

Appendix B



USFWS

Scattered numbers of the Northern pintail migrate through and winter in Back Bay NWR

Wilderness Review

Introduction

The purpose of a wilderness review is to identify and recommend for Congressional designation National Wildlife Refuge System (NWRs) lands and waters that merit inclusion in the National Wilderness Preservation System (NWPS). Wilderness reviews are a required element of comprehensive conservation plans and conducted in accordance with the refuge planning process outlined in 602 FW 1 and 3, including public involvement and the National Environmental Policy Act compliance.

There are three phases to the wilderness review process: (1) inventory, (2) study, and (3) recommendation. Lands and waters that meet the minimum criteria for wilderness are identified in the inventory phase. These areas are called wilderness study areas (WSAs). In the study phase, a range of management alternatives are evaluated to determine if a WSA is suitable for wilderness designation or management under an alternate set of goals and objectives that do not involve wilderness designation.

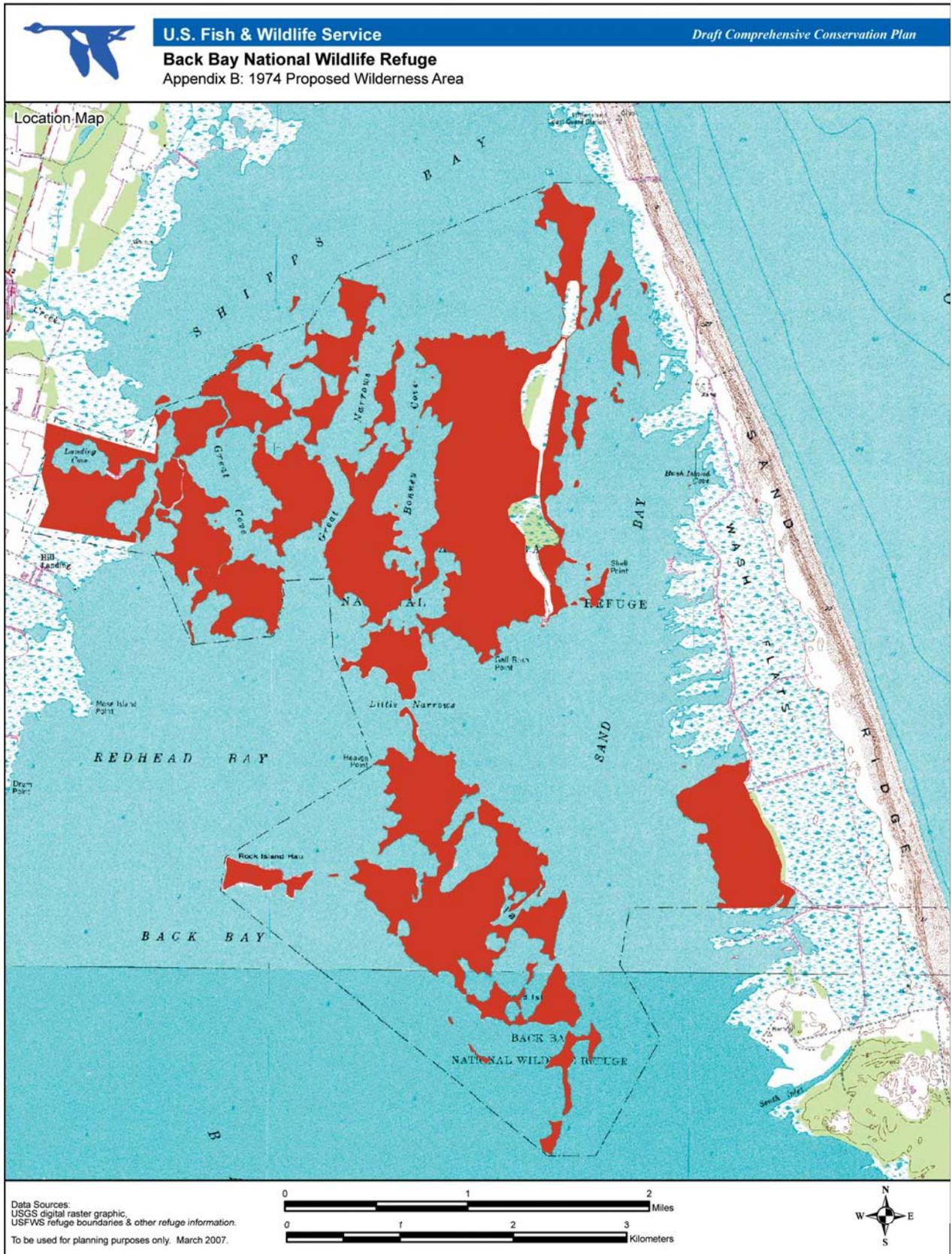
The recommendation phase consists of forwarding or reporting the suitable recommendations from the Director through the Secretary and the President to Congress in a wilderness study report. The wilderness study report is prepared after the record of decision for the final CCP has been signed. Areas recommended for designation are managed to maintain wilderness character in accordance with management goals, objectives, and strategies outlined in this final CCP until Congress makes a decision or the CCP is amended to modify or remove the wilderness proposal. If the final determination in a CCP is that a WSA is not suitable, we document the decision in the CCP and end the study process. We will manage unsuitable areas following the management direction outlined in this CCP.

