	21	33,824	840	160
W1	43	6,458	99	54	48	24,422	200 rms (100 slips)	277
W2								
Total Developed	61	8,501	149	65	94	61,363	1080	445
Undeveloped	45	1,057			12	282		
Total	106	\$ 9,558	149	65	106	\$ 61,645	1080	445

1. These values are counted under values and jobs generated by new residential construction.

DISTRICT B  
ASSESSMENT

The following table provides the guidelines ratings for the maximum mixed use scenario. Two major factors are worth noting in this assessment. The impacts for high density residential (R3-5) development are significantly more positive than were seen in District A. This reflects both the more favorable terrain, and the specific opportunity to cluster high density housing around landing areas and adjacent to the hotel facilities in ways that will minimize the

DISTRICT B DEVELOPMENTAL ASSESSMENT  
MAXIMUM MIXED USE SCENARIO

DEVELOPMENTAL GUIDELINE:

Use Category	Acres	#1 Instability	#2 Stress	#3 Catastrophe	#4 Uncertainty	COMMENT
A1						
A2						
B/C	5	2	3	3	2	
I						
P						
R1-2	20	2	3	3	4	
R3-5	21	2	2	1	3	
W1	48	2	4	3	2	Better management should relieve stress on beaches/ anchorages. Relatively labor intensive.
W2						

Values

- 1 = Negative impact on any level of development.
- 2 = Moderately negative impact, could be neutral or positive at lower levels or with special planning etc.
- 3 = Neutral or unknown impact.
- 4 = Moderately positive impact, could be neutral or negative at higher levels.
- 5 = Positive impact at any level of development.

secondary development impacts of roads, water, waste disposal and so forth.

The second factor worth mentioning is that the "W1" use category includes such a wide variety of end uses that it is somewhat difficult to assess them simultaneously. In an application of this technique to a more critical decision-making process, it would probably be desirable to separate the W1 category into several discrete elements, such as beaches, resorts, and marina/dock areas. It was not felt that this step was necessary for this exercise.

DISTRICT B  
RECOMMENDATIONS

Well over half of the total development projected for Water Island over the next ten years is recommended for District B.

Because this is an area that is already stressed

in certain sections by existing development it is critical that new investments be made to correct existing deficiencies as well as to prevent unnecessary further degradation of the natural environment or the quality of life for residents and visitors.

Viewed geographically, the development options recommended include: improvements and further development of the Flamingo Bay area; restricting further exploitation of Honeymoon Bay; development of medium density residential sites near the ferry dock; and more balanced use of beaches and near shore waters along the West Gregerie Channel.

*summary*

Apart from the direct investments involved in these various proposed developments, considerable additional benefits will accrue from increased year round employment, less dependence on seasonal tourism, improved transportation and access between St. Thomas and Water Island, and a higher proportion of permanent residents.

Because of the costs and specialized management requirements for the recommended development options, it is generally suggested that they be carried out as private investments under concession rights, lease or private ownership, rather than as public enterprises. (Note that this is not a recommendation with regard to the overall management of Water Island; it is only a specific suggestion in reference to the individual development options discussed here for District B.)

*private  
development*

Development of the water and land resources of the Flamingo Bay area offers the greatest potential for both economic benefit and environmental improvement of any area on Water Island. The major elements of this proposal are outlined below.

*Flamingo Bay*

Dredging, bulkheading and docks for the marina, basically completing the facility begun in 1965. The marina would provide dockage for at least 25 boats, which could be considerably expanded in phases by the construction of piers and mooring pilings. It would provide full time, year

*lagoon  
marina*

round employment for 10 to 30 people. In addition, charter boat, fishing and diving services located at the marina would support another 12 to 18 full time and 10 to 20 seasonal workers.

The boat yard would be located at the southeastern corner of Flamingo Bay and should include both 40 ton travel-lift and 100 ton railroad lift capabilities. This would support 25 year round workers.

*boat yard*

Lagoon and associated hotel improvements would also include provision of additional freshwater, (probably by installation of a 10 to 15,000 gpd reverse osmosis unit), a tertiary sewage treatment plant and proper management of the sanitary landfill.

Both marina and boat yard facilities would contribute to meeting excess demand for these services in St. Thomas. Because of the obvious market potential, and the millions of dollars of lost territorial income from boats that go to Puerto Rico or Tortola for service, these facilities should be fully and rapidly developed. It should be noted that a study of recreational fishing for the Caribbean Fishery Management Council (by David Olsen, Island Resources Foundation) indicates that the local multiplier of boating expenditures may be higher than many other investment alternatives.

*marina demand*

The development of direct St. Thomas commuting service through the lagoon marina should be used to support clustered housing and apartments within walking distance of the docks. These units cannot be low cost, but given the increasing demand for Water Island housing by certain classes of St. Thomas workers (water sports oriented, young professionals), they can serve to meet this demand, while minimizing the adverse effects and extra costs of dispersed development.

*cluster housing*

As with the marina, the density and extent of the cluster development can be phased in accordance with demand and available financing. Beyond the construction phase, cluster housing

will generate little additional employment, but it may contribute marginally to the total housing stock of the territory.

Renovation, rehabilitation and rationalization of the existing hotel facility will account for the moderate increase in available units. The development of the marina complex and shared infrastructure (water, sewer, etc.) will increase operating efficiency and will improve the hotel's marketing opportunities - especially off season. (Linkage of hotel and marina facilities have long been seen as mutually beneficial. In the Virgin Islands boating demand is less seasonally variable than most other forms of tourism.)

*hotel  
expansion*

Among other proposals for Flamingo Bay, there are several that can be developed in addition to those highlighted above; upgrading the beach in Flamingo Bay (perhaps, with clean dredge spoil from the lagoon) and developing homesites on the unpartitioned hillside on the south side, with improved sanitation, solid waste disposal and reorganized hotel infrastructure. The hotel/marina complex is a logical base for greater development of specialized tourist services for divers, deep sea fishing and so on. Lagoon-side private homes and private docks could be developed as a permanent berthing arrangement.

*other  
Flamingo Bay  
options*

These options, however, are given secondary emphasis because they require prior development of the necessary infrastructure outlined above, and because they appear to offer less direct benefit and linkage to St. Thomas than other options.

As illustrated by recent newspaper accounts, Honeymoon Bay is currently the site of sometimes acrimonious debate over proper use of Water Island beaches. That debate is in part the result of a failure of normal development processes to open up new opportunities for beach use.

It is recommended that Honeymoon Bay Beach be buoyed for a larger swimming area, with direct

*balanced  
beach use*

beach access from the sea limited to a small boat channel. Controlled moorings in the harbor, or site-selective enforcement of the new no-discharge marine head regulations would serve to maintain a high water quality for swimming, snorkeling and possible revitalization of local bait fishing by local fishermen. (These recommendations are similar to those being considered as part of a water use plan for the coastal zone by the Department of Conservation and Cultural Affairs.)

Combined with these restrictions on Honeymoon Bay, however, should be public (or private) development of recreational beaches further north, along the West Gregorie Channel. Basic beach maintenance, bathhouses, snack bars and possibly lifeguards are all that would be required to substantially increase the available beach resources for residents and visitors. Even modest development could generate six to twelve full time jobs. Mooring and landing charges might be one way to help support these developments.

*open new  
beaches*

Further development of the slope behind Honeymoon Bay is not recommended because of the steepness of the grade and the distance from many necessary services and transportation to St. Thomas.

Inland of the beaches on the West Gregerie Channel are a number of archaeological sites and two very small salt ponds. These signs of prior settlement and natural features could be developed as part of a small, relatively easily accessed park and recreation area.

*park area*

Beach development proposals are most sensitive to the potentially adverse effects of extensive dredging and further development of Crown Bay, and by accidents or major polluting incidents that could occur as a result of the operation of the West Indies Transport, Inc. barges, the Tropigas propane barge, or the Tropical shipping operation - all of which use the West Gregerie Channel in addition to thrice weekly cruise ship visits.

The undeveloped areas adjacent to the existing ferry dock (especially around the unnamed cove to the east and northeast) provide another opportunity for cluster housing or apartment development. Although this site is slightly more accessible to St. Thomas, it suffers the disadvantages of not being able to share in larger infrastructure investments for water or sewage treatment and occasional periods when the dock is unusable because of storm or swells (average three to five days per year).

*ferry dock*

In their survey responses, some Water Island residents have suggested that a dock and small boat marina could be located on Elephant Bay. Alternatively, the Sprat Bay dock could be opened as a public dock. Widely scattered residential housing could be developed along the less precipitous slopes north of the ferry dock.

*other options*

The critical dimension of future development of District B, especially north of the ferry dock is that a variety of "small" uses need to be developed in an integrated, compatible form, and that development should be sensitive to the impacts of other uses of the Sub Base, West Gregerie Channel area. At the present time the U.S. Army Corps of Engineers claims that dredging the channel and building a new deep water pier will have no adverse effect on water quality or other environmental conditions on Water Island.

*micro-developing*

Over a ten year period, and assuming the availability of financing, the general scope of Water Island development along the lines outlined above will result in nearly \$12 million dollars in new development and the creation of 140 new full time jobs on the island.

*economic  
summary*

Housing and hotel expansion will account for two-thirds (\$8.3 million) of the new investment. This will include 116 new units, spread evenly among the three categories of private houses, apartments and new (available) hotel rooms. The annual average of 12 new units per year is triple the rate of construction on the island over the past ten years. Population impacts will stem from both the 75 percent increase in

*residential  
increase*

housing units, and from a substantial increase in the hotel occupancy rate and spin-offs of the year-round charter boat operation. Average annual population is expected to increase from 165 to over 450 people (see Section V).

Infrastructure costs will be split between private investments for the hotel/marina/boat yard complex, and public investments for transportation, trash disposal and emergency services. Private development costs include \$500,000 for marina construction, \$340,000 for water and sewage systems, and \$1,000,000 for docks, moorings, piers, and boat yard facilities. Public costs include: \$560,000 for ferry service; \$1,000,000 for roads; \$250,000 for solid waste collection and landfill; and \$123,000 for an emergency service center with truck, tanker, radio and office.

*infrastructure*

The increase in jobs will be divided between 60 new full-time hotel jobs as a result of both increased capacity and the increased year round occupancy rate, and new job categories in marine services and water sports. The marina complex (with charter services) is estimated to contribute 25 new jobs, with 20 in the boat yard and 25 miscellaneous in beach operations, domestic service, ferry operations and so on.

*jobs*

These recommendations provide for a greatly accelerated development process for District B, and Water Island as a whole. They provide essential infrastructure elements necessary to other development options, without creating gross imbalances in the overall system. They maximize the employment potential and housing possibilities of the district without destabilizing other systems or exerting undue stress. Finally, the recommended options are compatible with additional development that may be determined useful at any point in the future.

