

SUMMARY

Supplemental Draft Environmental Impact Statement

on

SITING

OF

WASTEWATER

TREATMENT

FACILITIES

IN

BOSTON

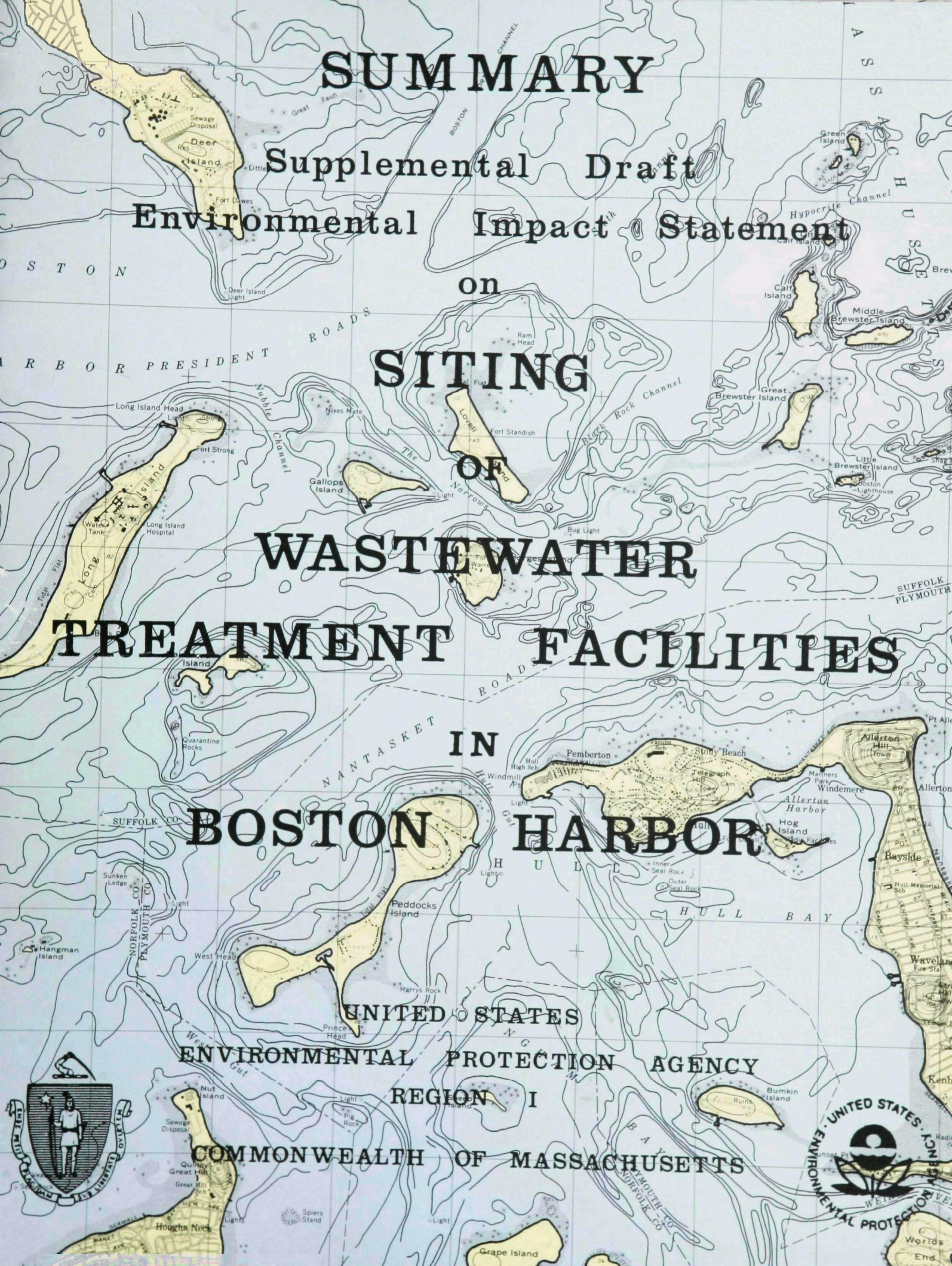
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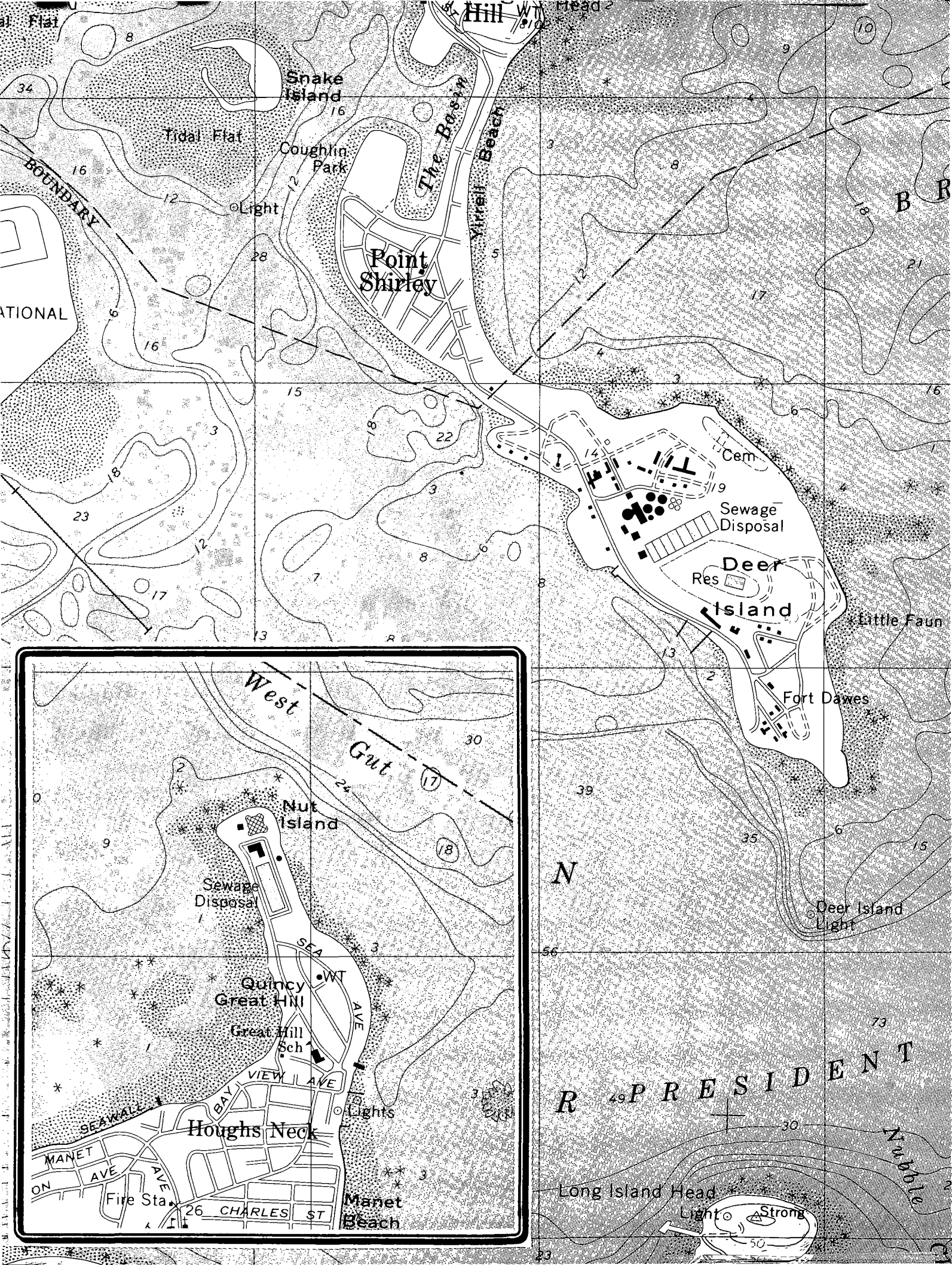
UNITED STATES

ENVIRONMENTAL PROTECTION AGENCY

REGION I

COMMONWEALTH OF MASSACHUSETTS





SUMMARY

Supplemental Draft Environmental Impact Statement on Siting of Wastewater Treatment Facilities in Boston Harbor

Prepared For
U.S. Environmental Protection Agency, Region I

Summary By
Thibault/Bubly Associates


SDEIS/EIR By
CE Maguire, Inc.