In 1974, 2,400 acres within the Back Bay National Wildlife Refuge (NWR) were identified as proposed wilderness (Map B-1). The proposed wilderness encompassed approximately 2,000 acres of marsh islands and a mainland marsh unit adjacent to the islands, and 165 acres of a mainland forested unit. In the process of this Wilderness Review we will evaluate all lands within the current Refuge boundary to determine if the proposed wilderness continues to meet the minimum criteria and if any other lands meet the same criteria.

Back Bay NWR staff and Region 5, Regional Office personnel met at the Refuge from April 11 through April 29 to gather information and conduct an inventory of the Refuge's lands and waters. This process required combining selective site visits and site knowledge with existing land status maps, photographs, available land use information and road inventory data to determine if the Refuge lands and waters met the minimum criteria for wilderness. Aerial and non-aerial photographs were used to document the imprint of man's work, road locations, and other surface disturbances. The photographs used for this review are included at the end of this Appendix.

Wilderness Review Team

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Back Bay National Wildlife Refuge

Wilderness Inventory Phase I:

The wilderness inventory is a broad look at the planning area to identify WSAs. A WSA is an area of undeveloped Federal land that retains its primeval character and influence, without permanent improvements or human habitation and further meets the minimum criteria for wilderness as identified in Section 2(c) of the Wilderness Act. A WSA must be a roadless area or island, meet the size criteria, appear natural, and provide for solitude or primitive recreation.

Minimum Wilderness Criteria

A WSA is required to be roadless, meet the size criteria, appear natural, and provide for solitude or primitive recreation.

1. Roadless

Roadless refers to the absence of improved roads suitable and maintained for public travel by means of motorized vehicles primarily intended for highway use. A route maintained solely by the passage of vehicles does not constitute a road. Only Federal lands and waters are eligible to be considered for Wilderness designation and inclusion into the NWPS.

2. Size

Roadless areas or roadless islands meet the size criteria if any one of the following standards applies.

- ☒ An area with over 5,000 contiguous acres. State and private lands are not included in making this acreage determination.
- ☒ A roadless island of any size. A roadless island is defined as an area surrounded by permanent waters or that is markedly distinguished from the surrounding lands by topographical or ecological features.
- ☒ An area of less than 5,000 contiguous Federal acres that is of sufficient size as to make practicable its preservation and use in an unimpaired condition, and of a size suitable for wilderness management.
- ☒ An area of less than 5,000 contiguous acres that is contiguous with a designated wilderness, recommended wilderness, or area under wilderness review by another Federal wilderness managing agency such as the Forest Service, National Park Service, or Bureau of Land Management.