DISTRICT C            District C includes the entire  
FEATURES            southern coast of Water Island,  
                         two windward bays (Limestone  
                         and Sprat) and two small penin-  
                         sulas (Carol Point, Sprat Point). As mentioned

before, it also includes the three large salt ponds.

The terrain is generally rocky, including the vertical cliff faces that rise to nearly two hundred feet (and plunge to 95 feet below sea level) along the extreme southern end of the island. The somewhat lower profiles of Carol and Sprat Points are covered with sparse grass and semi-arid vegetation.

The beach at Limestone Bay is subject to southeasterly swells, broken by the offshore reef; but it is often not suitable as a swimming beach (two visitors drowned in the surf here two years ago) and is covered with rough cobble and flotsam over much of its length. Sprat Bay is better protected with a fine sand beach and is sometimes used as an anchorage by one or two yachts. It is used by the Sprat Bay Club, which also has a shelter and tennis court nearby.

*beaches*

There are substantial coral reefs along the cliff face and offshore of Limestone and Sprat Bay. Although too deep and too exposed to wave and swell for snorkeling, this area currently is used for recreational SCUBA diving. (Currents can be strong, however, especially around the extreme southern end of the island.)

Although there is no known record of settlements in the district, residents have reported finding shards and other artifacts from the Danish colonial period on Sprat Point. The area of the World War II fort (Tract "A") which is immediately adjacent to District C at the south end of the island is of some interest, and there has been talk of designating it as an Historic Site.

The geological features of this coast are of considerable interest, as they represent the oldest formations in the Virgin Islands. All of District C serves as an important visual facade for sea traffic into St. Thomas harbor. With the continued seaward development of the western districts of St. Thomas, this aspect becomes more important to creating a favorable first impression on the half-million or so

visitors who arrive by sea every year.

DISTRICT C            There are a total of 24 sub-  
DEVELOPMENT           leased lots (13 of which are  
                         developed) plus an unknown  
                         number of Sprat Bay Corpora-  
                         tion lots in District C. The  
bulk of the 134 acres of District "C" are un-  
developed. The Sprat Bay Corporation has des-  
ignated 40 acres of Sprat Point as a nature  
reserve and intends to turn it over to a group  
such as the Audubon Society for perpetual man-  
agement as a natural area, when clear title is  
available.

Due to the rugged terrain and bedrock outcrop-  
pings, housing has been widely scattered, and  
lots are larger than average.

Aerial photographs from 1965 indicate that sand  
was being mined from the beaches south of the  
Limestone Bay salt pond, but there is no cur-  
rently observable effect of this activity. A  
report from the Sprat Bay Corporation indicates  
that the reef into Sprat Bay may have been  
breached to permit access to the beach, but  
this also is not discernible.

DISTRICT C            Given the large tracts of un-  
OPTIONS                developed land in the district,  
                         there are a variety of potential  
development alternatives. (See top of page 116.)

When competing uses are reconciled, however,  
with priority given to those options represent-  
ing the most labor and capital intensive op-  
portunities, the scenario on the following page  
emerges.

An additional factor which influenced this scen-  
ario was the finding that the infrastructure  
costs of large tract animal raising (pasture,  
feed lots) were so high that they would have re-  
quired an enormous, technically unattainable,  
production to sustain the activity. Because  
of the distance from the entry points to the  
island, and the difficult terrain in the district,

DISTRICT C DEVELOPMENT ALTERNATIVES

UNDEVELOPED	USE	MAXIMUM Acres	POSSIBLE Units	Infrastructure Needs	COMMENTS
108 acres	A1	60	2	Water, storage, freight	Pasture
	A2	15	3	Water, roads	Vegetables
	B,C,I	N.A.			(District B)
	P	100	1	Roads, trains	Natural areas, camp
	R1-2	50	300 homes	8 m. 2 <sup>nd</sup> ary road, transit system, ferry, parking	
	R3-5	30	800 apts	Water/sewers, 8 m. primary road	
	W1	5		(Beach, resort)	Sprat Bay area

DISTRICT C DEVELOPMENT OPTIONS  
MAXIMUM MIXED USE SCENARIO

Use Category	EXISTING				PROJECTED			
	Land (acres)	Value (1,000's)	Units	Jobs	Land (acres)	Value (1,000's)	Units	Jobs
A1		\$				\$		
A2								
B/C								
I								
P					40	904	1center	8
R1-2	26	1,351	18	4	46	9,513	138	37
R3-5					30	54,501	800	258
W1					5	3,077	1center	46
W2								
Total Developed	26	1,351	18	4	121	67,995	938	349
Undeveloped	108	1,803			13	217		
Total	134	\$ 3,154	18	4	134	\$ 68,212	938	349

the costs of high density housing become relatively high (see Section V). This scenario also assumes that Sprat Point, with it's relatively less rugged surface, is used for development, with the park area shifted around and to the south of the Limestone Bay salt pond.

DISTRICT C ASSESSMENT      The problems and issues of District C development exert some costs, which are reflected in the following assessment.

DISTRICT C DEVELOPMENTAL ASSESSMENT  
MAXIMUM MIXED USE SCENARIO

DEVELOPMENTAL GUIDELINE:

Use Category	Acres	#1 Instability	#2 Stress	#3 Catastrophe	#4 Uncertainty	COMMENT
A1						
A2						
B/C						
I						
P	40	4	3	5	3	Not on Sprat Point
R1-2	46	3	2	2	3	Less extensive better
R3-5	30	1	2	1	2	Isolation and remoteness especially critical problems
W1	5	1	2	1	3	
W2						

Values

- 1 = Negative impact on any level of development.
- 2 = Moderately negative impact, could be neutral or positive at lower levels or with special planning etc.
- 3 = Neutral or unknown impact.
- 4 = Moderately positive impact, could be neutral or negative at higher levels.
- 5 = Positive impact at any level of development.

It is clear that the general levels of developmental impact are expected to be negative. What is not obvious from this specific assessment is that on a comparative basis, over all four districts of Water Island, these development options are even less desirable, given the

higher costs involved in developing this more remote area.

DISTRICT C  
RECOMMENDATIONS

It is recommended that no further residential or commercial development be permitted within District C, and that Sprat Point continue to be maintained as a natural preserve.

The area from Sprat Bay west to the accessible southern portions of Tract "D" should be developed as nature trails and possibly a small campground with a fairly extensive interpretation program for St. Thomas residents, schools and visitors. Although the environments and ecosystems of this district are not unique, they are relatively undisturbed, and would offer a useful alternative to the National Park Service programs at Hassel Island and on St. John. (The management and interpretation program of the District C park should be closely coordinated with NPS to assure that they are complementary.)

This development option would require a minimum of new investment (less than \$200,000 for trails and facilities over ten years) and would generate 8 to 12 new full time jobs for park maintenance and interpretation services. This recommendation can be seen in any of three different perspectives: as a move to preserve natural areas; as a holding action to avoid making major, irreversible investments at this time; or as a tactic to maximize investment returns by developing less costly/risky opportunities in other districts. All three positions have merit under the developmental guidelines.

DISTRICT D  
FEATURES

The 60 odd acres of District D fall largely within the current Sprat Bay Corporation property and comprise the hilly northeastern corner of the island. The shores of District D are rock cliffs or gravel beaches, unsuitable for development because of waves and swell.

The terrain varies from hilly to broken ridges with thin rocky soils.

Vegetation is of the semi-arid second growth tropical brush found over the rest of Water Island, but somewhat more luxuriant than in District C.

District D faces St. Thomas harbor, and from the town area blends with Hassel Island to give a picture of virtually undeveloped natural hillsides.

There is one account that the 290 foot hilltop in District D was the site of a Russian hospital in the 19th century, but little more is known about this site.

DISTRICT D            Although the boundaries of  
DEVELOPMENT        District D are not the same  
                      as Sprat Bay Corporation, most  
                      of the recent development has  
                      been the result of that organ-  
ization's efforts.

Sprat Bay corporation has divided its property into 90 one acre lots, which are held by 37 members. Thus far the Sprat Bay Corporation has invested a substantial amount in roads (over \$500,000) and improvements to commonly held property such as the Ruyter Bay dock.

However, only seven individual homes have been built on the Sprat Bay Corporation property. Only one of these is occupied by a permanent resident of the Virgin Islands. Sprat Bay Corporation homes are not rented out, and they do not have separate apartments. The value of Sprat Bay houses are among the highest on Water Island, and they generally seem to employ more domestic service and laborers than other residences. It has been said that there are firm plans to construct two additional homes in the Sprat Bay property (maybe even four) within the next year.

*Sprat Bay  
houses*

DISTRICT D  
OPTIONS

As another undeveloped section of the island, District D also offers a variety of development alternatives:

DISTRICT D DEVELOPMENT ALTERNATIVES

UNDEVELOPED	USE	MAXIMUM Acres	POSSIBLE Units	Infrastructure Needs	COMMENTS
54 acres	A1	50	1	Secondary roads, water storage	Pasture
	A2	5	2	Water, roads, freight	Vegetables
	B,C,I	N.A.			District B
	P	50	1	Trails, transport	Hiking, camping
	R1-2	50	200	10 m. 2 <sup>nd</sup> ary road	
	R3-5	20	600	5 m. primary road, transit system, water/sewage	
	W1	10	1	Docks, breakwater, piers, warehouses	Banana Bay

The possibility of constructing a breakwater-protected "third port" for Water Island does open up some new options. If this facility were to be developed (and it would never provide as much security as the Flamingo Bay lagoon), it could lead to the establishment of a secondary development center in Banana Bay. Such a center would be a reasonable service and support base for a more intense level of development on the northern end of the island.

/Such an option was not explored for District C because of the greater southerly exposure. The only possibility in District C would be to open one of the salt ponds. Apart from the environmental question of destroying one of the few remaining salt ponds, the facility would still not be secure in storms, and would be subject to breaking waves in the entrance channel and surge in the interior basin.7

DISTRICT D DEVELOPMENT OPTIONS  
MAXIMUM MIXED USE SCENARIO

Use Category	EXISTING				PROJECTED			
	Land (acres)	Value (1,000's)	Units	Jobs	Land (acres)	Value (1,000's)	Units	Jobs
A1		\$				\$		
A2								
B/C								
I								
P								
R1-2	9	804	8	3	24	7,022	68	28
R3-5					20	36,462	600	172
W1					10	6,219	( 50 slips)	35
W2								
Total Developed	9	804	8	3	54	49,703	668	235
Undeveloped	54	1,248			9	208		
Total	63	\$ 2,052	8	3	63	\$ 49,911	668	235

DISTRICT D  
ASSESSMENT

The assessment of the maximum scenario for District D reflects the elements of risk and heavy investment that would be required.