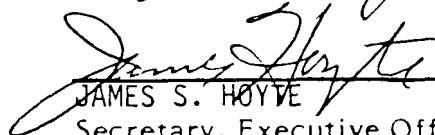
And Submitted By
Metropolitan District Commission

To
Massachusetts Executive Office of Environmental Affairs
As a
Draft Environmental Impact Report




MICHAEL R. DELAND
Regional Administrator,
U.S. EPA
Date 12/31/84


WILLIAM J. GEARY
Commissioner, Metropolitan
District Commission
Date 12/28/84


JAMES S. HOYTE
Secretary, Executive Office
of Environmental Affairs
Date 12/28/84

For Further Information:

Mr. Robert E. Mendoza
Water Management Division
U.S. EPA
JFK Federal Building
Boston, MA 02203
617-223-0841

Mr. John S. Hamm III
Principal Civil Engineer
Metropolitan District Commission
20 Somerset Street
Boston, MA 02108
617-727-8882

This Summary Supplemental Draft Environmental Impact Statement/Environmental Impact Report (SDEIS/EIR) is part of a process to identify and evaluate the environmental impacts of various site options for wastewater treatment facilities for treating Greater Boston's wastewater in compliance with federal and state pollution control laws. The U.S. Environmental Protection Agency (EPA) and the Commonwealth of Massachusetts will use the information developed in this process to select a site for treatment facilities that will be financed, in part, with federal and state construction grant funds. This Summary also appears in the detailed SDEIS/EIR.



GREAT BREWSTER ISLAND

The Setting

By any yardstick, Boston Harbor is one of New England's most valuable economic and recreational resources. Geologically, it is a partially submerged glacial landscape composed of the tops of a series of drumlins (steep oval hills) that rise out of the sea in a complex pattern of islands and channels, over an area of approximately 50 square miles. The drumlins themselves take a variety of shapes. Some are nearly entire, retaining their smooth oval forms, while others have been partially eroded, their shore lines cut back to create great earthen bluffs that tower abruptly upward from their shoreline beaches. Still others have been almost totally washed away, leaving behind only a core of hard, angular, granitic rocks.

Part of this landscape has survived through the years, essentially intact, unbuilt upon, still covered with wild vegetation, but most of it has been altered in one way or another by the hand of man. In some places, the drumlins are simply covered with a mosaic of streets and houses; while in others they have been significantly reshaped as the sites of great civil engineering projects, sometimes into interesting and beautiful forms, as in the many 19th century military fortifications, and sometimes into featureless plains, as at Logan Airport. Throughout, the harbor shows the influence of human activity, from the high-rise towers of downtown Boston to the thousands of one, two and three family houses that line the miles of shoreline, from the heavy industry of the Fore River to the small docks of its many fishermen and lobstermen, from the solitary landscapes of World's End to the crowded promenades of City Point and Castle Island.

Present uses of the harbor include the full range of urban activities, from manufacturing and shipping to housing and recreation. Its waters are used daily by a steady procession of tankers and container ships, an occasional cruise liner or warship, and, in season, thousands of lesser craft from sailboats to motor yachts and fishing boats of every size, purpose, and description. In the air above it there is a mixture of aircraft, coming and going, into and out of the airport, while below the surface, there is a profusion of sea life, in one area or another, that includes clams, lobsters, bluefish, striped bass, cod, haddock, mackerel, eels, and what is reputed to be the densest and most easily caught school of winter flounder in the world, all pursued by legions of fishermen, both commercial and recreational. And finally there is the weather, on clear days creating a multi-colored landscape of blue skies and waters, punctuated by ochre bluffs and green hills, and, in storms creating a black and white scene of dark grey skies and even darker grey waters, sometimes almost black, dotted with the foamy whiteness of the wind torn waves.

Overall, this mix of islands and sea, of buildings and vegetation, of commerce and recreation, of sky and water creates a landscape that is never without new interest, that is never without great beauty, and that is never without a variety of recreational opportunities for the literally millions of people who live within a few miles of its shores. Boston Harbor, both its islands and its waters, is an economic and esthetic resource whose present value and future potential to the surrounding region cannot be overestimated.

The Potential

Over the years, recognition of the extraordinary resources of Boston Harbor has caused much to happen. In the past, the individual cities and towns that front on the harbor, the Metropolitan District Commission, and the Commonwealth of Massachusetts all have undertaken a variety of planning and development programs to utilize the harbor's resources more effectively. Parts of the waterfront were transformed economically, with more efficient transportation systems, high-rise residential developments, office complexes, restaurants, the aquarium, and other marine facilities. Other areas have seen a steady growth of recreation, starting with the older parks (Carson and Wollaston Beaches, City Point, Castle Island, etc.) and adding a growing list of new sites (Fort Warren, Lovells, Gallops and Peddocks Islands, the old Boston Navy Yard, etc.).

For the future, the prospects are for more economic growth and more recreational use of the water. Both kinds of use are called for in the plans of the surrounding municipalities and the State. The economic plans include continued expansion of transportation facilities as well as continued improvements to other waterfront developments. The recreation plans include continued development of the Harbor Islands State Park, more public access to the shoreline, and expansion of public boat services, including commuter boats, shuttles to the island parks, and sightseeing craft.

The Problem

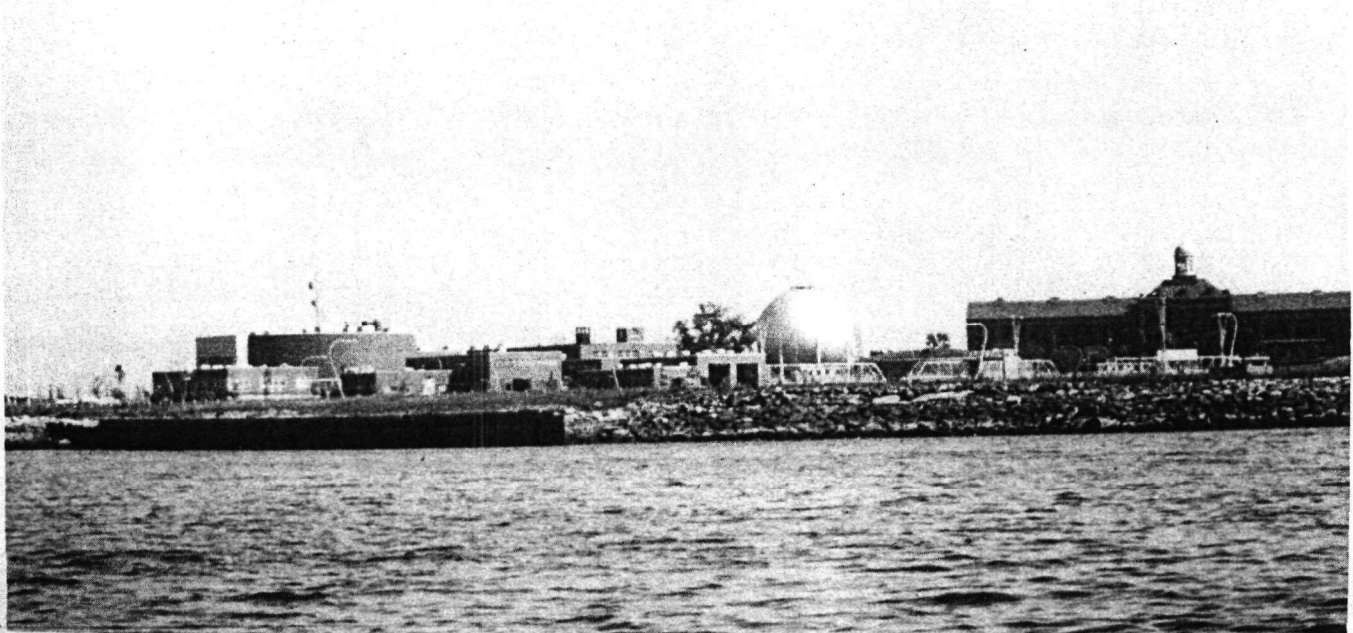
Unfortunately, despite the manifestly great economic and esthetic value of the harbor to the future of Metropolitan Boston, the harbor's water quality leaves much to be desired. The waters are murky, streaked here and there with floating wastes, and contaminated with both domestic and industrial pollutants, all in violation of both state and federal law.

The harbor is affected by overflowing sewage collection systems, by runoff from urban storm drains, and by treatment plants that are aged, worn and inadequately maintained. The enjoyment of swimming, fishing and boating are all appreciably lessened by the quality of the water, its appearance, odor and feel, and by public health concerns.

