



FIGURE 9: ALTERNATIVE C - LOCATIONS OF WETLAND AND GOOSE MANAGEMENT TECHNIQUES, CENTRAL AREA

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FIGURE 10: ALTERNATIVE C - LOCATIONS OF WETLAND AND GOOSE MANAGEMENT TECHNIQUES, SOUTH AREA

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IMPLEMENTATION COST

The total cost of implementing alternative C includes both wetland and goose management techniques over the life of this plan/EIS. Estimates of these costs are included in the table below.

Alternative C Cost Estimate

#	Action	Assumptions	Implementation of Technique (one-time cost)*	Implementation of Technique (annual cost)	Cost for the 15-year Planning Period†
1	Vegetation monitoring and invasive plant species management	Same as alternative B	\$30,125 (first year only)	\$386,370 (labor + annual costs)	\$5,825,675
2	Population Monitoring	Same as alternative B	\$0	\$10,000	\$150,000
3	Hydrology techniques	Cost does not include design and permitting; some costs encompassed in salary of labor from #1 above	\$1,244,000	\$0	\$1,244,000
4	Vegetation techniques		\$1,474,392	\$26,630	\$1,873,842
5	Wetland restoration	No techniques proposed	\$0	\$0	\$0
6	Park Operations and Maintenance		\$268,820	\$9,970	\$418,370
7	Lethal Control**	Includes year 1 one costs only	\$12,408	Unknown	\$12,408
8	Habitat modification		\$890,181	\$0	\$890,181
9	Scare and harassment**	Includes year 1 one costs only	\$8,581	Unknown	\$8,581
10	Reproductive Control**	Includes year 1 one costs only	\$14,100	Unknown	\$14,100
11	Cultural/Educational	Some costs encompassed in salary of labor from #1 above	\$5,000 (signage)	N/A	\$5,000
TOTAL COST FOR ALTERNATIVE C					\$10,442,157‡

* Exact year of implementation unknown at this time; cost does not include maintenance or repair, if applicable.

** Includes cost for year 1 only; adaptive management will determine if technique will be required and to what extent in subsequent years.

† One-time cost + (annual cost*15 yrs)

‡ Total cost for 15 years assumes all proposed wetland and goose management techniques would be implemented during the life of the plan/EIS.

ALTERNATIVE D: LOW LEVEL OF WETLANDS MANAGEMENT WITH LOW GOOSE MANAGEMENT

This alternative combines less aggressive wetlands management options with lethal goose management option performed one time during the life of the plan.

This alternative combines less aggressive wetlands management options with a lethal goose management option performed one time during the plan/EIS and only if necessary. This offers the lowest management effort for both wetlands and resident geese.

WETLAND MANAGEMENT TECHNIQUES

Hydrology—Under alternative D, management techniques that could be implemented may include the removal of structures or obstacles that are resulting in severe erosion of the shoreline or wetland areas. The park could conduct yearly clean-ups for items such as logs and debris, which clog the openings of the marshes throughout the park. Alternative D would not include using erosion control techniques, creating tidal guts, enforcing wake zones, investigating extreme water level change, or altering water elevations as described in alternative B.

Vegetation—Under alternative D, the NCR-EPMT would continue to manage invasive species, but at a reduced level. If more money and staff become available, the NPS may manage invasive species including common reed and purple loosestrife at a minor level if needed. To allow natural seedbanks to regenerate the park could use only passive methods of regeneration. There would be no mechanical seedbank regeneration associated with this alternative. Locations for potential use of natural seedbank regeneration are shown on figures 11 through 13.

Restoration—There is no new wetland restoration efforts associated with alternative D. Conditions would continue to be similar to the no action alternative.

Cultural/Educational—There is no new cultural/educational efforts associated with alternative D.

Park Management and Operations—Alternative D would only include the installation of new rain gardens as discussed in “Techniques Common to All Action Alternatives” above. This alternative would not include trash management or reducing impervious areas as described in alternative B.

RESIDENT CANADA GOOSE MANAGEMENT TECHNIQUES

Lethal Control—Under alternative D, there would be no initial lethal resident Canada goose population reduction activities. If the other goose management techniques discussed below do not keep the goose population at the goose population goal, a one-time population reduction using lethal controls of 40 to 60 percent of the resident goose population would be performed during the life of the management plan but only if necessary. The lethal control technique during this one time reduction would include round-up, capture, and euthanasia; no shooting of resident Canada geese would occur under alternative D. If lethal control is needed, potential round-up locations are illustrated on figures 11 through 13.

Habitat Modification—Alternative D would be similar to alternative B and C because existing vegetative buffers would be widened and new vegetative buffers would be planted to act as barriers to the geese; however, buffers would be planted following areas and are shown on figures 11 through 13:

- West bank of the Kingman Marsh along the RFK stadium parking lots.
- Shoreline buffers along the fringe marshes (excluding Langston Golf Course)



FIGURE 11: ALTERNATIVE D - LOCATIONS OF WETLAND AND GOOSE MANAGEMENT TECHNIQUES, NORTH AREA

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FIGURE 12: ALTERNATIVE D - LOCATIONS OF WETLAND AND GOOSE MANAGEMENT TECHNIQUES, CENTRAL AREA

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