Like other of the negative assessments that have been reviewed for other districts, the developmental implications of negative ratings are largely to emphasize risk and cost factors. Given other opportunities for investment, they should be preferred for their higher probable rate of return.

DISTRICT D DEVELOPMENTAL ASSESSMENT  
 MAXIMUM MIXED USE SCENARIO

DEVELOPMENTAL GUIDELINE:

Use Category	Acres	#1 Instability	#2 Stress	#3 Catastrophe	#4 Uncertainty	COMMENT
A1						
A2						
B/C						
I						
P						
R1-2	24	2	3	2	3	
R3-5	20	1	1	1	2	
W1	10	2	2	1	1	Exposed site
W2						

Values

- 1 = Negative impact on any level of development.
- 2 = Moderately negative impact, could be neutral or positive at lower levels or with special planning etc.
- 3 = Neutral or unknown impact.
- 4 = Moderately positive impact, could be neutral or negative at higher levels.
- 5 = Positive impact at any level of development.

DISTRICT D  
 RECOMMENDATIONS

It is recommended that the pattern of single family homes on large lots, characteristic of District A, be extended into District

D. Higher densities are not desirable because of the physical and infrastructure limitations emphasized in preceding sections.

It is estimated that an aggressive home building program, which would necessarily require reconciliation of property rights, could result in the construction of 37 new homes, worth a total of \$3,900,000 over the next ten years and the creation of 12 new full time service and laborer jobs.

It should be recalled that all of the analysis for District D, and major parts of the other districts, implicitly ignores the position and role of the Sprat Bay Corporation. At the

present time, because there are only 37 members of the corporation, one might well assume that the maximum level of development would consist of 37 houses over the 160 acre holding of the corporation, and that the theoretical maximum limit to development would be 90 residences on the 90 one-acre lots in the corporation's lease holding.

ATTACHMENT 1 TO SECTION IV

## ZONING CATEGORY DEFINITIONS

Characteristics of the Virgin Islands zoning districts are summarized below.

Agricultural Districts (A-1 and A-2) - The primary purpose of the A-1 District is to maintain potential agricultural lands. Each parcel of property must have a minimum area of 40 acres. There is a maximum of two dwelling units per parcel. The A-2 designation is for acres suitable for small scale agriculture, such as truck farming. The minimum lot size is two acres, with not more than two dwelling units per lot.

Residential Low Density (R-1 and R-2) - the minimum lot size for the R-1 District is one-half acre. Up to two dwelling units per lot are allowed (maximum four dwelling units per acre). Minimum lot size requirement for the R-2 zoning is 10,000 square feet, with a maximum of two dwelling units per lot (maximum of eight dwelling units per acre). The maximum height for structures in both districts is two stories.

Residential Medium Density (R-3 and R-4) - The R-3 District is primarily for medium density hotels and multi-family dwellings. The maximum number of persons per acre for residential structures is 80. The minimum lot size per parcel is 6,000 square feet, and maximum height for structures is six stories. In addition, at least 35 percent of the parcel must be reserved for usable open space. The minimum lot size for R-4 is 3,000 square feet and the maximum number of persons per acre is 120. The height limitation is three stories.

Residential High Density (R-5) - The maximum number of persons per acre is 160, with a minimum lot size of 10,000 square feet. Thirty-five percent of the parcel must be reserved for usable open space. The height limit is eight stories.

Business Districts (B-1 through B-4) - The business zones range from B-1, the central business districts, to B-4, business-residential areas.

Commercial District (C) - The commercial zone includes those used which are business-oriented but with some characteristics of light industrial activities. For example, these uses include such activities as service stations, automobile dealers, warehouses, and laundries.

Industrial Districts (I-1 and I-2) - The heavy industry zone, I-1, includes those uses such as Hess Oil, Martin Marietta, and the Water and Power Authority plants. The light industry zone (I-2) encompasses a wide range of uses such as warehousing, light assembly, textile manufacturing and contracting, as well as many of the same uses permitted in the commercial district.

Waterfront Districts (W-1 and W-2) - The law establishes two waterfront districts, W-1 Waterfront-Pleasure and W-2 Waterfront-Industrial. The W-1 zone is primarily a recreation zone, and permitted uses include marinas, marine terminals, parks and recreation areas, hotels, and guest houses. The Waterfront Industrial District (W-2) permits a variety of marine-related and industrial uses.

Public District (P) - Publicly owned properties fall into this category. Uses may vary widely, from recreational areas to schools, airports, offices, sewage treatment and solid waste disposal.

SECTION V: SUMMARY DEVELOPMENT OPTIONS FOR  
WATER ISLAND

RESOURCES The following table summarizes the improved and unimproved land holdings, by micro planning district, on Water Island.

Improved and Unimproved Properties

(\$ in thousands, acreages approximate, excluding roads, etc.)

	Micro Planning Districts				Water Island
	A	B	C	D	Total
Total Acres	115	106	134	62	418
Total Value	\$4,751	9,558	3,154	2,052	19,515
Avg. Value/Acre	\$41.3	90.2	23.5	33.1	46.7
Number of Parcels	72	33	30	12	147
Improved Parcels	37	17	15	8	77
Total Acres	41.8	61.1*	26.1	8.9	137.9
Total Value	\$2,907	8,501	1,351	804	13,563
Avg. Value/Acre	\$69.5	139.1	51.7	90.1	98.4
Dwellings (est.)	45	149**	18	8	220
Unimproved Parcels	35	16	15	4***	70
Total Acres	73.2	44.9	108	54	280.1
Total Value	\$1,844	1,057	1,803	1,248	5,952
Avg. Value/Acre	\$25.2	23.5	16.7	23.1	21.2

\* Includes 27 acres of unsubdivided land and 34 acres of hotel/marina facilities.

\*\* Includes 99 occupiable hotel rooms, 23 condominiums (villas) and 13 residences (some with apartments). Excludes the equivalent of 35 "rooms" in facilities on board charter boats based on Water Island.

\*\*\* Includes undeveloped Sprat Bay Corp. lots as one parcel.

MAXIMUM  
DEVELOPMENT

Before proceeding to examine the combined results of all four micro planning districts, the assumptions underlying each step in the process need to

be reviewed:

Development Alternatives represent the maximum amount of a given use that could be achieved on the available undeveloped land. (Only in the case of "W1" use category is there any additional development assumed for land that is already partly improved.) No assumption is made about the use of the remaining unimproved land.

Maximum Mixed Use Scenario and Recommended Ten Year Scenario are both comprehensive options, selected from among the available alternatives, for development of the 280 acres of unimproved land identified in the preceding table. The "Recommended Ten Year Scenario" is designed to minimize the negative development impacts found in the maximum development option. As a simplifying assumption, neither of these options assumes redevelopment of already improved property, and both assume that the unimproved portion of the Sprat Bay Corporation would be available for development. (To a limited degree, these are self-cancelling assumptions.)

Permanent Jobs are based on estimates of full-time, year-round employment. This is considerably less than average annual employment, which is boosted by short-term, seasonal jobs.

Use Categories are defined in the attachment to Section IV of this chapter.

Adding the various development alternatives for all of the micro planning districts, the list on the following page is generated. In addition to the amount of development possible, and the overall costs, this table also displays the costs per

WATER ISLAND DEVELOPMENT ALTERNATIVES

Use Category	Acres <sup>1</sup>	New Investment		New Jobs <sup>3</sup>	Investment Per Acre <sup>4</sup> (\$000's)	Investment Per Job (\$000's)
		Direct (\$000's)	Infrastructure <sup>2</sup> (\$000's)			
A1	110	\$ 300	\$ 1,545	8	\$ 16.8	\$250.6
A2	40	726	400	20	28.2	56.3
P	200	408	763	30	5.9	39.0
R1-2	180	64,000	6,875	240	393.8	295.3
B/C (w/above)	5	750	790	50	308.0	30.8
Total R1-2	185	64,750	7,665	290	391.4	249.7
R3-5	120	\$198,900	29,620	900	1,904.3	253.9
B/C (w/above)	10	3,250	2,225	120	547.5	45.6
Total R3-5	130	\$202,150	\$31,845	1,120	\$1,800.0	\$208.9
W1	40	\$ 20,350	\$ 3,600	370	\$ 598.8	\$ 64.7

<sup>1</sup>Based on totals of "District Development Alternatives"

<sup>2</sup>Infrastructure may be publicly or privately built; costs based on A.A.A. estimates.

<sup>3</sup>Permanent new jobs, not counting construction, or seasonal peaks

<sup>4</sup>Does NOT include value of land or existing development

acre and the costs per job generated to demonstrate the relative capital and labor intensity of each alternative. Again, it should be noted that these costs exclude the value of the land itself, which would substantially increase the agricultural and park costs.

The low and high density (R1-2 and R3-5), residential options each imply different levels of business activity; therefore, the business/ commercial developments for each are combined with the corresponding residential alternative.

Neither the alternatives presented above, nor the maximum use options discussed below should be construed as "realistic" development proposals. The purpose is to outline the possible limits to development under any condition. In matter of actual fact, these alternatives are quite improbable because they assume constant land costs. However, in the real world, as the intensity of development increases, the value of land will be bid so high that there is no longer an incentive to develop (i.e., growth can be self-limiting). The "worst case" version of this same phenomenon occurs when a development program is so badly done that it actively devalues the entire area. The Estate Paradise public housing project in Saint Croix is an example of a medium density development option where it is no longer possible to even give away apartments.

*limiting  
factors*

The high density residential alternative (R3-5) suggests a total investment of around \$250 million (for over 3,500 housing units). Although this sum is unprecedented for the Virgin Islands, it is not unprecedented for high density resort areas, ranging from Isleta Marina in Puerto Rico, to the Spanish Riviera and Waikiki.

Combining the various alternatives into one option results in the scenario on the following page. This brobdingnagian vision of Water Island's future holds little attraction to those whose image of the Virgin Islands has been conditioned over the past generation. Nevertheless, it should not be rejected out of hand. The level of development implied by the maximum mixed use scenario would provide housing for less than 10,000 people. At current (1970 to 1980) rates of growth, that is the population increase for St. Thomas over the next five years. One alternative to the undisciplined growth pattern of the past three decades on St. Thomas is to focus new growth on one controllable site - hopefully one with minimal spillover effects. Given the intense concern in St. Thomas for "growth management," it does not seem inconceivable that one growth model for the future would consist of a moratorium on new developments on St. Thomas (no growth),

*5 years growth*

*growth  
management*

combined with high intensity and carefully coordinated development of Water Island. Although this model has substantial economic costs, it does provide a solution to many difficult political and social choices that have to be made if a growth management program is to be applied to St. Thomas (i.e., who loses and who gains). In addition, many of the increased costs would be borne by new immigrants to St. Thomas - a circumstance that is felt to be eminently fair by all current residents.