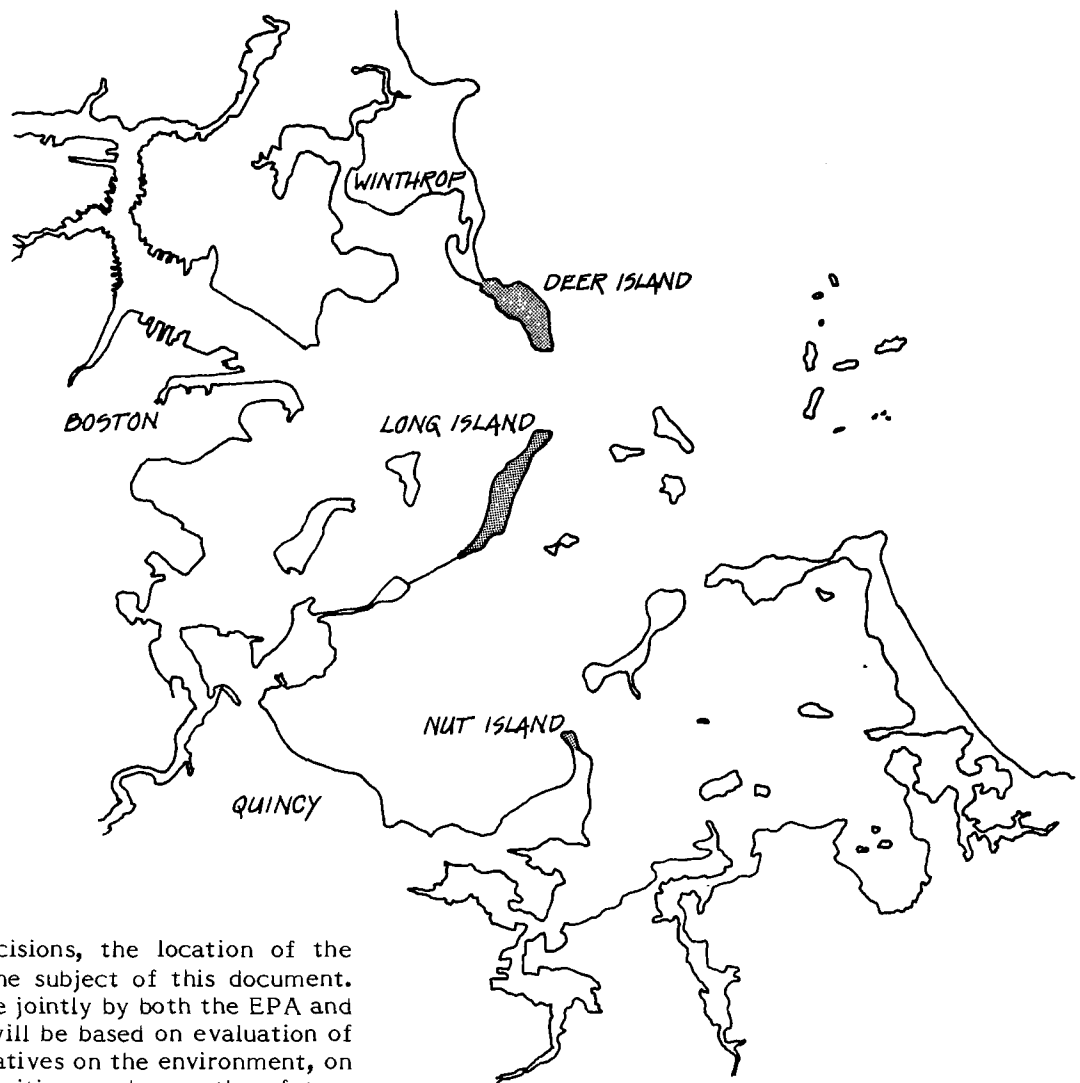
To overcome these problems, much can and must be done. The existing deficiencies in the sewer systems that allow overflows into in-shore waters can and must be eliminated and the sewage treatment plants can and must be upgraded to comply with applicable state and federal law.

It is the goal of both EPA and the Commonwealth of Massachusetts to move forward with these improvements as soon as possible. Correction of some of the in-shore collection system overflows, along with immediate improvement of the wastewater treatment facilities, is already in process, but for the long term, two fundamental decisions must still be made, i.e. selection of the level of treatment to be provided and the location of the treatment facilities.

The first of these decisions, the level of treatment, will be determined this spring through technical and scientific evaluation of the effects of primary effluent discharge on water quality. This decision will be made by EPA in consultation with the Commonwealth's environmental agencies through a separate decision making process called a "301(h) waiver application" (after section 301(h) of the Clean Water Act). These alternatives for Boston harbor are "primary treatment" (a physical process which removes about half of the suspended and organic materials from the wastewater), coupled with a nine mile, deepwater outfall, and "secondary treatment" (a biochemical/physical process which removes 85% to 90% of the suspended and organic materials), with a shorter outfall located to the east of Deer Island Light.



DEER ISLAND TREATMENT PLANT



The second of these decisions, the location of the treatment facilities, is the subject of this document. This decision will be made jointly by both the EPA and the Commonwealth and will be based on evaluation of the impacts of the alternatives on the environment, on the surrounding communities and on the future optimum use of Boston Harbor as a whole. These impacts are the subject of this Supplemental Draft Environmental Impact Statement (SDEIS) and the Environmental Impact Report (EIR) for Facilities Siting on Boston Harbor.

Studies so far have narrowed that locational choice from 22 alternative sets to 7, 3 in the event that primary treatment is selected and 4 if secondary is selected. Each of these alternatives, the seven under active consideration, is described briefly in this Summary. Chapters 2 and 4 of the Supplemental Draft Environmental Impact Statement/Environmental Impact Report describe them in greater detail and include an eighth alternative, All Primary Long Island, as well. The screening processes that reduced the number of alternatives from 22 to 7 are described in Chapter 2.

None of the descriptions in this Summary, or in chapters 2 and 4, include the impacts of the processing, storage or disposal of sludges and other solid wastes that are expected to be generated by the wastewater treatment processes. These impacts could be significant by themselves, but the decision on siting of the wastewater treatment facilities is not being driven by a choice of sludge options, since none of the wastewater treatment facility options would foreclose any sludge management solution. The impacts of sludge disposal will be defined in a separate study and described in a separate Environmental Impact Statement in the near future, not in this document.

Mitigation Measures

Each alternative will include a significant and costly set of mitigating actions to preclude or minimize the adverse environmental impacts of the construction and operation of the treatment facilities.

These mitigating actions are firm commitments by the Commonwealth and EPA to the affected communities and will be made a condition of federal and state grants to the project. They are included because the Commonwealth and EPA concluded that all of the alternatives would otherwise have a severe environmental impact, particularly with regard to traffic and noise. Their average cost has been estimated to be on the order of \$45 million, over and above the cost estimates given in the descriptions of the individual alternatives. The mitigation measures include:

1. Use of buses and barges to the maximum feasible extent for the transportation of construction workers, heavy construction materials and equipment to and from the site of the wastewater treatment facilities to minimize traffic on nearby residential streets.
2. Use of all practical noise and odor suppression equipment and practices to minimize noise and odor generation both during construction and afterwards.

Scope of This Summary

Each alternative, and its major, distinguishing environmental impacts, are described on the following pages. It is important to note that the text of this summary does not attempt to describe all the anticipated impacts, but, rather, it describes only those impacts which are relevant to the choice of a wastewater treatment plant site.

Tables 1 and 2 at the end of this summary do display both these major distinguishing impacts and other anticipated impacts of each alternative.

And, finally, note that all three of the primary alternatives and three of the four secondary alternatives will require the location of a substantial wastewater treatment plant on Deer Island. While extensive mitigation will be required and the long term effects on neighbors of plant operation will be less severe than the effects of the current Deer Island facility, there remains concern about locating a major regional facility adjacent to a community that is now subject to the effects of the Deer Island House of Correction and major flight paths to Logan Airport. This issue, often described as one of fairness, is difficult to quantify, but must be considered nonetheless. This concern may be particularly relevant to the All Primary Deer Island and the All Secondary Deer Island alternatives.

Alternatives

In all, seven alternative sets of locations are under active consideration. Three are intended to meet primary treatment standards and four are intended to meet secondary treatment standards.