3. Naturalness

A WSA must meet the naturalness criteria. The Wilderness Act, Section 2(c), defines wilderness as an area that "... generally appears to have been affected primarily by the forces of nature with the imprint of man's work substantially unnoticeable." The area must appear natural to the average visitor rather than "pristine." The presence of historic landscape conditions is not required. An area may include some human impacts provided they are substantially unnoticeable in the unit as a whole. Significant human-caused hazards, such as the presence of unexploded ordnance from military activity, and the physical impacts of refuge management facilities and activities are also considered in evaluation of the naturalness criteria. An area may not be considered unnatural in appearance solely on the basis of the "sights and sounds" of human impacts and activities outside the boundary of the unit. The cumulative effects of these factors in conjunction with land base size, physiographic and vegetative characteristics were considered in the evaluation of naturalness.

4. Solitude or Primitive and Unconfined Recreation

In addition to meeting the roadless, size and naturalness criteria, a WSA must provide outstanding opportunities for solitude or primitive and unconfined recreation. The area does not have to possess outstanding opportunities for both solitude and primitive and unconfined recreation, and does not need to have outstanding opportunities on every acre. Further, an area does not have to be open to public use and access to qualify under this criteria; Congress has designated a number of wilderness areas in the Refuge System that are closed to public access to protect resource values.

Opportunities for solitude refer to the ability of a visitor to be alone and secluded from other visitors in the area. Primitive and unconfined recreation means non-motorized, dispersed outdoor recreation activities that are compatible and do not require developed facilities or mechanical transport. These primitive recreation activities may provide opportunities to experience challenge and risk; self reliance; and adventure. These two “elements” are not well defined by the Wilderness Act, but, in most cases, can be expected to occur together. However, an outstanding opportunity for solitude may be present in an area offering only limited primitive recreation potential. Conversely, an area may be so attractive for recreation use that experiencing solitude is not an option.

5. Supplemental Values

The Wilderness Act states that an area of wilderness may contain ecological, geological, or other features of scientific, educational, scenic or historical value. Supplemental values of the area are optional, but the degree to which their presence enhances the area’s suitability for wilderness designation should be considered. The evaluation should be based on an assessment of the estimated abundance or importance of each of the features.

Wilderness Inventory methodology

The Back Bay NWR Wilderness Inventory was divided into two separate and distinct steps. In step one; we inventoried all Federal lands within the Back Bay NWR that were not proposed for Wilderness designation in 1974, including those lands that have been acquired. In step two; we inventoried the lands within Back Bay NWR that were proposed for Wilderness designation in 1974.

Wilderness Inventory Phase Step One: Inventory of all Federal lands within the Back Bay National Wildlife Refuge that were not proposed Wilderness in 1974

These fee title lands were initially assessed based on the size criteria. The Federal lands within the Back Bay National Wildlife Refuge that were not proposed Wilderness in 1974 were divided into twenty four separate blocks (Map B-2). The blocks, which we tentatively called Wilderness Inventory Areas (WIA), are bordered by major roads or bodies of water which are not owned in fee title. Several of the large WIAs contained improved roads suitable and maintained for public travel by means of motorized vehicles primarily intended for highway use. Before we refined the boundaries of each WIA to eliminate the road systems, we calculated the acreage of each WIA. Further refinement would have increased the number, and reduced the size of each WIA. The largest block that was found during our initial review was 1,884.4 acres. Because the largest block was less than 5,000 acres, we determined that none of WIAs met the size criteria for a WSA (Table B.1). The Federal lands within the Back Bay National Wildlife Refuge that were not proposed Wilderness in 1974 will not be considered further for possible Wilderness designation in this CCP.