The developmental assessment below highlights some of the potential problems of the maximum mixed use scenario:

WATER ISLAND DEVELOPMENTAL ASSESSMENT  
MAXIMUM MIXED USE SCENARIO

DEVELOPMENTAL GUIDELINE:

Use Category	Acres	#1 Instability	#2 Stress	#3 Catastrophe	#4 Uncertainty	COMMENT
A1						
A2	5	3	5	5	3	Economic feasibility suspect
B/C	5	3	3	3	3	Depends on level of other development
I						
P	40	5	4	5	3	
R1-2	147	2	1	2	4	Lower density better
R3-5	111	1	1	1	1	Construction phase infrastructure a problem
W1	63	2	2	3	2	Site specific criteria important
W2						

Values

- 1 = Negative impact on any level of development.
- 2 = Moderately negative impact, could be neutral or positive at lower levels or with special planning etc.
- 3 = Neutral or unknown impact.
- 4 = Moderately positive impact, could be neutral or negative at higher levels.
- 5 = Positive impact at any level of development.

WATER ISLAND  
MAXIMUM MIXED USE SCENARIO

Use Category	EXISTING				PROJECTED			
	Land (acres)	Value (1,000's)	Units	Jobs	Land (acres)	Value (1,000's)	Units	Jobs
A1		\$				\$		
A2					5	141	3	3
B/C <sup>1</sup>					5		2 centers	
I								
P					40	904	1	8
R1-2	92	6,105	98	23	147	28,430	321	97
R3-5	3	1,001	23	6	111	197,797	3040	935
W1	43	6,458	99	54	63	33,718	200 (150 slips)	358
W2								
Total Developed	138	13,564	220	83	371	260,990	3560	1401
Undeveloped	280	5,951			47	1,035		
Total	418	\$ 19,515	220	83	418	\$262,025	3560	1401

1. Estimated values and jobs for business activities are included under the respective residential optic

This assessment brings one new factor to light. At the level of \$250 million dollars in new investment (four times the size of the Harry S. Truman Airport construction project), the construction phase itself will overwhelm the existing systems on the island. Even if this scenario is seen as the product of a 20 year development program, the annual rate of expenditure (or development) would average \$13 million, which is well over the total investment in Water Island for the past 30 years. The average workforce for 20 years would be over 250 construction workers (triple the number of permanent jobs on Water Island now). Development on this scale will require the most sophisticated planning and project management technologies available.

*construction demands*

RECOMMENDED  
DEVELOPMENT

The scope of development that is recommended for Water Island is an order of magnitude smaller than the maximum mixed use scenario. As described in the table below, this scale of development is closer to the aspirations and recommendations of existing Water Island property holders (see Chapter Five) than to the maximum scenarios.

The diversity of development opportunities does reflect the maximum scenario. This recommendation, however, is considerably more "labor intensive" than the maximum condition (\$118,000 invested for each new job versus \$184,000 in the maximum use scenario), as a direct result of a selection of options with the largest job generating potential. The major advantages of the recommended scenario, however, is its flexibility and the ability to carry it out within the existing infrastructure. These features are evident in the development assessment for the option printed below.

The recommended scenario is not without risk or costs in terms of increased ecosystem stresses and the threat of a catastrophe. Although there is some potential for increasing the diversity of Water Island property holders and for

WATER ISLAND DEVELOPMENT OPTIONS  
RECOMMENDED 10 YEAR SCENARIO

Use Category	EXISTING				PROJECTED			
	Land (acres)	Value (1,000's)	Units	Jobs	Land (acres)	Value (1,000's)	Units	Jobs
A1		\$				\$		
A2								
B/C								
I								
P					66	3,737		35
R1-2	92	6,105	98	23	148	18,166	205	51
R3-5	3	1,001	23	6	13	4,984	78	18
W1	43	6,458	99	54	63	10,187	137	151
W2								
Total Developed	138	13,564	220	83	290	37,074	420	255
Undeveloped	280	5,951			128	2,720		
Total	418	\$ 19,515	220	83	418	\$ 39,794	420	255

increasing the proportion who are permanent residents of the Virgin Islands, the island could still be seen as a protected enclave, contributing to increased social and political stress.

Based upon the detailed recommendations for the four micro planning districts, housing and population projections for the ten year scenario are shown below.

WATER ISLAND  
HOUSING AND POPULATION PROJECTIONS

Housing

District	Current			Projected		
	Homes	Apts	Hotel/Villa	Homes	Apts	Hotel/Villa
A	37	8	-	75	15	-
B	13	14	122	45	60	160
C	15	3	-	15	5	-
D	8	-	-	45	-	-
Total	73	25	122	180	80	160
Charter Boats						30

Population

Housing Type	Current	Projected
	No. x Occupants x Rate = Total	N x O x R = T
Homes	$73 \times 2.5 \times .75 = 137$	$180 \times 2.5 \times .75 = 338$
Apts.	$25 \times 2.2 \times .60 = 33$	$80 \times 2.4 \times .75 = 144$
Hotel/Villas	$122 \times 2.3 \times .40 = 122\frac{1}{2}$	$160 \times 2.3 \times .70 = 258$
Charter Boats	-- 2	$30 \times 4.0 \times .15 = 18$
Annual Avg. Population	282	758
Annual Peak Population	518	1070

- 1 Historically the hotel occupancy rate has been much lower, often closing for four or five months in the summer.
- 2 A small charter boat service is currently operating, but its population impact is minimal.

The recommended ten year development scenario provides one illustration of a phased development process that is supportable on Water Island and in St. Thomas by the existing infrastructure and construction industry. Furthermore, the style of development is generally compatible with the expectations of the existing community and can be accomplished with minimal dislocation. There is no need to insist that the particular recommendations in this scenario are the only path to prosperity and enlightenment. It is sufficient to understand that there are significant differences among the potential choices and that solutions can be found to complex and competing needs.

WATER ISLAND DEVELOPMENT ASSESSMENT  
RECOMMENDED 10 YEAR SCENARIO

DEVELOPMENTAL GUIDELINE:

Use Category	Acres	#1 Instability	#2 Stress	#3 Catastrophe	#4 Uncertainty	COMMENT
A1						
A2						
B/C						
I						
P	66	5	5	4	5	
R1-2	148	3	2	3	4	
R3-5	13	3	2	2	2	
W1	63	2	4	2	1	Concentration around Flamingo Bay increases risk
W2						

Values

- 1 = Negative impact on any level of development.
- 2 = Moderately negative impact, could be neutral or positive at lower levels or with special planning etc.
- 3 = Neutral or unknown impact.
- 4 = Moderately positive impact, could be neutral or negative at higher levels.
- 5 = Positive impact at any level of development.

**CONCLUSION**            The Water Island development options discussed in this chapter range from creating 200 acres of park or 100 acres of pasture to massive residential developments comparable only to the most densely developed resorts in the world. The examination of these alternatives and specific development scenarios has revealed great differences in their impact on, and contribution to the economic and social systems of the Virgin Islands.

It is clearly in the best interests of the Virgin Islands to seek future development on Water Island which: increased the rate of new investment, increases the proportion of resident property holders on Water Island, and uses the island's natural resources to create permanent new full-time employment for Virgin Islanders.

The challenge in the design of future development for Water Island, from the perspective of the wider Virgin Islands community, is to maximize the economic benefits to the territory within an acceptable level of risk, as defined by the development guidelines. The Government of the Virgin Islands has a particular concern that such development does not contribute disproportionately to the operating or capital costs of providing services to Water Island. The preceding analysis and examples imply that these two objectives are potentially attainable. In short, economic development options for Water Island are not a problem.

*territorial  
objectives*

*economic  
benefit*

*low service  
demand*

The real problem facing the Virgin Islands regardless of the status of Water Island is the design of a process for managing and controlling Water Island development. Federal ownership and the historical master lease procedure do not appear to be sensitive enough, in themselves, to meet this need. It will be necessary to find mechanisms for increasing the decision-making and monitoring role of the local government, while maintaining the assurances and property rights that developers require.

## SECTION VI: SOURCES AND REFERENCES

DEVELOPMENT GUIDELINES            There is a great deal of information on both economic development planning and environmental conditions. There is less material available which deals with the direct relationship of the environment and development programs. Some of the seminal work in this general area has been addressed directly to the problems of tropical islands (by Towle and McEachern) and tropical coasts (Wm. E. Odum). However, there are major difficulties in most of the materials listed. One is that they are directed to conservation and environmental preservation issues, rather than development. Secondly, there is not yet a systematic process for combining consideration of social effects with the terrestrial and marine biological systems that are getting to be known.

In drawing up the guidelines presented in Section II, the systems concepts of ecology and the biological sciences have been applied to the impacts that conventional development programs usually generate. Priority was assigned to those topics which represent major problems in the Virgin Islands.

Major references include:

McEachern, John and Towle, Edward, Ecological Guidelines for Island Development, IUCN, Morges, Switzerland, 1974.

Towle, Edward L., "Environmental Management of Island Based Ocean Engineering Projects." Paper for the First Caribbean Oceanengineering Conference, San Juan, Puerto Rico, 1973.

Towle, Edward L., "The Coastal Zone Development Dilemma of Island Systems," in Proceedings of the 14th Biennial Wilderness Conference. Westview Press, Denver, Colorado, 1978.

Odum, William E., Ecological Guidelines for Tropical Coastal Development, IUCN, 1976.

Dasmann, Raymond F., John P. Milton, and Peter H. Freeman, Ecological Principles for Economic Development, John Wiley & Sons, New York, 1974.

CONSTRAINTS Cost information was obtained from the report and consultation provided by Alton A. Adams and Associates, consulting engineers, from personal interviews with: Walter Phillips; Captain Robertson of the Sprat Bay Corporation; Warren Pond, Wad Raye, K.C. Jones, and Ed Kreiger, all officers of the Water Island Civic Association; and from discussions with the Bishop family and employees of Beach Management Corporation. In addition, Orlando Canel, Director of Roads, St. Thomas; Ralph Blanchard, Director of Planning, V.I. Port Authority; Lou Becker, Director of Planning, V.I. Housing Authority; V.I. Water and Power Authority; and the Federal Aviation Administration housing coordinator for the Virgin Islands provided information on specific cost components.