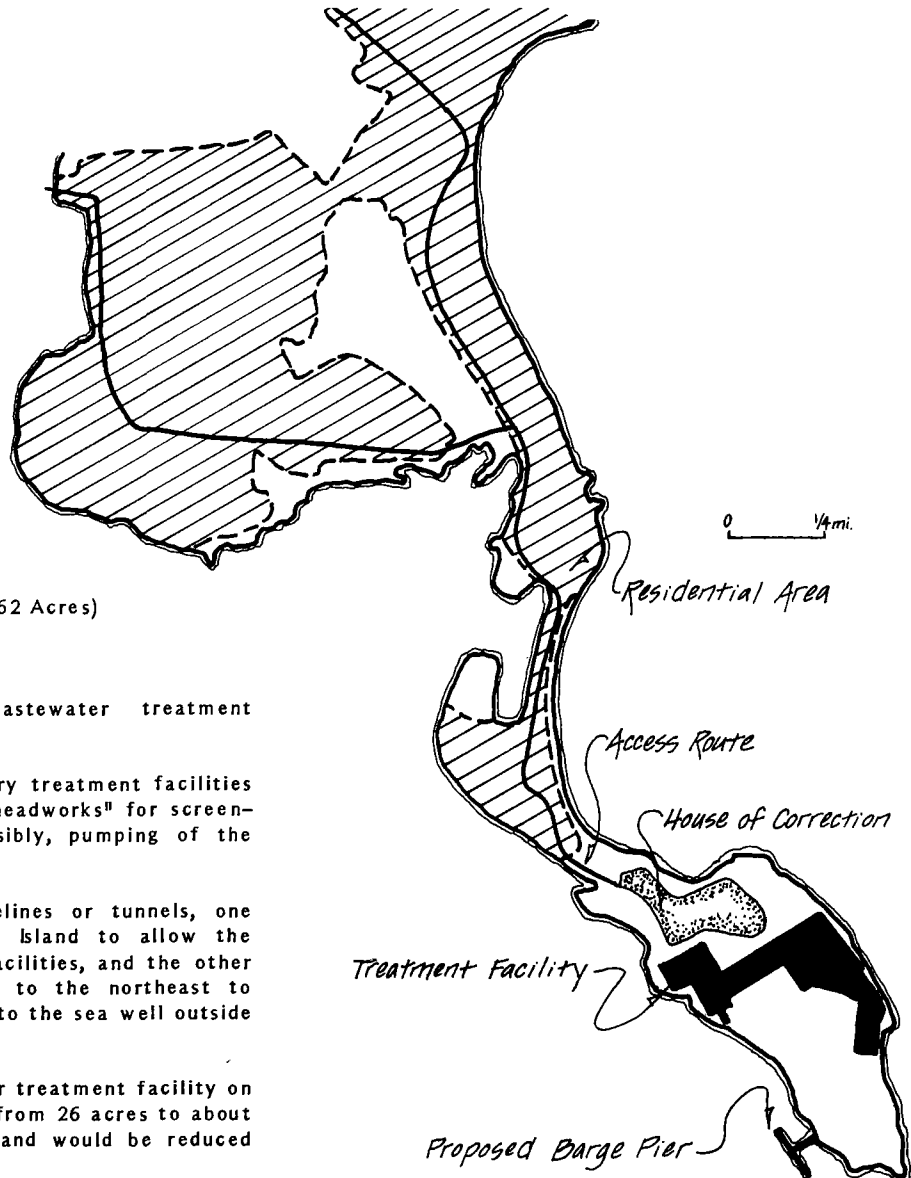
In general, treatment facilities designed to meet primary standards are smaller in area (up to 62 acres for a new consolidated plant), while those designed to meet secondary standards are larger in area (up to 115 acres for a consolidated plant) and are more complex to operate.

PRIMARY TREATMENT ALTERNATIVES

The three alternatives that are under active consideration to meet primary effluent standards, should such discharge be allowed, include:

1. All Primary Deer Island: Consolidation of all treatment facilities at Deer Island.
2. Split Primary Deer Island and Nut Island: Retaining and expanding the existing facilities at both Deer Island and Nut Island.
3. Split Primary Deer Island and Long Island: Retaining and expanding the existing facility at Deer Island but relocating the Nut Island facility to Long Island.

PRIMARY TREATMENT ALTERNATIVES



ALL PRIMARY DEER ISLAND (62 Acres)

This alternative would:

1. Expand the existing wastewater treatment facility at Deer Island.
2. Reduce the existing primary treatment facilities at Nut Island to a small "headworks" for screening, chlorination and, possibly, pumping of the wastewater.
3. Construct two major pipelines or tunnels, one from Nut Island to Deer Island to allow the consolidation of the two facilities, and the other from Deer Island 9 miles to the northeast to discharge treated effluent to the sea well outside the harbor.

AREA: The existing wastewater treatment facility on Deer Island would be increased from 26 acres to about 62 acres while that on Nut Island would be reduced from 12 acres to about 2 acres.

COST: The overall construction cost of this alternative would be about \$752 million (1984 dollars) and its annual cost of operation and maintenance would be about \$21 million.

IMPACT: Based on the extensive and detailed evaluations of all the impacts, as described in detail in the SDEIS/EIR, none of the environmental impacts of this alternative, with the required set of mitigating actions, are expected to be severe or significant. At Point Shirley, the nearest neighborhood in Winthrop, nearly one half mile away from the plant, it is expected that traffic and traffic noise will increase somewhat during the 5 to 6 years of construction, but that the increase will have slight impact. Construction traffic is not expected to exceed 20 trucks and buses each day.

With respect to Deer Island, this alternative is not expected to have any severe environmental effects since the plant will not alter the appearance of the island, the island is ample in size, and most of the land to be used is otherwise unused or committed. The expansion is not expected to preclude the use of substantial portions of Deer Island for other purposes including, possibly, recreation.

This alternative will have no significant adverse impact on Nut Island. It will preserve Long Island for major recreational use, a priority for the Harbor Islands State Park.

PRIMARY TREATMENT ALTERNATIVES

SPLIT PRIMARY DEER ISLAND (52 Acres) AND NUT ISLAND (18 Acres)

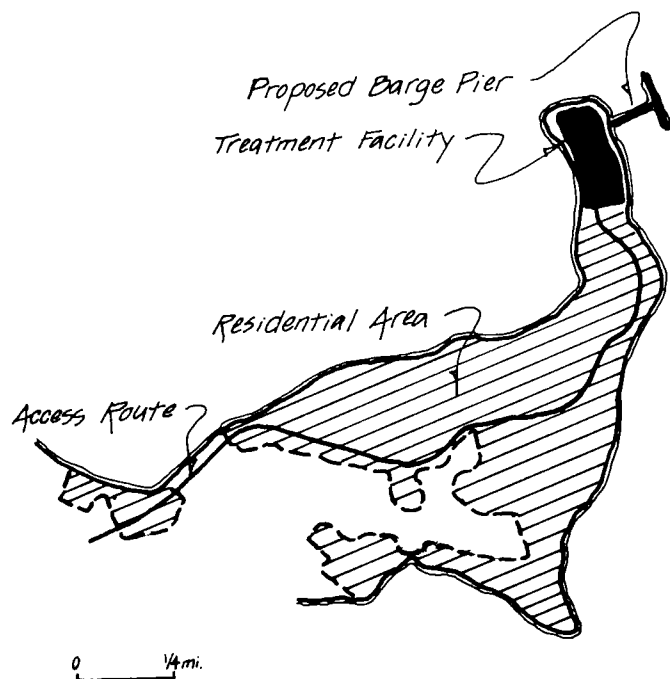
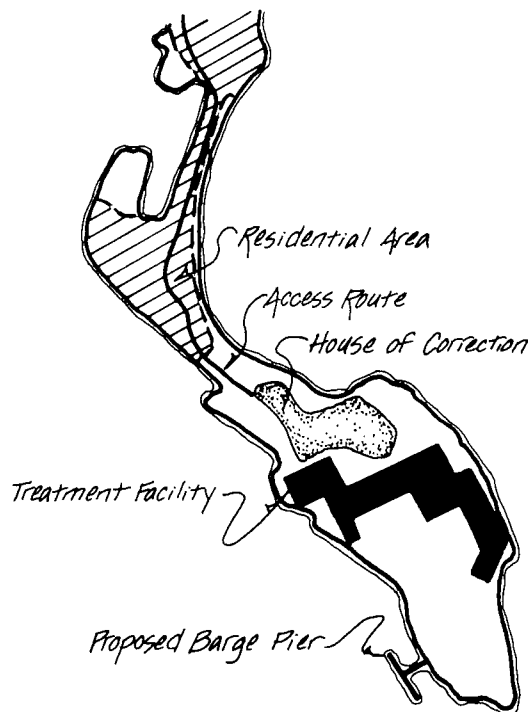
This alternative would:

1. Expand the existing wastewater treatment facilities at both Deer Island and Nut Island.
2. Construct new outfall pipelines or tunnels from Nut Island to Deer Island and from Deer Island 9 miles to the northeast to discharge the treated effluent to the sea well outside the harbor.

