

Appendix I



USFWS

Refuge visitors at the beach

Summary Costs of Draft Alternatives and Comparison of Beach Access Costs

Non-Beach Capital Cost Components						
Project	Units/Notes	Cost per unit	Alternative A Cost	Alternative B Cost	Alternative C Cost	Beach Nourishment Alternative
WCS - between Ragged Point & Assateague Channel	90 LF	\$ 12,250.00	\$ 1,102,500	\$ 1,102,500	\$ 1,102,500	-
WCS - between NWF & Assateague Channel	100 LF	\$ 3,500.00	\$ 350,000	\$ 350,000	\$ 350,000	-
WCS - between E Pool & Assateague Channel	100 LF	\$ 3,500.00	\$ 350,000	\$ 350,000	\$ 350,000	-
WCS - between Sow Pond & Assateague Channel	90 LF	\$ 12,250.00	\$ 1,102,500	\$ 1,102,500	\$ 1,102,500	-
WCS between A & B South (36")	100 LF	\$ 3,500.00	\$ 350,000	\$ 350,000	\$ 350,000	-
WCS between F & B South (36")	100 LF	\$ 3,500.00	\$ 350,000	\$ 350,000	\$ 350,000	-
WCS between B South & B North (36") 2 structures	90 LF	\$ 3,500.00	\$ 630,000	\$ 630,000	\$ 630,000	-
WCS between C and B North (36") 2 structures	90 LF	\$ 3,500.00	\$ 630,000	\$ 630,000	\$ 630,000	-
WCS between C & D (36") 2 structures	90 LF	\$ 3,500.00	\$ 630,000	\$ 630,000	\$ 630,000	-
New Hunt Areas	8 blinds	\$ 5,000.00	-	\$ 40,000	\$ 40,000	-
Restore Lightkeepers House	1 restoration		-	\$ 1,000,000	-	-
Wildlife Observation Tower (Wallops Island)	1 tower		-	\$ 80,000	-	-
Boardwalk (Wallops Island)	Facilities will be shared with NASA		-	*shared with NASA	-	-
Construct additional office space for NPS at the existing Herbert H. Bateman Administrative Office Complex.	Funding will be coordinated with NPS.			*shared with NPS		
TOTAL COSTS			\$5,495,000	\$6,615,000	\$5,535,000	-

Note: This table covers major capital costs expected for each alternative; operational costs – including staffing – for each alternative is not captured.

All Major Capital Costs and Operations and Maintenance for Beach Access

Project	Units/Notes	Cost per unit	Alternative A Cost	Alternative B Cost	Alternative C Cost	Alternative A with Beach Nourishment Cost	Alternative B with Beach Nourishment Cost
Non-Beach Capital Cost Component			\$5,495,000	\$6,615,000	\$5,535,000	\$5,495,000	\$6,615,000
WCS - A Pool (84")	90 LF	\$12,250.00	\$1,102,500	-	-	-	-
WCS - F Pool (84")	90 LF	\$12,250.00	\$1,102,500	-	-	-	-
Bike Trail - Visitor's Center to Beach	11,523 linear feet of trail	\$123.00	\$1,417,329	-	-	-	-
Bike Trail - WL Loop to C Dike	3,730 linear feet of trail	\$123.00	-	\$458,790	-	-	-
Turn Around - terminus Beach Rd.	3,023 square feet of pavement	\$35.00	-	\$105,805	\$105,805	-	-
Crabbing Dock	40 linear feet of docking	\$875.00	-	\$35,000	-	-	-
Wildlife Observation Tower (Beach Road)	1 tower		-	\$80,000	-	-	-
Launch Area for kayak/canoe	438 linear feet of boardwalk	\$875.00	-	\$383,250	-	--	-
Shuttle Transit Service	3 shuttles purchased and maintained for seven years	Capital cost of \$900,000, Annual operating cost of \$179,000	\$2,600,000	-	\$2,600,000	-	-
Proposed Access Road, Joint NPS/USFWS Visitor Contact Station, and Parking Areas for Relocated Beach	2 way traffic, emergency lane and bike trail / 8.5 acre or 4.25 acre parking area / 3,000 sf building with public restrooms / small exhibit area	Includes construction, design, and construction management costs, estimated by FWS		\$14,558,100	\$11,739,900	-	-
Army Corp of Engineers Beach Nourishment Assessment	Stabilization of the current recreational beach and parking lots, and recurring maintenance every 3-7 years	\$24 million of initial costs, then three maintenance occurrences at \$8.3 million (3-7 years over 15 year CCP = average of every 5 years)	-	-	-	\$48,900,000	\$48,900,000
Grand Total			\$11,717,329	\$22,235,945	\$19,980,705	\$54,395,000	\$55,515,000