Property ownership issues were synthesized from a July, 1979, report by the U.S. Comptroller, "Water Island Subleases;" from a computer printout labeled "Real Property Tax Edit Listing," dated September 18, 1979, provided by the Virgin Islands Tax Assessor, Office of the Lieutenant Governor; and from a cadastral survey of Water Island produced by the Bureau of Land Management, Department of the Interior, and signed January 29, 1979, by Bernard W. Hostrop, Chief of the Cadastral Survey Division. A summary list of properties and estimated values is attached to this section. In addition, an unsigned memorandum on Water Island Civic Association letterhead, dated July 27, 1979, entitled "Transfer of Water Island to the Government of the Virgin Islands/Title in Fee Simple," provides a brief summary of property holdings.

Alternative management options are based on discussions among all of the contractors working on the Water Island study and the Policy Planning staff of the Department of Commerce; an interview with Superintendent Joe Miller of the Virgin Islands National Park; and on the park "Management Policies," 1978, published by the National Park Service, U.S. Department of the Interior.

Information for the development options was assimilated from all of the preceding sources, plus interviews with: the Coastal Zone Management Division, Fish and Wildlife Bureau, and the Archaeologist's Office of the Department of Conservation and Cultural Affairs; the Virgin Islands Planning Office; the Director of the Fire Service; the Assistant Commissioner of Public Safety; the Disaster Preparedness Office; various Water Island property holders including Jack McWilliams, Mark and Mary Marin, Bill Myers, Joe Paden, Emily Blackburn and Madelene Bateman.

The completed questionnaires and their analysis provided additional information.

Other information sources that were consulted for general background data or corroboration included:

"Comparative Growth Statistics, 1960 to 1978" by the V.I. Department of Commerce, 1979.

"Land Use and Housing Elements," of the Virgin Islands comprehensive plan by the Virgin Islands Planning Office, Office of the Governor, June, 1977.

"Water and Sewer System Recommendations, Sugar Bird Hotel," by Donald Francois, P.E., and Elton Chongasing, P.E., March, 1978.

"Loan Application to Farmers Home Administration," Beach Management Corporation, December, 1978.

"Solid Waste Resource Recovery Planning Study," Metrek Division, The Mitre Corporation, February, 1979.

Resource Conservation, Economics and Policy, by S.V. Ciriacy and Wantrup, University of California Press, 1968.

Environmental Administration by Stahl Edmunds and John Letey, McGraw-Hill, 1973.

Tourism and Development by John M. Bryden, The University Press, Cambridge, 1973.

The Hawaii State Plan, the Planning Department of the State of Hawaii, Honolulu, 1979.

ATTACHMENT 1 TO SECTION VI

Valuation of Water Island Properties  
Microplanning District "A"

	<u>Acres</u>	<u>Total Value</u>	<u>Improved</u>
Lot 114	.94	\$ 75,000e	x
110	.51	68,700	x
109	1.02	26,000e	
106	1.09	80,000	x
103	.76	60,000e	x
98	1.13	58,800	x
Plot A	1.34	95,000e	x
B	.75	17,010	
C	.92	58,400	x
D	.86	59,500e	x
E	.58	13,200	
Lot 108	.91	85,000e	x
107	.90	20,400	
102	1.01	22,900	
101	.92	20,900	
99	.81	18,400	
97	.84	80,100	x
96	.59	13,400	
93	.45	12,800	
92	1.00	47,900	x
91	.94	67,000e	x
90	.47	13,300	
89	.85	80,900	x
112	3.49	33,900	
88	3.13	221,200	x
82	3.44	95,800	x
81	.57	51,600	x
80	.83	18,800	
Parcel 128	.57	16,200	
Lot 79	.92	70,200	x
83	.92	20,900	
84	.78	17,700	
85	.90	20,400	
70	.89	20,000	
69	1.50	34,000	
68	1.04	23,600	
64	.76	17,200	
67	.95	46,100	x
66	.63	35,300	x
65	.58	13,200	

Continued

Valuation of Water Island Properties  
Microplanning District "A"  
(Continued)

	<u>Acres</u>	<u>Total Value</u>	<u>Improved</u>
Lot 40	1.22	\$ 27,700	
41	1.10	85,300	x
39	1.02	23,100	
38	.95	47,800	x
42	.62	66,600	x
43	.73	18,400	
44	.88	22,200	
45	.73	18,400e	
46	.89	111,400	x
47	.84	50,600	x
36	.93	71,900	x
35	.72	18,100	
37	1.16	98,400	x
32	.97	22,000	
33	.91	41,800	x
34	.86	19,500	
30	.71	16,100	
31	.73	16,600	
27	1.12	38,000	x
26	1.08	72,500	x
23	.89	45,000	x
19	3.67	241,400	x
18	.65	50,600	x
17	1.92	104,100	x
16	.93	66,200	x
15	.69	89,300	x
12	.74	124,200	x
14	.59	14,900	
13	1.09	65,000	x
Tract A	4.50	93,600	
Unpartioned	40.00e	1,120,000e	
Total	115.33	\$4,751,400	

Valuation of Water Island Properties  
Microplanning District "B"

	<u>Acres</u>	<u>Total Value</u>	<u>Improved</u>
Lot 7	.77	\$ 14,500	
25	.50	14,400	
24	.57	12,600	
Tract B	34.00e	5,535,300	x
Villas	N.A.	1,001,700	x
Tract C	12.00e	529,700	x
Lot 48	.88	22,200	
49	.47	34,400	x
60	.99	64,000	x
59	.71	23,900	
58	1.00	33,600	
57	.76	94,400	x
56	1.36	111,700	x
55	.92	106,500	x
54	.45	106,300	x
53	.71	49,300	x
52	.59	63,000	x
51	1.03	34,600	
50	.85	28,600	
71	1.20	34,000	
72	1.20	89,600	
73	.54	12,200	
74	.66	42,100	x
75A	1.18	69,600	x
75B	1.85	173,600	x
76	1.54	80,400	x
77	.66	56,300	x
Tract "E"	.75e	204,800	x
Lot 78	1.07	32,400	
100	1.99	40,100	
112	3.49	33,900	
Tract "G" & "F"	9.50e	215,800	
Ruyter Bay Club	2.41	178,300	x
Other Unmarked	18.00e	414,000e	
Total	106.4	\$ 9,557,800	

Valuation of Water Island Properties  
Microplanning District "C"

	<u>Acres</u>	<u>Total Value</u>	<u>Improved</u>
Lot 1	1.93	\$ 31,200	
2	1.01	66,000	x
3	2.20	45,200	
4	3.18	88,300e	x
5	2.12	44,000	
6	.71	17,900	
8	2.38	47,700	
9	3.88	117,800	x
10	.82	20,700	
Parcel 111	.50	13,400	
Lot 20	2.74	185,900	x
21	1.46	79,100	x
22	1.37	41,400	
28	1.30	94,600	x
29	1.39	101,400	x
61	1.72	85,800	x
62	1.97	93,300	x
63	.69	67,300	x
86	.71	56,000	x
87	.94	28,400	
94	1.64	49,600	
95	1.03	82,200	x
104	.86	94,500	x
105	.94	53,000e	
Tract "D"	14.50e	74,300	
Caroline Point	10.00e	280,000e	
Sprat Point	40.00	515,300	
Other	28.00e	543,200e	
So. Club Area	1.1	19,400	x
Main Club Area	3.10	117,100	x
 Total	 134.19	 \$3,154,000	

Valuation of Water Island Properties  
Microplanning District "D"

	<u>Acres</u>	<u>Total Value</u>	<u>Improved</u>
Lot 111	1.65	\$ 41,600	
113	.64	65,000e	x
SB # 12 & #13	2.03	134,700	x
SB # 21	1.06	98,000e	x
SB # 26	1.10	103,000e	x
SB # 40	1.01	66,500	x
SB # 44	1.06	102,000e	x
SB # 45	1.02	95,800	x
SB # 64	1.00	138,900	x
No. Club Area	1.14	34,500	
Banana Bay	2.60	77,200	
Other	47.59e	1,094,600e	
Total	61.9	\$2,051,800	

Summary

	<u>Acres</u>	<u>Total Value</u>
Micro District A	115.33	\$ 4,751,400
B	106.40	9,557,800
C	134.19	3,154,000
D	61.90	2,051,800
Total	417.80	\$ 19,515,000

e = estimated, other values are current assessed values

CHAPTER FIVE

WATER ISLAND QUESTIONNAIRE ANALYSIS

## SECTION I: INTRODUCTION

The following section of this report is a detailed examination of the results of the questionnaire mailed to all property holders on Water Island, including Sprat Bay Corporation members and villa owners. One hundred fifty-three questionnaires were mailed out, additional copies were provided to winter residents on request. Four questionnaires were returned as undeliverable by the Postal Service. As of this date, seventy-three questionnaires have been returned to Island Resources Foundation. Seventy-two of them had been received by April 2, 1980, and form the basis of this analysis. (The questionnaires had been mailed on January 28, 1980.)

The main analysis of questionnaire responses is presented below in Sections II through IV of this chapter. Portions of this analysis have also been used in other chapters of the paper. Section II examines the characteristics of Water Island property holders. Section III examines their economic circumstances and impacts on the Virgin Islands. Section IV details the respondents reactions to development issues for Water Island.

## SECTION II: RESPONDENTS' CHARACTERISTICS

Questionnaires were mailed to 153 property holders, from addresses taken from membership in the Water Island Civic Association (WICA), to shareholders of the Sprat Bay Corporation, and owners of the hotel condominiums (villas).

A total of 72 completed questionnaires (47%) were received by April 2, 1980. The rates of return from various categories of property holder were substantially different:

- 27 questionnaires were received from identifiable Water Island residents - out of a total of an estimated 35 permanent Water Island residents (77%);
- 20 returned questionnaires are identified as being from among the 43 estimated improved properties owned by non-residents (47%);
- 19 returns were from among the estimated 70 to 75 property holders of unimproved lots or parcels (26%).

Five questionnaires could not be identified for improvements or residency. Among these were two whose total responses consisted of:

"We are not interested in making any changes. You may so inform your principals."

"I wish no change."

The summary of respondents' general characteristics is contained in the table on the following page. The main sub-groups that will be the subject of major interest in this analysis are "Residents", "Non-Residents" and the categories of Non-Residents with Improved Properties (abbreviated "Improved Non-Residents") and Non-Residents with Unimproved Properties (obviously, "Unimproved Non-Residents").