AREA: The existing wastewater treatment facilities on Deer Island, now about 26 acres in extent, would be increased to about 52 acres while those on Nut Island, now about 12 acres in extent, would be increased to about 18 acres.

COST: The overall construction cost of this alternative would be about \$810 million and its annual cost of operation and maintenance would be about \$22 million.

IMPACT: On Deer Island, the effects of this alternative would be virtually identical to those of the preceding alternative, the All Primary Deer Island.

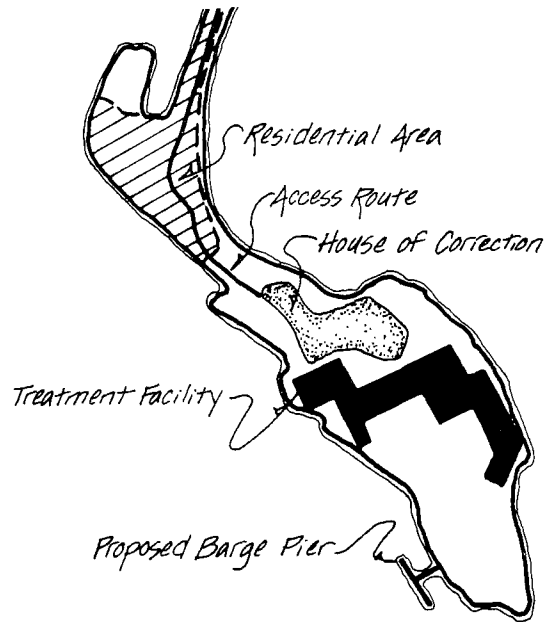


On Nut Island, however, since the site is closely limited by both adjoining houses and the sea, this alternative would generate severe environmental effects. The expansion of the plant would expose the immediately adjacent neighborhood on Quincy Great Hill, during the construction period, to five years of noise and mess, and, thereafter, to the sight and infrequent smells of an even larger sewage treatment plant than now exists. In any event, to maintain a buffer zone, it will be necessary either:

- a. to fill up to 3 acres of Hingham Bay, or
- b. to relocate the small number of families immediately adjoining the site.

This alternative will have no impacts on Long Island and will preserve it for future recreational use.

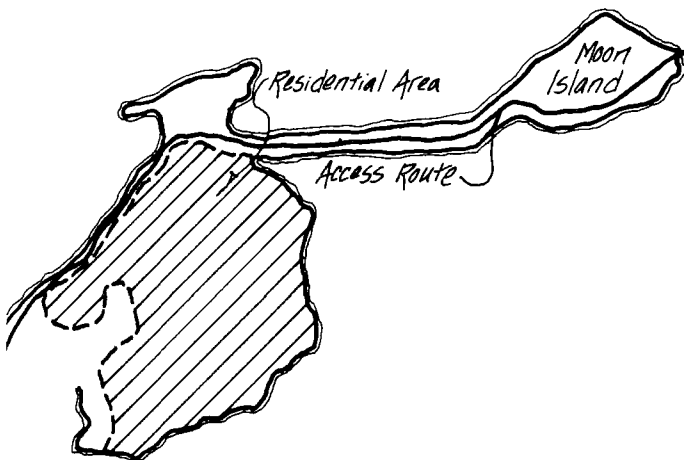
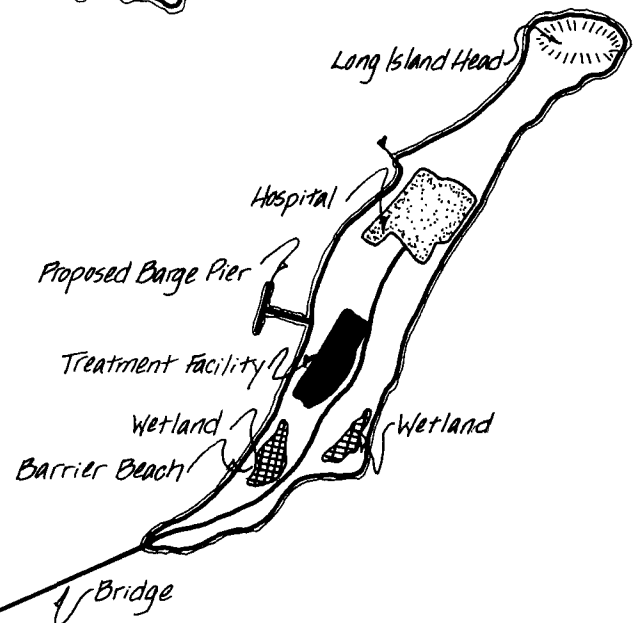
PRIMARY TREATMENT ALTERNATIVES



SPLIT PRIMARY DEER ISLAND (52 Acres) AND LONG ISLAND (18 Acres)

This alternative would:

1. Expand the existing wastewater treatment facility at Deer Island.
2. Reduce the existing primary treatment facilities at Nut Island to a small headworks.
3. Construct a new treatment plant on Long Island to replace the Nut Island facility.
4. Construct a series of major new pipelines or tunnels, one to connect the Nut Island headworks to Long Island, a second to combine the effluent discharges of the proposed Long Island facility to Deer Island, and a third from Deer Island 9 miles to the northeast to discharge treated effluent to the sea, well outside the harbor.



AREA: The existing facility on Deer Island would be increased from 26 acres to about 52 acres; the new facility on Long Island would require about 18 acres, and the Nut Island facility would be reduced from 12 acres to about 2 acres.

COST: The overall construction cost of this alternative would be about \$816 and its annual cost of operation and maintenance would be about \$24 million.

IMPACT: On Deer Island, the effects of this alternative would be virtually identical to those of the All Primary Deer Island alternative.

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On Long Island, this alternative would utilize a former Nike missile site and an additional 6 acres of adjacent open land. In addition, it:

- a. Would generate noise which would have occasional, moderate impacts on patients at the City of Boston's Chronic Disease Hospital, about 1300 feet away, during construction and expose the hospital, and its patients, to infrequent odors thereafter.
- b. Would generate moderate impacts to recreational development plans for the island, because it would preclude use of a small part of the area proposed for passive uses.
- c. Might have an adverse impact on the appearance of the island from proposed recreation areas and from off-island vantage points.
- d. Might have an adverse impact on cultural resources on the island.

And, finally, this alternative would require land transfer from the City of Boston, approval of land transfer and construction by the Department of Environmental Management and, perhaps, approval of land transfer by the legislature. It might also require review by the United States Advisory Council on Historic Preservation and the Massachusetts Historical Commission. These procedures constitute hurdles to the implementation of this alternative.

This alternative would have no significant adverse impact on Nut Island.

SECONDARY TREATMENT ALTERNATIVES

The four alternatives that are under active consideration to meet secondary treatment standards include:

1. All Secondary Deer Island:
Consolidation of all treatment facilities at Deer Island.
2. Split Secondary Deer Island and Nut Island: Consolidation of all treatment facilities at Deer Island except for primary treatment to be retained and expanded at Nut Island.
3. All Secondary Long Island:
Relocation of all treatment facilities to Long Island.
4. Split Secondary Deer Island and Long Island: Relocation of all treatment facilities to Long Island except for retention of primary treatment at Deer Island.

SECONDARY TREATMENT ALTERNATIVES

ALL SECONDARY DEER ISLAND (115 Acres)

This alternative would:

1. Expand the existing primary wastewater treatment facility at Deer Island to a secondary treatment plant.
2. Reduce the existing primary treatment facilities at Nut Island to a small headworks.
3. Construct a major new pipeline or tunnel from Nut Island to Deer Island to allow the consolidation of the two facilities.
4. Construct a new local outfall to the east of Deer Island Light.

AREA: The existing wastewater treatment facility on Deer Island would be increased from 26 acres to about 115 acres while that on Nut Island would be reduced from 12 acres to about 2 acres.

COST: The overall construction cost of this alternative would be about \$595 million and its annual cost of operation and maintenance would be about \$44 million.