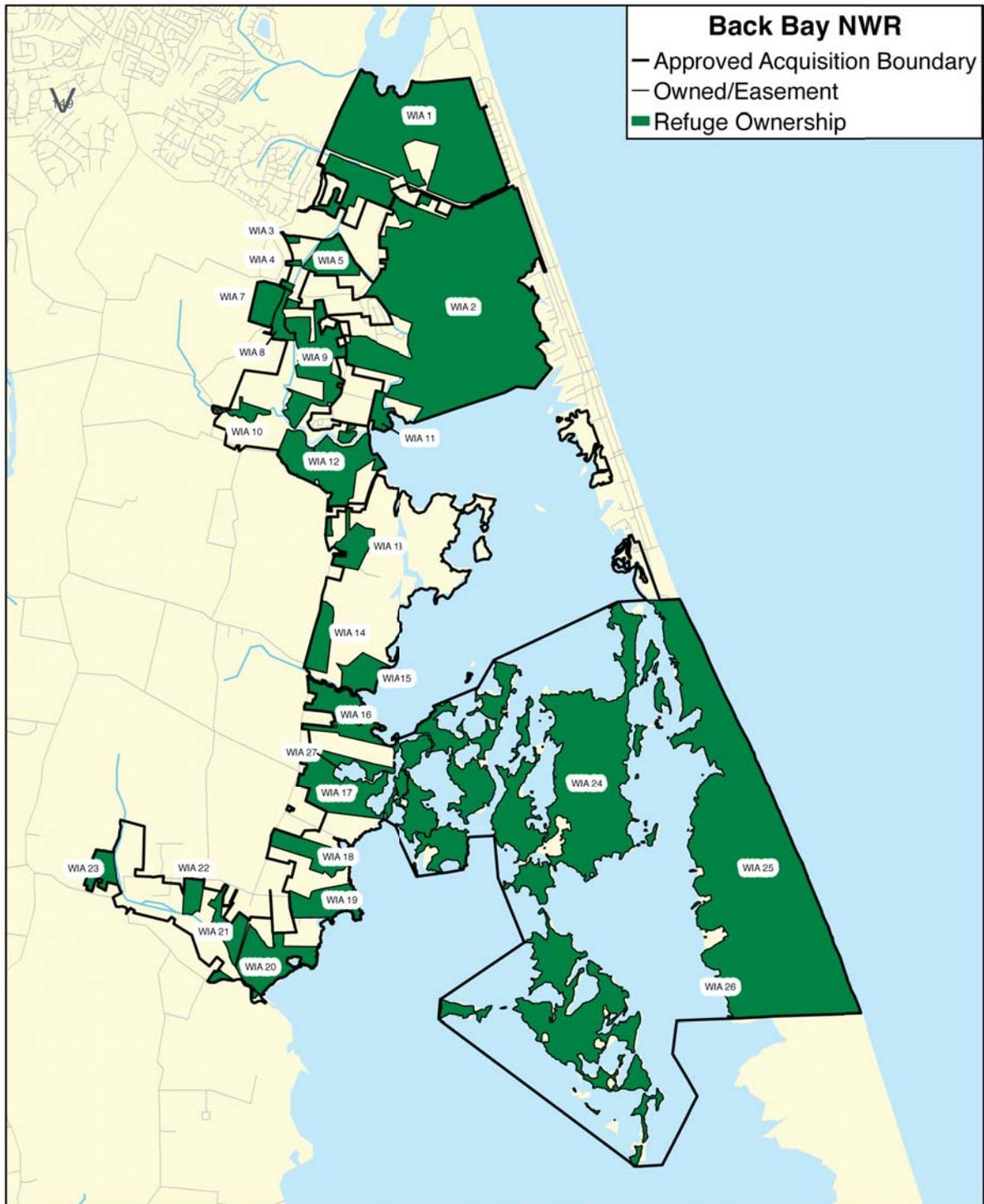
Appendix B



U.S. Fish & Wildlife Service

Back Bay National Wildlife Refuge - Wilderness Inventory Areas
Virginia Beach, Virginia

Map B-2



Produced in the Division of Realty, Hadley, Massachusetts
 Land Status Current to: 01/24/2007
 Revision: 1/26/05 1:24,000 approval map
 Refuge boundaries: compiled from USFWS sources
 Datum & Projection: NAD_1983_StatePlane_Virginia_South_FIPS_4302_Feet



This map is designed for refuge management
 It is not intended to be used as a land survey or
 as a representation of land for conveyance or for purposes.
 For more information visit the USFWS Northeast Region GIS
 website at <http://northeast.fws.gov/gis/>