	Virgin Islands Resident	Non-V.I. Resident	Unknown Residency	TOTAL
Improved Property	27	20	1	48
Unimproved Property	1	19	-	20
Improvements Unknown	-	2	2	4
TOTAL	28	41	3	72

As soon as the questionnaire was received, the Water Island Civic Association circulated a guidance letter (see Section V) to all Water Island property holders. This letter, and the questionnaire were also discussed at the General Meeting of the Civic Association in early February. These activities helped to stimulate a high rate of response, and allayed many misgivings about the survey. This assistance, however, was not without some cost in terms of an artificial uniformity of opinion and position. As the same time, dozens of interviews and hundreds of hours of conversation affirm that the "guidance" offered by the Civic Association is also a reasonable concensus and an accurate statement of the prevailing opinions and attitudes of the membership.

DEMOGRAPHICS      Water Island property holders are predominantly rich, elderly professionals and executives, overwhelmingly white, many of them retired couples.

- The average age of 61 total respondents is 62 years.
- Average reported 1979 income for fifty property holders is \$44,000.
- Thirty-two of 65 respondents are retired, and many others identify themselves as semi-retired.

- Ninety percent of those who answered live in two person households.
- One of the seventy-two respondents is black (it is known that there are three black property holders on Water Island).
- Only three of those answering listed occupations that were not executive, professional or managerial (or widows of same).

It is interesting to note the significant differences among the major classes of Water Island property holder. These are detailed in the following table.

DEMOGRAPHIC CHARACTERISTICS  
SELECTED DETAILS

Characteristic (n)	Virgin Islands Resident	Improved Non-Res.	Unimproved Non-Res.	TOTAL
Age (61)	66	60	58	62
Income (55)	28,800	41,400	61,800	44,000
Retired (65)	75%	26%	29%	49%

As demonstrated above, there are significant differences among the various categories of property holder. Virgin Islands (viz., Water Island) residents are older, relatively poorer and much more likely to be retired. The non-residents are somewhat younger, more likely to be fully employed or "semi-retired", and have significantly higher incomes. The significantly higher incomes reported for Unimproved Non-Residents may be confirming of the popular notion of Sprat Bay Corporation members as being especially wealthy (since only seven of the 37 Sprat Bay owners have built, they would be disproportionately represented in this category).

The demographic data also contain some less obvious suggestions that merit consideration:

- Fully one-third of the retired Water Island property holders are not resident in the Virgin Islands. When

this group is added to the significant number of "semi-retireds" who are counted as not retired, it is clear that the Virgin Islands are not reaping all of the benefits of a retirement haven.

	Virgin Islands Residents	Improved Non-Res.	Unimproved Non-Res.	TOTAL
Retired	21	5	5	32*
Not Retired	7	14	12	33

\*Includes one unknown residency

- Given the relatively large number of property holders that they represent, the non-resident group gives every indication of being a powerful interest group in the bureaucratic/political realm. (In addition to the factors discussed above, many live in the D.C. area and have or have had senior government positions.) Given the observed differences between residents, and non-residents, it may be speculated that a lease termination agreement acceptable to the lessee and the resident sub-lessees could be easily frustrated by the non-resident group.

### SECTION III: ECONOMIC CHARACTERISTICS

PROPERTY HOLDINGS      The information reported under various property holding categories provides some confirmation that the respondents in this survey are generally representative of all Water Islanders.

The average size holding is about one and one-third acres, with most reporting the "standard" one acre lot.

The average reported (60 answered) acquisition cost was \$23,600, and the average date of acquisition was 1967. There have been a number of relatively recent acquisitions (eight in 1978) - all of which have been transfers of prior sub-leases, since the hotel has sold no new sub-leases in a decade. Given the short term of the lease, one can only wonder at the reason for the sudden activity - especially since the rate of new construction has not markedly increased.

*acquisition*

Twenty-nine respondents reported making property improvements worth an average of \$35,800. This would imply a cost for developed homesites of around \$50,000, which corresponds with current estimated values by the tax assessor of between fifty to ninety thousand dollars for developed residential properties.

*improvements*

In part, because of the WICA guidance, and in part because no one really knows, there was very little response to the question of current land values, given clear title (Question 13). Seventeen answered that unimproved property was worth an average of \$8,200 an acre, and eleven said that their improved properties were worth an average of \$80,500 per acre. (This overall value coincides with the tax assessor's estimates, except that he values the land at twenty to thirty thousand dollars per acre. In other words, residents value improvements higher, and land values lower than the tax assessor.)

*current value*

ECONOMIC  
IMPAIRMENTS

The apparent economic effects of the current ownership and development patterns on Water Island are relatively small, and are generally limited to the developed properties.

Thirty-four developed property holders report employing an average of .3 employees. The actual employment figure is estimated to be somewhat lower, because many of those who did not respond to this question should have indicated that they employ no one.

The fact that one-fourth of the Water Island residents are not retired may surprise some people and implies a degree of linkage with the St. Thomas economy that was not previously expected. (It has also been suggested that by omitting resident renters, the study has neglected a relatively large number of economically active residents - some of whom have families and have lived on Water Island for several years.)

The average residency for non-residents with improved properties was approximately two months. Most non-residents with unimproved properties regularly visit the Virgin Islands less than two weeks per year.

Out of the total of 48 improved properties, 14 report renting 26 rental units for all or part of the year. (One property has eight apartments; several others have guest units that are rented.) Information on the number of annual house guests was not reliable, given evident confusion on the meaning of Question 7c. Presumably, each developed property is host to several (5-20) "guest-weeks" of visitors each year, who do not pay for accommodations, but who do support other St. Thomas visitor services.

The most significant economic impact of Water Island is probably the taxes paid by residents. A number of non-residents identified customs duties and gross receipts taxes as by-products of their periodic visits and maintenance of

*taxes*

their properties, but the amounts were consistently less than \$1,000 per year. Twenty-six of the 28 Water Island residents who responded indicated payments of local taxes that average \$6,700 per year. This is consistent with the reported average income of approximately \$29,000 per year for Water Island residents. As pointed out previously a change in residency by some of the non-resident property holders (especially those who are retired or semi-retired) could result in a significant improvement in this key impact area.

The issue of economic impact is directly linked, in Water Islanders' perceptions, with the issue of the use of public services. Many respondents emphasized that they use no Virgin Islands public services. This perception should be a matter of concern, because it will impact future status negotiations. This is discussed more fully under "General Development Issues", below.

DEVELOPMENT  
PLANS

When queried about their personal plans for developing Water Island properties, most respondents were not very clear. In addition, despite the "leading" nature of the questions, there was not an overwhelming sense of pent up development that would be released once a long-term resolution of property rights was achieved.

Only 35 of the 72 respondents indicated any form of plan for developing their property, before or after 1992. Of these 35, only 14 indicated plans to build essentially new structures. (The remainder were general property improvements, guest houses, apartments, etc.) A few respondents did specifically mention that clear title would provide them with the option of selling their property.

*few new  
buildings*

The same degree of restraint was evident in the question about plans to move to Water Island. Only 12 of the 41 non-residents indicated any such wish, and many of their comments were qualified or conditional. (There were few responses to the question of estimated income upon moving to Water Island.)

Examining the demographic characteristics of property holders provides some partial explanations of these responses. Over a quarter of the non-resident property holders are already retired, and probably feel no need to change their current arrangements. The relatively advanced age of all categories of respondents might imply a diminished enthusiasm for undertaking the "challenges" of a major new construction project in the Virgin Islands. And the high income levels suggest that the investment and income generating potential of a new property are not major incentives for the bulk of the non-residents.

*explication*

#### SECTION IV: WATER ISLAND DEVELOPMENT RESPONSES

Water Islanders may differ in their demographic characteristics and in their personal development plan, but they are unified in their vision and aspirations for Water Island development. In the key question on support for twelve different development options, there is a .93 correlation between the preferences of Water Island residents and non-residents with unimproved properties. This degree of consistency is not normally encountered in survey research.

*unanimity*

Undoubtedly the discussions and guidance letter from the Civic Association contributed to the consistency of responses. Nevertheless, it is also clear that background, expectations and experience have formed a very cohesive view of the development potential for Water Island.

#### Respondents:

- (1) Support acquisition of Water Island by the Virgin Islands -- but only if a transfer involves clear title to their leased land;
- (2) Want none or minimal government services;
- (3) Believe that there should be no further development of Water Island, or that it should be limited to natural preserves and single-family residences on acre lots;
- (4) See clear title and financing (two sides of the same coin) as the biggest obstacles to development; and,
- (5) Are opposed to the development of Crown Bay as a deep water port for cruise ships.

*summary of reactions*

TRANSFER Superficially it would appear that two-thirds of the 64 people expressing an opinion would support the transfer of Water Island from the Department of the Interior to the Government of the Virgin Islands. It would also appear that Water Island residents are more favorably inclined toward Government of the Virgin Islands acquisition than non-residents (73% versus 58%).

*two-thirds support*

This conclusion is misleading, however, in that virtually all of this support is qualified or conditional on transfer resulting in the property holders securing a clear title to their leased land. In fact, there is almost no distinction between those who support and those who oppose transfer, because the "opposers" would support transfer if they would get clear title at a nominal cost.

*support is conditional*

It is not clear whether the respondents saw the transfer question as a means of setting forth an initial bargaining position with the government, or if these are "genuine" sentiments reflecting their minimum expectations of a fair settlement of the property rights issue. In either event, they would appear to have high hopes.

*high hopes*

The conditions most frequently set forth by respondents to these questions (in descending order) are:

*conditions*

Clear title. As mentioned before, both supporters and opposers of transfer set the acquisition of clear title by lessees and sub-lessees as a condition for transfer. Only two or three cited transfer issues not directly tied to property rights.

Low/no cost. Almost all respondents also state that title should be available at low cost, or at a "reasonable fee". Given the large difference between property holders' and the tax assessor's land valuations (\$8,000 versus \$20,000 per acre, respectively) it is clear that "reasonable fee" is subject to dispute.

Special tax rates. A number of respondents expressed the view that Water Island should be subject to special (low) tax rates because of the minimal demands that residents make on government services. It is also evident that many of those surveyed did not know the additional taxes, or the tax rates, that they would be liable for if the Virgin Islands assumed jurisdiction over Water Island.

Political rights. Some misinformed respondents insisted that Water Island should become part of the territory only if it had local self-government, "the same as St. Thomas and St. Croix". Others stated that it should have a resident Senator-at-Large, such as is provided for St. John. (Some non-resident respondents obviously did not know that Water Islanders vote in Virgin Islands elections.)

Unconditional opposition. A few respondents indicated, sometimes vehemently, that they would oppose any attempt to transfer Water Island to the Government of the Virgin Islands.