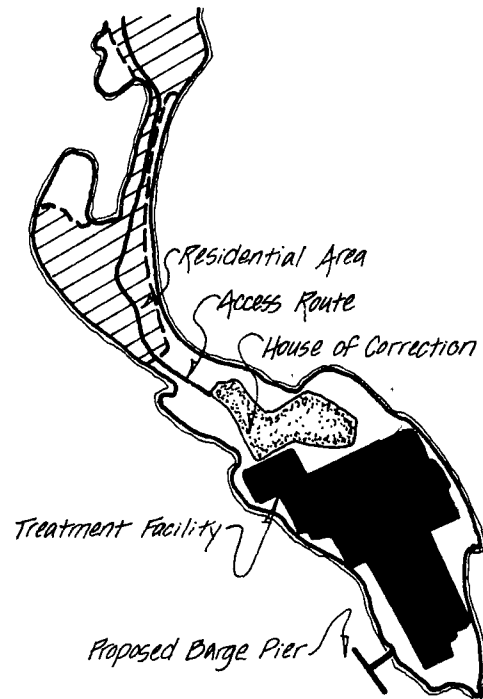
IMPACT: This alternative would commit almost all the land on the island south of the prison to wastewater treatment and level almost all the topographic features of the island.

At Point Shirley, it will increase traffic and traffic noise during the 7 years of construction by about 21 trucks and buses each day. This would have slight impact. However, at the peak periods, 6 months to a year, it would increase by up to 34 trucks and buses each day, a moderate but manageable impact.

On the island itself, this alternative will cause:

1. Permanent preclusion of public access to a number of potential recreational resources including Signal Hill (the Deer Island drumlin), with its panoramic views of the whole range of the harbor islands, and the southern end of the island, with its potential access to the water for shoreline fishing. It should be noted that recreational use of this land, though suggested in prior plans, is not a current priority for the Commonwealth, so that this would only be a moderate impact.
2. Destruction of Signal Hill, the visual landmark that defines the northeastern limit of the harbor, and that is an important component of the views of the harbor from significant vantage points. It is judged to be a severe impact.

This alternative will have no significant adverse impact on Nut Island. It will preserve Long Island for major recreational use, a priority for the Harbor Islands State Park.



SECONDARY TREATMENT ALTERNATIVES

SPLIT SECONDARY DEER ISLAND (115 Acres) AND NUT ISLAND (18 Acres)

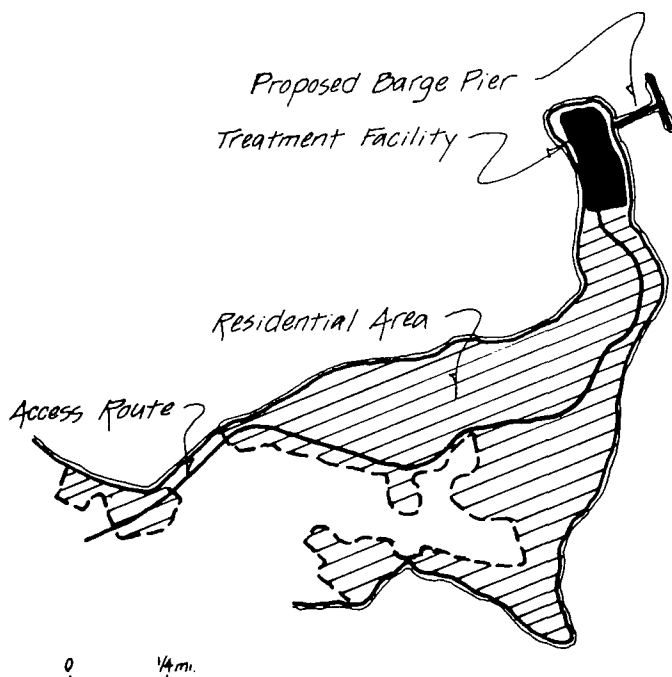
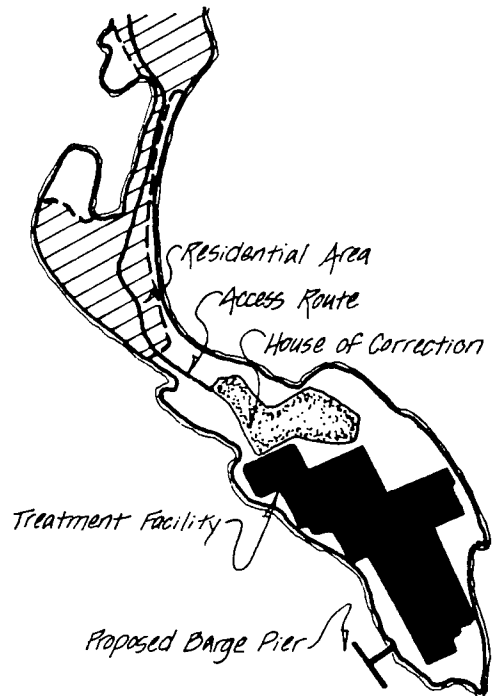
This alternative would:

1. Expand the Deer Island treatment facility to provide secondary treatment for all flows.
2. Expand the Nut Island treatment facility to provide primary treatment.
3. Construct a new pipeline or tunnel from Nut Island to Deer Island to allow pumping of Nut Island primary effluent to Deer Island for secondary treatment.
4. Construct a new local outfall to the east of Deer Island Light.

AREA: The existing facility on Deer Island would be increased from 26 acres to about 115 acres while those on Nut Island, now about 12 acres in extent, would be increased to about 18 acres.

COST: The overall construction cost of this alternative would be about \$650 million and its annual cost of operation and maintenance would be about \$45 million.

IMPACT: On Deer Island its significant impacts would be virtually identical to those of the preceding alternative, namely slight to moderate traffic impacts at Point Shirley and moderate loss of recreational potential and severe loss of visual quality at Deer Island.



On Nut Island, however, since the site is closely limited by both adjoining houses and the sea, this alternative would generate severe environmental effects. The expansion of the plant would expose the immediately adjacent neighborhood on Quincy Great Hill, during the construction period, to five years of noise and mess, and, thereafter, to the sight and infrequent smells of an even larger sewage treatment plant than now exists. In any event, to maintain a buffer zone, it will be necessary either:

- a. to fill up to 3 acres of Hingham Bay, or
- b. to relocate the small number of families immediately adjoining the site.

This alternative will have no impacts on Long Island and will preserve it for future recreational use.

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SECONDARY TREATMENT ALTERNATIVES

ALL SECONDARY LONG ISLAND (96 Acres)

This alternative would:

1. Construct a wholly new, consolidated secondary treatment facility on Long Island.
2. Reduce the existing primary treatment facilities at Deer Island and Nut Island to smaller head-works.
3. Construct major new pipelines or tunnels from both Nut and Deer Islands to Long Island to allow the consolidation of the facilities.
4. Construct a new local outfall to the east of Deer Island Light.

AREA: The new Long Island treatment facility would require about 96 acres of land, while the Deer Island and Nut Island facilities would be reduced from 26 and 12 acres respectively to 5 and 2 acres.

COST: The overall construction cost of this alternative would be about \$705 million and its annual cost of operation and maintenance would be about \$45 million.

IMPACT: The sheer size of this alternative would require the removal and relocation of the City of Boston's Chronic Disease Hospital from the island. It would have a severe impact on the proposed recreational development plans of the City and Department of Environmental Management for the island. It would occupy all of the central upland, precluding the island's development as a large, diversified recreation area.

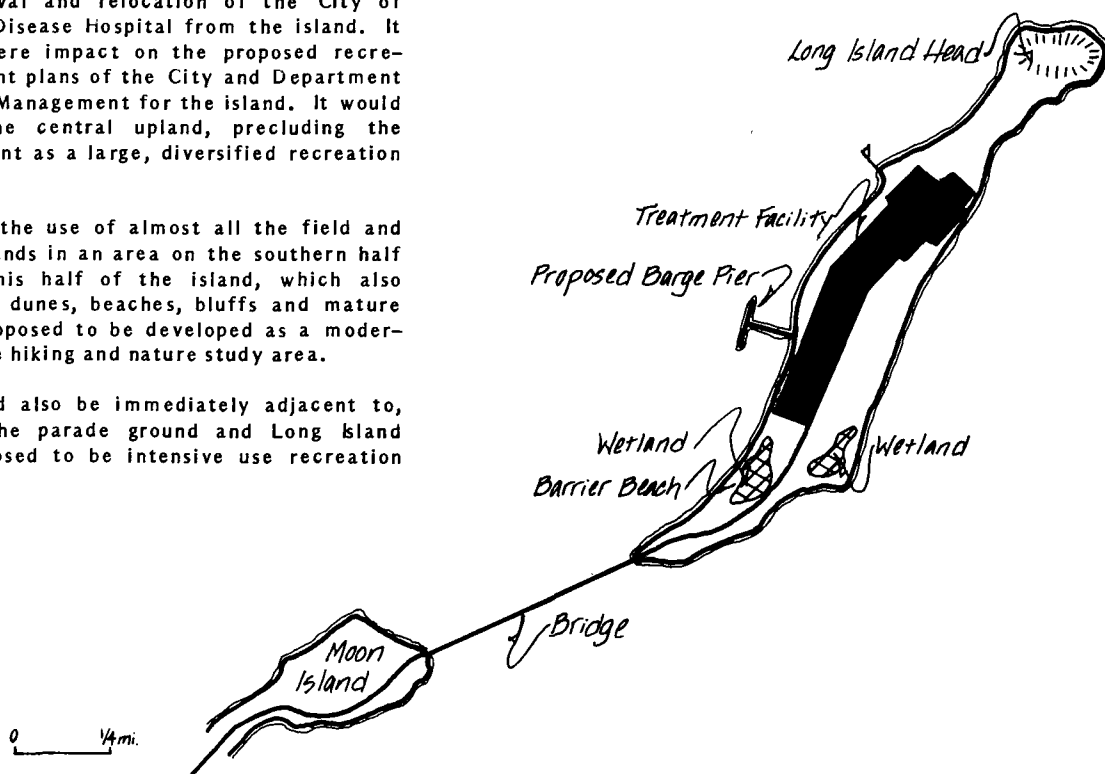
It would preempt the use of almost all the field and shrub covered uplands in an area on the southern half of the island. This half of the island, which also includes wetlands, dunes, beaches, bluffs and mature pine groves, is proposed to be developed as a moderately-intensive-use hiking and nature study area.