Back Bay National Wildlife Refuge

Wilderness Inventory Phase II: Inventory of all lands within the Back Bay National Wildlife Refuge that were proposed for Wilderness designation in 1974

The lands within the Back Bay NWR that were proposed for Wilderness designation in 1974 total of 2,400 acres, and consist of a large assemblage of roadless islands and two mainland units, Green Hills and Landing Cove. The proposed designation of these lands was based on allowing the continuation of controlled burning as a wildlife management practice to meet the objectives of the Refuge. Certain Refuge lands within the 1974 proposed wilderness area were not proposed for wilderness designation. They include: three goose pastures on Long Island that were maintained with the use of motorized equipment; and a bridge and motor trail on Long Island. The three goose pastures totaling approximately 59 acres are no longer maintained for goose browse by the Refuge. The pastures have reverted to shrub species such as: wax myrtle and salt bush, *panicum* grass species, broom sedge, holly, and sweet gum. The bridge and motor trail on Long Island no longer exist. The bridge remnants now consist of a few deteriorating pilings. For the purposes of this review, these areas were considered as part of the lands within the Back Bay NWR that were proposed for Wilderness designation in 1974.

WIA-24 Island Assemblage

The Refuge islands, totaling 2000 acres are located within the bay portion of the Refuge. Predominate island vegetation is black needle rush, cattail and invasive phragmites. There are two large island units known as Long Island and Ragged Island.

Long Island is the largest and least eroded of the island complex while Ragged Island is somewhat smaller and shows a high rate of erosion. Long Island is approximately 800 acres. This includes 55 acres of old fields that are slowly reverting back to woodland, 50 acres of (red maple) hardwood forest, while the remaining acreage consists of emergent black needlerush marshes, ponds, small guts and inlets. Ragged Island is approximately 700 acres of emergent needlerush marshes, scattered waxmyrtle and open water or "potholes." Long Island supports scattered hawthorns, and a mix of loblolly pine, waxmyrtle, hackberry, sweetgum, black cherry, persimmon, red cedar, groundsel/saltbush and a variety of oaks such as black and pin oaks. Several wetland sites on Long Island support unique Olney's three-square marshes and a floating spikerush marsh. They are the only known locations for these two unique marsh communities on Back Bay NWR, and thus, require protection. Surveys have revealed that Long Island is also unique in supporting one of the few breeding populations of seaside sparrows in this area.

The Refuge has been actively controlling Phragmites on Long Island and Ragged Island since 1987 through the use of "Rodeo" (glyphosate), an approved pesticide. Dense dead stands have been removed by controlled burns to promote the growth of native and more desirable species. Back Bay NWR biologists suspect that Long Island is one of the few areas where native phragmites can be found. Long Island also possesses an important cultural resource. An old cemetery site can be found within the woods edge adjacent to an old field, on northern Long Island, south of the "Boy Scout Bridge" canal.

Adjacent to both islands are numerous islets. These smaller land units have eroded and are no longer connected. The remaining islands are small units that are either isolated or are a complex of islands interspersed by coves. All of the islands within this area are roadless, meet the size criteria, and can provide some limited opportunities for primitive recreation.

Conditions outside the area of the Refuge islands have changed considerably since 1974. The population of Virginia Beach has increased more than 250% since 1970, from 172,000 to the current estimate of 440,000. The proliferation of boats and personal motorized watercraft (i.e. jet skis) on waters surrounding the islands has resulted in additional impacts related to "sights and sounds" than originally

Table B.1. Wilderness Inventory Areas

WIA #	Name	Size (acres)
1	Black Gut	824.29
2	North Bay Marshes	1884.4
3		5.89
4		4.43
5		83.14
6		4.76
7		60.53
8		31.08
9	Carter impoundment	217.66
10		26.11
11		33.39
12		249.02
13		76.66
14		70.96
15		69.18
16		137.21
17	Farm land (minus landing cove)	225.17
18		92.81
19		102.13
20		157.98
21		78.42
22		35.71
23		51.22
24*	Island Assemblage	2000
25	Beach and impoundment area (minus green hills)	1929.4
26*	Green Hills	165
27*	Mainland marsh unit (Landing Cove area)	136

**1974 Proposed Wilderness Areas*

evaluated thirty years ago. Non-native invasive plants such as phragmites are also much more dominant than before, and can require intensive management to maintain biological integrity and environmental health. In addition, due to island erosion and the intensive management efforts needed to control encroachment of invasive species, the Island Assemblage is affected by man's work rather than the forces of nature, and this work can be noticeable throughout the year.