*total  
opposition*

The views and opinions summarized above are not statistically significant, except that some are more common than others. With reference to the question for a "reasonable fee" for title to land, there was no discernible pattern of answers among the three categories of respondent. However, from the viewpoint of looking forward to some form of negotiated early termination of the lease in order to promote greater economic development of Water Island, they do provide some guidelines for a program of public education and information that could ease some of the misgivings and misinformation currently held by many Water Island property holders.

*education  
needs*

GOVERNMENT SERVICES  
The most frequent response to the question of what services would be expected if the Government of the Virgin Islands took over Water Island was "none", expressed by 32

*no help  
wanted*

of the 66 people who answered. There was a significant difference between those who live on Water Island (54% wanted no services) and non-residents with unimproved properties (30%). Obviously, familiarity does not stimulate demands for services.

Among the 34 people who voted for one or more services, the most frequent choices were road maintenance, mail, trash collection, and public ferry service, in that order. The only really significant difference among the various sub-groups of Water Island property holders was that residents were twice as likely as non-residents to identify a need for mail service. (Many recognized that this was not a local government service.)

*roads, mail,  
trash and  
ferry*

In general, even among those who identified service expectations, there was a sense of restraint, with the average number of services checked at less than three per respondent. However, there was one qualification appended by many of the people who identified no service needs ... "at this time." There is a distinct impression that further development of the island would bring increased demands for public services.

*at this time*

DEVELOPMENT  
OPTIONS

Sixty-seven respondents identified 199 separate development options that they supported. Thirty-one percent of the total votes supported individual private residences, twenty-nine percent identified reserved natural areas as a preference, and ten percent want no further development. The only other item to receive any support of significance was marina and watersport developments.

*homes*

As mentioned previously, there was an extraordinarily high correlation (.93) among all categories of those who answered this question.

DEVELOPMENT  
ROLES

The responses to the question of the development role of various institutions and agencies were fairly standardized:

- The hotel should encourage the development of more single residences on available land. General expansion of the hotel was seldom mentioned -- and then negatively.
- The Sprat Bay Corporation was often faulted for not having stimulated a higher rate of home construction by its members.
- The Water Island Civic Association was most frequently identified as a vehicle for representing the interests of residents -- with some responses specifying sub-lessees in general. (A few thought the Civic Association should build homes.)
- The Department of the Interior was generally assigned the responsibility for negotiating a termination to the leaseholding arrangement that includes fee simple title to current landholdings at minimal cost. Some cited an Interior role in environmental conservation. A few felt Interior should adhere strictly to the terms of the original lease, only.
- The Government of the Virgin Islands should approve the "equitable arrangement" for the termination of the lease as specified above.

*a fair deal*

OBSTACLES

Sixty-seven respondents identified a total of 122 different obstacles to development. Water Island residents consistently cited a wider variety and more obstacles than other categories of property holder.

The lack of clear title and the inability to finance developments given the short term of the lease were cited by three-quarters of the respondents. These two discrete issues were so directly linked by so many respondents that

*no title,  
no mortgage*

they were counted together. These issues were mentioned with slightly greater frequency (83%) by holders of unimproved properties.

High costs and difficulties of access were mentioned by about the same number of respondents, as major secondary obstacles (37% and 35%, respectively). The issue of costs tended to focus on construction, although a number of people also mentioned the extra costs-of-living created by living on Water Island. In many ways the problems of access are simply another way of expressing the cost question. A number of responses did refer to the additional problems of maintaining cars on both the mainland and Water Island, and the inconvenience of the ferry schedule for working people.

*costs, time  
and hassle*

*extra cars*

The natural features of Water Island, including rugged terrain, rocky soils, low absorption rates and low rainfall, were identified as obstacles by a quarter of those answering. References to problems created by these natural conditions pertained to both the obstacles created for private construction and to the implications for building infrastructure.

*environmental  
conditions*

Miscellaneous and other obstacles accounted for only about twelve percent of all the responses, but were cited by 42 percent of the Water Island residents. Some of the issues mentioned included: the lack of services; pollution created by the noise of overflying aircraft and overuse of Honeymoon Bay; the financial instability of the hotel; political attacks on Water Island; and the unknown effects of chemical warfare experiments conducted by the Army.

*familiarity  
leads to  
pessimism*

CROWN BAY      Eighty-three percent of the respondents said that they viewed the Crown Bay development proposal unfavorably, or that they felt that it would have a negative environmental impact on Water Island. Specific factors included both the short-term effects of lowered water quality from dredging, and the permanent impact of greater ship traffic, polluting discharges and accident risk. Several people also mentioned

*Crown Bay  
(St. Thomas)  
rejected*

the potential loss of a Water Island ferry landing site on St. Thomas, and the displacement of the Shoreline Marina.

Non-residents with unimproved property were unanimously against the proposal, whereas one in four residents tended to favor it.

CONCLUSION            We have devoted considerable discussion to Water Island property holders' perceptions of development because it is obvious that they are going to exercise considerable influence in the final determination of both property rights and investments in Water Island over the medium run. In addition to highlighting significant distinctions between the various classes of property holder, we have also tried to indicate areas in which public education and discussion can help to clarify key issues, particularly in the area of the current political rights of Water Islanders, and their access to government services. Furthermore, we believe that the informed opinion of those who have held property or lived on Water Island for many years should serve as useful guidance for the future.

# ISLAND RESOURCES FOUNDATION

Red Hook Center, Box 33, St. Thomas, U.S. Virgin Islands 00801

(809) 775-3225

Dear Water Island Property Holder:

The Virgin Islands Department of Commerce has asked the Island Resources Foundation to examine long term economic development options for Water Island. Key elements in such a study are the experience, plans and preferences of the existing property holders. In addition, we have been asked to collect information on the current and future impact of Water Island on the finances of the Government of the Virgin Islands.

The attached questionnaire is a preliminary attempt to summarize the circumstances of Water Island property holders. Please answer, fold and return the postage paid mailer as soon as possible. We request that you do not sign the questionnaire.

You may freely decline to answer any question; our principle concern is for what you want to tell us about the development prospects for Water Island, and their impact on the Virgin Islands. All responses will be kept strictly confidential. Data from the questionnaires will be used only in summary form. We request your cooperation, so that our results will be based on a complete and balanced assessment of development alternatives.

We encourage any additional comments or suggestions that you may have to offer. In addition, we will be conducting a follow-up telephone or in-person interview of many property holders. If you wish to be called, please let us know by writing, or call (809) 775-3225.

Sincerely,

*Mary Moorhead*

Mary F. Moorhead

Island Resources Foundation

## Water Island Economic Development Options

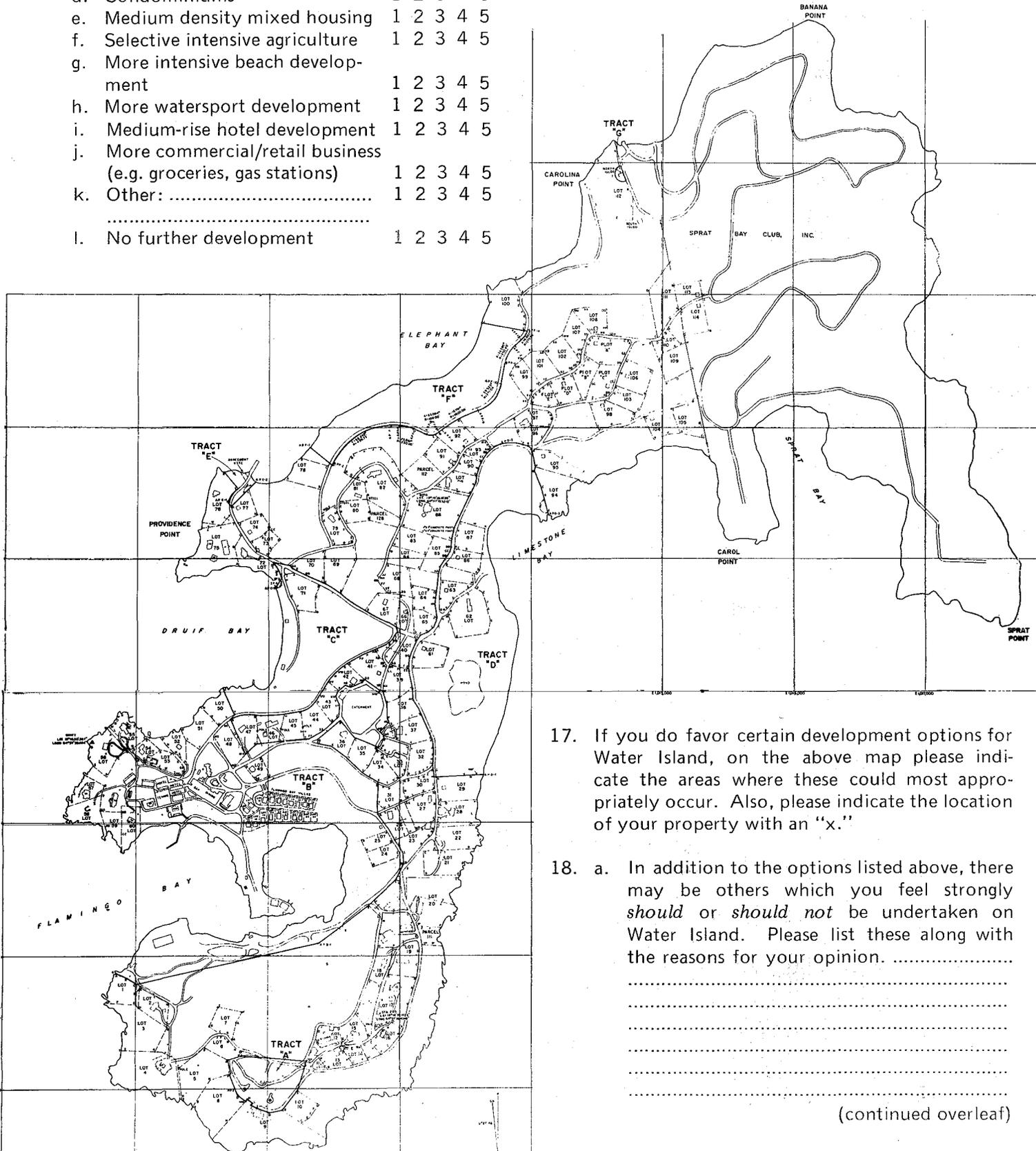
**INSTRUCTIONS:** The following questions are generally self-explanatory. In most cases a response may be indicated with a simple check mark or a short comment. A limited amount of space is provided for narrative responses. Please feel free to provide extra comments on a separate piece of paper, which may be stapled inside the folded questionnaire and mailed together. In some cases a property holder may inadvertently receive more than one copy of the questionnaire. We request that only *one* form be completed.