The facility would also be immediately adjacent to, and upwind of, the parade ground and Long Island Head, areas proposed to be intensive use recreation areas.

In addition, it would change the appearance of the island from both on-island and off-island vantage points and would have a severe impact on archeological and, possibly, other cultural resources on the island.

In addition, it should be noted that this alternative would require land transfer from the City of Boston, approval of land transfer and construction by the Department of Environmental Management, and approval of land transfer by the legislature. It would also require review by the United States Advisory Council on Historic Preservation and the Massachusetts Historical Commission. These procedures could significantly delay, or even impair, the implementation of this alternative.

This alternative will have no significant adverse impact on Nut Island. It is expected to release almost all of Deer Island for other purposes including, possibly, recreation.



SECONDARY TREATMENT ALTERNATIVES

SPLIT SECONDARY DEER ISLAND (52 Acres) AND LONG ISLAND (82 Acres)

This alternative would:

1. Expand the existing Deer Island treatment facility for primary treatment only.
2. Construct a new treatment facility to provide secondary treatment for all flows on Long Island.
3. Reduce the existing primary treatment facility at Nut Island to a small headworks.
4. Construct new pipelines or tunnels from both Deer and Nut Islands to Long Island to allow the consolidation of the facilities.
5. Construct a new local outfall to the east of Deer Island Light.

AREA: The new Long Island treatment facility would require about 82 acres of land; the Deer Island facility would be increased from 26 acres to about 52 acres, and the Nut Island facility would be reduced from 12 acres to about 2 acres.

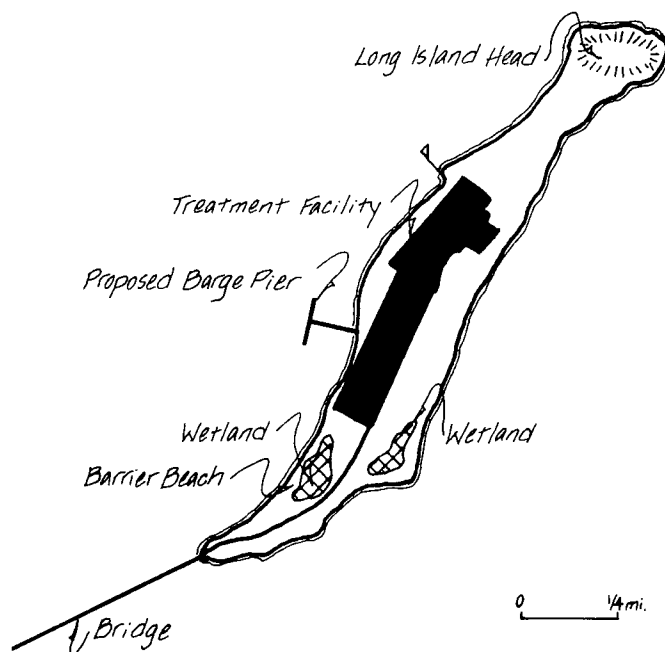
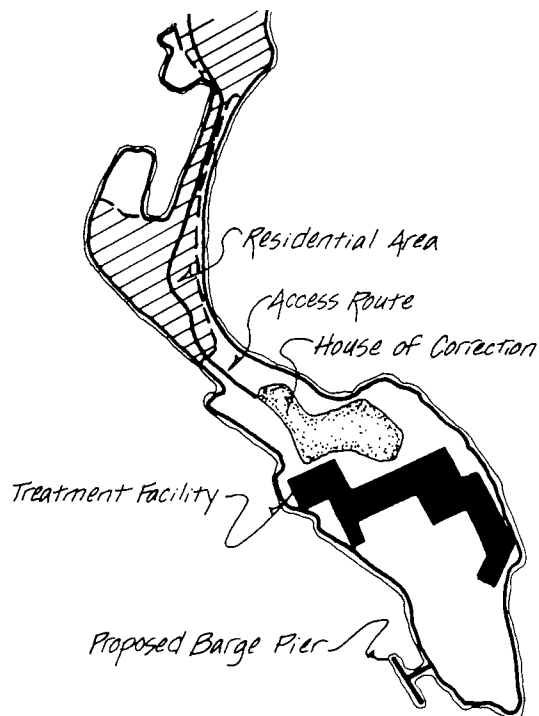
COST: The overall construction cost of this alternative would be about \$738 million and its annual cost of operation and maintenance would be about \$53 million.

IMPACT: At Long Island, the effects of this alternative are virtually identical to those of the preceding alternative. It would occupy the central uplands, require relocation of the Chronic Disease Hospital, preclude development of the proposed hiking and nature study area to the south, severely impact on proposed intensive use areas at Long Island Head, and suffer from severe institutional constraints to implementation.

Elsewhere, based on the extensive and detailed evaluations of all the impacts, as described in detail in the SDEIS/EIR, none of the environmental impacts of this alternative, with the required set of mitigating actions, are expected to be severe or significant. At Point Shirley, the nearest neighborhood in Winthrop, nearly one half mile away from the plant, it is expected that traffic and traffic noise will increase somewhat during construction, but that the increase will have slight impact. Construction traffic is not expected to exceed 15 trucks and buses each day.

With respect to Deer Island, this alternative is not expected to have any severe environmental effects since the plant will not alter the appearance of the island, the island is ample in size, and most of the land to be used is otherwise unused or committed. The expansion will leave substantial portions of Deer Island for other purposes including, possibly, recreation.

This alternative will have no significant adverse impact on Nut Island.



Public Consultation on Selection of the Final Plan

Selection of the location(s) of the treatment facilities will be made in the very near future. It will be a joint decision of EPA and the Commonwealth of Massachusetts. Six decision criteria have been identified. Each alternative will be evaluated to determine the extent to which it:

1. is consistent with and, if possible, promotes the fulfillment of the promise of Boston Harbor.
2. can be implemented in a timely and predictable manner.
3. minimizes the adverse impacts of the facility on neighbors, taking into consideration existing conditions, facility siting impacts and mitigation measures.
4. minimizes the impacts of the facilities on natural and cultural resources.
5. can be built and operated at a reasonable cost.
6. maximizes the reliability of the entire treatment system.

Public comment is sought on the adequacy and accuracy of all the material contained in this SDEIS/EIR including the decision making process. Are the decision criteria adequate? How should the alternatives be rated against the decision criteria? Which decision criteria are the most important?

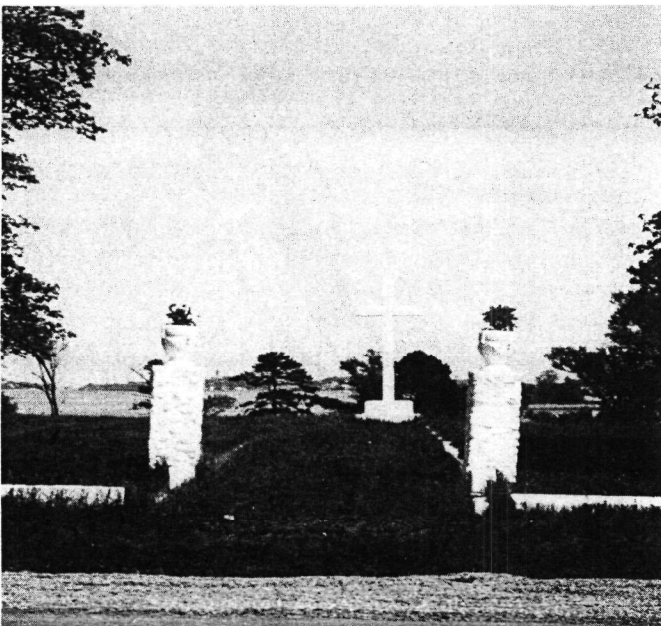
In addition, it should be noted that any of the seven options will have some impacts on some neighbors. Some options locate most impacts on one site to the benefit of other sites. Other options spread impacts among various sites. We seek public comment on how the EPA and the Commonwealth should judge the combined consequences of each option.