Although the islands can provide some limited opportunities for primitive recreation, and even solitude in the winter months, there are no outstanding opportunities for solitude and/or primitive or unconfined recreation throughout the year. The islands no longer meet minimum criteria for solitude or primitive recreation.

**WIA-26 Green Hills —
mainland unit**

Green Hills is a roadless forested block of approximately 165 acres that was added to the wilderness proposal of 1974 as a result of the public hearing during that time. These woodlands are generally low, reaching heights of 20 feet or less, due to the "salt pruning" of salt-laden winds from the ocean. Dominant species include live oak, loblolly pine, red cedar, laurel oak, red maple and sweetgum. A few pond pines can also be found in this area. To encourage nesting of the prothonotary warbler, nestboxes were placed on red maples within this area. It provides limited opportunities for primitive recreation, primarily deer and hog hunting. Located on the east side of the bay, it is bordered by the bay on the west and south and on the north by small eroded areas of basic marsh vegetation (marsh fingers). On the east a staff access road borders and separates this block of forest from the impoundment complex.

Green Hills does not currently meet the minimum criteria for size, as it is not an island and is drastically less than 5,000 acres. Its location and small size of 165 acres would make future preservation and use in an unimpaired condition mostly impractical, and therefore unsuitable for wilderness management.

**WIA-27 Landing Cove —
mainland unit**

This roadless unit of approximately 136 acres is located on the west side of the bay, and adjacent to the islands on its east side. It has the same basic marsh vegetation as the islands, composed of cattails, black needle rush (predominant), and phragmites. On the west it is adjacent to the mainland, a new acquired farm fields. A strip of trees (pine) mixed with some shrubs (wax myrtle) separates the marsh area from the farm field. It could provide limited opportunities for primitive recreational activities. As with the Green Hills unit, the Landing Cove unit does not currently meet the minimum criteria for size. Landing Cove is not of sufficient size as to make practicable its preservation and use in an unimpaired condition, and of a size suitable for wilderness management.

**Wilderness Inventory
Conclusion**

The Service finds all Federal lands within the Back Bay NWR that were not proposed Wilderness in 1974 do not meet the minimum size criteria as defined by the Wilderness Act, and will not be considered further in this CCP for Wilderness designation.

The Service also finds that the lands within the Back Bay NWR that were proposed for Wilderness designation in 1974 do not meet the minimum criteria for size (mainland units), or for outstanding opportunities for solitude or primitive and unconfined recreation and naturalness (Island assemblage) as defined by the Wilderness Act. The lands proposed for wilderness designation in 1974 will not be considered further in the CCP for wilderness designation.

Land classification can be thought of as a continuous spectrum of land types ranging from urbanized land, on one end, to wilderness, on the other. In our society, all portions of the spectrum are important, and many land classifications

for public lands can compliment wilderness. Many of these classifications better fit the recreation desires of diverse users and are excellent alternatives to visiting wilderness. One such classification is a “Research Natural Area.”

Research Natural Areas exist throughout the country on public lands. Unlike wilderness areas, recreation is not a primary use in these areas, but they supplement the educational and scientific values of wilderness areas. These areas are intended to serve as gene pools for rare and endangered species and as examples of significant natural ecosystems. Like wilderness areas, they also serve as important outdoor laboratories to study natural systems. The lands at Back Bay originally proposed for wilderness in 1974 would seem to be better suited as a designated Research Natural Area than as a proposed wilderness.

**Definition of
Wilderness:**

“(c) A wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean in this chapter an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man’s work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.”