1. a. On what date did you acquire your property?  
.....  
b. What is its acreage? .....  
c. What was its acquisition cost? .....
2. What is the approximate cost, nature and date of improvements you have made to your property since acquisition?  
\$ ..... nature .....  
..... date .....  
\$ ..... nature .....  
..... date .....
3. Has your property been subdivided since you originally acquired it? .....  
If so, when? .....
4. Do you own your property as an individual, partnership or corporation? .....
5. a. What kinds of taxes do you pay directly to the Government of the Virgin Islands (e.g., income, gross receipts, business fees, customs duties, etc.)? .....  
.....  
b. What do you estimate to be the total amount of taxes that you currently pay to the Government of the Virgin Islands?  
0 - 1,000 ..... 7,001 - 10,000 .....  
1,001 - 2,500 ..... 10,001 - 15,000 .....  
2,501 - 4,500 ..... 15,001 - 25,000 .....  
4,501 - 7,000 ..... 25,000 and up .....
6. How many people do you employ full time or part time in connection with your property holding on Water Island? (Fractions are permissible. For example, ".2" or "1/5" would be equivalent to one person one day a week.)  
.....



16. In the following list of possible development options, please indicate your personal preferences on a scale from one (strongly oppose) to five (strongly favor):

- |   | Oppose / Support |
|---|------------------|
| a. Reserved natural areas   | 1 2 3 4 5        |
| b. Developed recreational areas, including campgrounds            | 1 2 3 4 5        |
| c. Individual private residences                                  | 1 2 3 4 5        |
| d. Condominiums   | 1 2 3 4 5        |
| e. Medium density mixed housing                                   | 1 2 3 4 5        |
| f. Selective intensive agriculture                                | 1 2 3 4 5        |
| g. More intensive beach development                               | 1 2 3 4 5        |
| h. More watersport development                                    | 1 2 3 4 5        |
| i. Medium-rise hotel development                                  | 1 2 3 4 5        |
| j. More commercial/retail business (e.g. groceries, gas stations) | 1 2 3 4 5        |
| k. Other: .....   | 1 2 3 4 5        |
| .....   |                  |
| l. No further development   | 1 2 3 4 5        |



17. If you do favor certain development options for Water Island, on the above map please indicate the areas where these could most appropriately occur. Also, please indicate the location of your property with an "x."

18. a. In addition to the options listed above, there may be others which you feel strongly *should* or *should not* be undertaken on Water Island. Please list these along with the reasons for your opinion. ....

.....

.....

.....

.....

(continued overleaf)

b. Specifically, what is your feeling about the role to be played in future Water Island development by:

- 1. The hotel (i.e., the main lease holder) .....
- 2. Sprat Bay Corp. ....
- 3. Water Island Civic Assoc. ....
- 4. Dept. of the Interior .....
- 5. Gov. of the Virgin Islands .....

19. Based on your knowledge and experience, what are the biggest obstacles to future development of Water island? (Indicate those you feel to be unique to Water Island, rather than those that might be generally applicable to the Virgin Islands.) .....

20. The Port Authority's Crown Bay Development Plan under consideration by the Army Corps of Engineers proposes to construct docking, transshipping and maintenance facilities on 35 acres of new filled land which would extend from the "Miss Opportunity" barge to the present Water Island ferry dock in Sub Base. Crown Bay will

then become a major cruise ship docking facility berthing 3 cruise ships and capable of providing turn around service to those ships. It could also be a major cargo facility.

Taking into consideration Water Island's proximity to Crown Bay, how do you feel this project will impact Water Island?

21. The following information is needed for demographic purposes:

- a. Age of head-of-household .....
- b. Sex of head-of-household .....
- c. Number of people in household .....
- d. Approximate total 1979 household income:
  - 1. less than \$15,000 .....
  - 2. 15,001 to 20,000 .....
  - 3. 20,001 to 25,000 .....
  - 4. 25,001 to 30,000 .....
  - 5. 30,001 to 35,000 .....
  - 6. 35,001 to 40,000 .....
  - 7. 40,001 to 45,000 .....
  - 8. 45,001 to 50,000 .....
  - 9. 50,001 to 75,000 .....
  - 10. 75,001 to 100,000 .....
  - 11. 100,001 to 125,000 .....
  - 12. more than 125,000 .....
- e. Where is the permanent residence of the household? .....
- f. How long have you lived at your permanent residence? .....
- g. Race of head-of-household .....
- h. What is/was occupation of the principal wage earner in the household? .....
- i. Is principal wage earner now retired? .....

Name .....

Address .....

City .....

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VIRGIN ISLAND 00801

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# Water Island Civic Association, Inc.

Water Island  
St. Thomas, U.S. Virgin Islands 00801

February 6, 1980

Dear Water Island Property Holder:

The Island Resources Foundation questionnaire recently sent to you has received much discussion by the TAG Committee as well as by all the Water Islanders in residence who attended the reconvened session of the annual WICA meeting on February 2, 1980. This letter is to apprise you of our collective comments and points of view -- not to tell you how to answer the questions.

Should you wish to remain anonymous, then Questions #1-a and #6 should be answered in general terms with respect to time and acreage. Also, you should not mark "X" on your lot (Question #17); and the return address should be WICA, P.O.Box 570, Water Island, St. Thomas, V.I., 00801; or you can send the questionnaire directly to the Civic Association secretary, Emily Blackburn, who will see that your anonymous reply gets to Island Resources.

Questions #1-c and #2 provide an opportunity to point out the kind of investment we have already put into Water Island. We do not think that numbers should be inflated, but include all your costs.

The "dwelling unit" referred to in Question #8-a is a house, or apartment, or separate unit which could be rented.

Questions #9 and #10. It has long been our opinion that residential development of Water Island has been held up because we lack title to our land, and we assume that your development plans will occur after you have clear title. Please note under #9-b that there is nothing in the works at this time regarding a lease extension beyond 1992. On the contrary Congressman Philip Burton is on record as opposing such an idea.

Questions #12 and #13 received much discussion. In general, it probably can be said none of us does or plans to rent land alone. To decide what is a fair rental or market value for our property and/or improvements is a real estate person's job and generally beyond our individual judgement. In any event, we do feel this questionnaire is not the place to lay any groundwork for these numbers.

Question #11. Most of us support the transfer of Water Island to the Virgin Islands Government, under certain circumstances. Generally, we want to have already negotiated the terms of obtaining fee simple title with the Department of the Interior before such a transfer. If you favor such a transfer, are you interested in obtaining title to your property? Obtaining title means that you would give up lease rights and come under property taxation. Also, please indicate whether you are only interested in an even exchange, or would you be willing to pay a nominal or a substantial sum to obtain title.

Question #15. Most everyone would like to see Water Island remain pretty much as it is; hence, after a transfer to the V.I. Government, the fewer government services that come over, the better chance we have to keep our island as is. "None at present" might be an appropriate answer, if you agree.

Question #16 also gives us an opportunity to express our desire for individual private residences, as opposed to commercial or government expansion. Reserved natural areas could, and would also benefit our island.

Question #18-b is another chance for us to express views which will help our future. We would like (and the hotel has expressed the same view) the hotel to develop their unused land for single family residences on 1 acre (prox.) plots. Sprat Bay is already sub-divided and we would hope these owners would build.

(over)

- 2 -

Further, we would like the Department of the Interior to set fair terms for the acquisition of our property and for the transfer of Water Island to the Virgin Islands. We want the Virgin Islands Government to approve such fair terms of transfer.

Question #19. Without question, the biggest obstacle to development on Water Island is the shortness of the lease and the inability to get financing. These are followed by such factors as high cost of construction, convenience of access and others.

Question #20. The Crown Bay development would take pages to explain. In a word, the plan calls for the creation of 32 acres of new land along the St. Thomas shore, opposite Water Island, for increased ship activity. The proposal has no provision for a new Water Island ferry dock, or relocation plans for waterfront business and/or marinas. Nor are specific plans for what will be put on the 32 acres a part of its approval. Some feel the north side of Water Island will be badly affected. The general feeling is very negative.

Question #21. The image of Water Island is a millionaire sanctuary. Perhaps the answers to the demographic questions gives us a chance to indicate by category that most of us are middle income people.

Island Resources requests further comments and ideas if you care to express them. The room allocated to the answer to many questions is limited; hence feel free to add paper as needed.

The TAG Committee does urge everyone to answer the questionnaire as best he can. If you have specific objections to certain questions, by all means leave them blank. Please feel free to contact any member of the TAG Committee for advice or help in answering any question.

Respectfully submitted:

H. W. Rave  
H.W.Rave, Chairman  
E.L.Robertson  
Ed Krieger  
K.C.Jones  
Warren Pond

SECTION VII  
SUMMARY OF QUESTIONNAIRE RESPONSES

Item #	Description	Responses (n)	Factor	Comment
1.	Average size	66	1.37 acres	
	Average cost	60	\$23,610	
	Year acquired	64	1967	8 in 1978
2.	Cost of improvements	29	\$35,800	
3.	Sub-divided			1 affirmative
4.	Ownership			2 partnerships/1 corporation
5.	Average tax payment	26	\$ 6,700	V.I. residents only
6.	Average employees	34	.31	domestics/gardeners
7.	Residency	54	6.7 mos./yr.	
8.	Improved property	48	14 w/26 apts.	Rents \$250 to \$1400/mo.
	Average rent	14	\$860/mo.	Unreliable
	Rent broker	12	self	2 use hotel
9.	Planned improvements	35	No Value	pre or post 1992
10.	Title change plans	36	Affirmative	Mostly advance date of #9
11.	Retire/move to Water Island	41	12	Affirmative
	Retirement income	6		Not reliable
12.	Land rent value	2		Not reliable
	Land with buildings rent	8		Not reliable
13.	Sale value of land	17	\$8,200/acre	
	Sale value of improved land	11	\$80,500/acre	Marginally reliable
14.	Support transfer	64	42-yes/ 22-no	
15.	Services expected	66	32-none/ 26-roads	18 listed more than 3 services
16.	Development options	67	62-homes 58-preserves 20-no develop.	
17.	Areas for development			no significant response
18.	Development roles			see narrative
19.	Obstacles	62	47-title/financing 23-high costs 22-access 15-natural feature 15-other	
20.	Crown Bay	58	48-against	
21.	Average age	61	62 years	
	Sex	63	59 male	
	Number in household	61	2.0 average	
	Average 1979 income	50	\$43,960	
	Residence	69	41 off island	Some inferred
	Time at residence	48	13 years average	
	Race	60	1 black	
	Occupation	55		See narrative
	Retired	65	32 retired	