Finally, please keep in mind that the facility location that is ultimately selected may be one that impacts your neighborhood adversely. If this were to happen, what design modifications or environmental mitigations (trade-offs) would you like to see to minimize or offset these adverse impacts?

Remember that this site selection decision is critical and must be made.

Copies of the entire SDEIS/EIR are available at the Boston Public Library (Documents Department), the Quincy Center Library, the Winthrop Public Library, the Wellesley Free Library and from EPA. The EPA and the Commonwealth will advertise the time and locations of public information meetings and public hearings. All comments on the SDEIS/EIR will be considered in the selection of the final plan.

For further information, please note the respective agency contacts on the title sheet of this document. All written comments should be submitted to Mr. Michael R. Deland, Regional Administrator for the EPA at the JFK Federal Building, Boston, MA 02203 or to Mr. James S. Hoyte, Secretary, Executive Office of Environmental Affairs, 100 Cambridge Street, Boston, MA 02202.



LONG ISLAND CEMETERY



CASTLE ISLAND FISHING PIER

TABLE 1. IMPACTS OF PRIMARY TREATMENT ALTERNATIVES

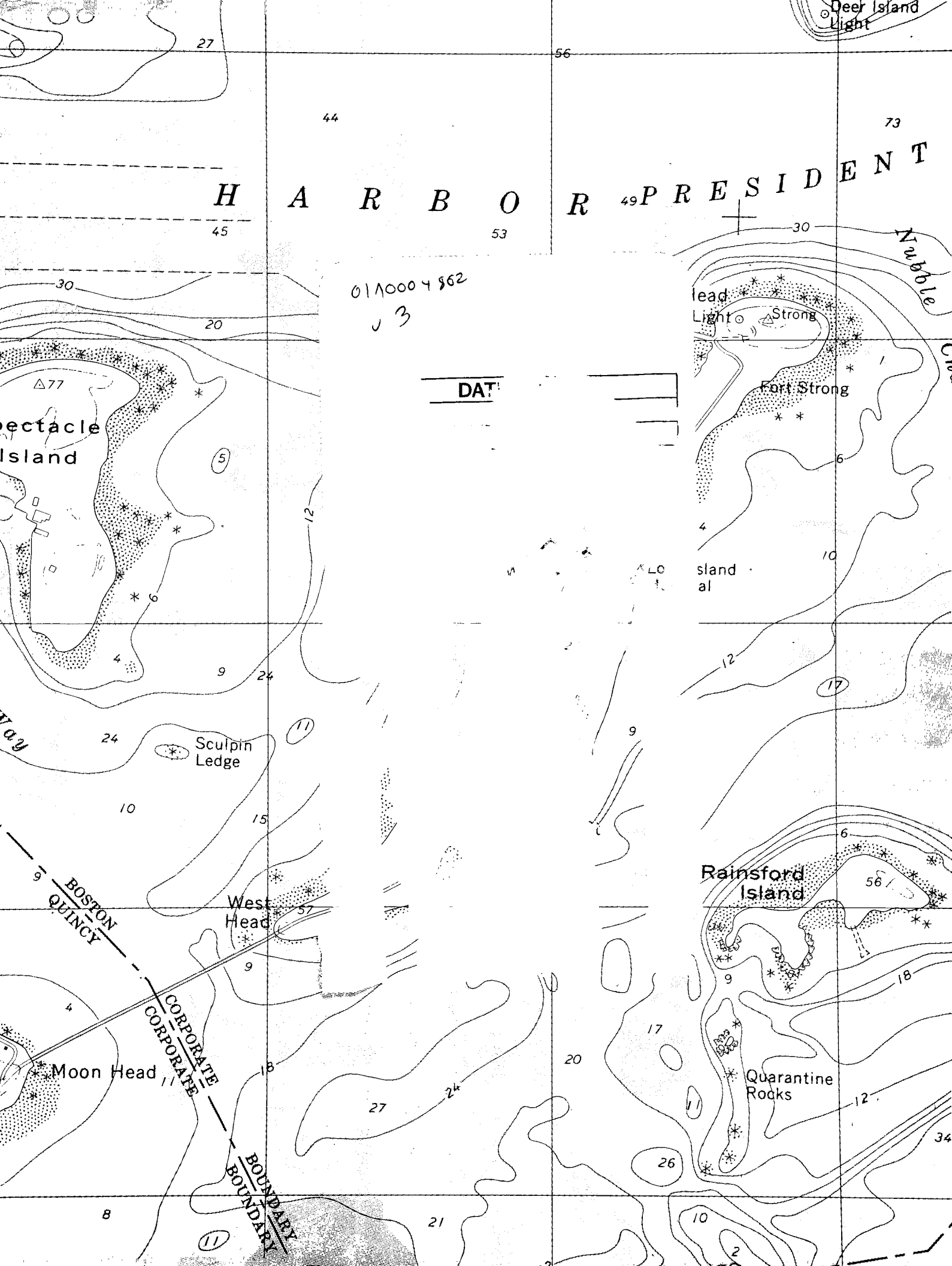
IMPACT CATEGORIES	1. ALL DEER ISLAND (4a.2)		2. SPLIT DEER ISLAND AND NUT ISLAND (4b.2)		3. SPLIT DEER ISLAND AND LONG ISLAND (5a.2)		
	D.I. (62A)	N.I. (2A)	D.I. (52A)	N.I. (18A)	D.I. (5A)	N.I. (2A)	L.I. (18A)
*Years Constr.	5-6 years	3-4 years	5-6 years	5 years	5-6 years	3-4 years	6 years
*Daily Construction Traffic							
*Avg. Trucks (w/barging)	7 - slight	8 - slight	6 - slight	4 - slight	6 - slight	8 - slight	4 - slight
Avg./Peak Buses	12/13 - slight	2/2 - slight	6/10 - slight	2/3 - slight	6/9 - slight	2/2 - slight	4/5 - slight
Avg./Peak Constr. Workers *(6-12 mo. duration)	590/655	55/70	305/465	95/125	285/430	65/75	190/245
*Constr. Noise Levels dBA (mitigated)	Homes 46-56 Prison 66-78 slight moder.	72-84 moderate	Homes 46-58 Prison 66-78 slight moder.	72-84 moderate	Homes 46-58 Prison 66-78 slight moder.	72-84 moderate	Park 42-54 Hospital 48-60 slight moder.
*Property Values	Decline & rebound	Decline & rebound	Decline & rebound	Decline, may not rebound fully	Decline & rebound	Decline & rebound	Decline & rebound
*Infrequent Odor Problems (operations)	Homes 46-56 Prison 66-78 moder. moder.	Moderate	Homes 46-58 Prison 66-78 moder. moder.	Moderate	Homes 46-58 Prison 66-78 moder. moder.	Moderate	Park 42-54 Hospital 48-60 slight moder.
*Visual Impacts (operations)	Moderate	Slight	Moderate	Severe	Moderate	Slight	Moderate
*Total Ops. Staff/Max. Daily Shift	136/60	20/8	118/53	83/37	118/53	20/8	63/28
ENVIRONMENTALLY SENSITIVE AREAS	None exist	None exist	None exist	None exist on site; bay fill- ing impacts	None exist	None exist	Adjacent wet- lands & bar- rier beach; no direct effect
PROJECT COST ¹							
*Capital (million \$)	752		810		816		
*Annual							
*O & M (million \$)	21		22		24		
*Annualized (million \$)	101		108		111		
*Household User (\$)	74		78		81		
LEGAL AND INSTITUTIONAL OBSTACLES TO IMPLEMENTATION	Moderate: pos- sible legisla- tive approval	None	Moderate: pos- sible legisla- tive approval	Severe if leg- islative ap- proval for filling or, alternatively, demolition of nearby homes to create buf- fer is limited obstacle	Moderate: pos- sible legisla- tive approval	None	Moderate: DEM approval, pos- sible legisla- tive approval or "Section 106" review, City of Boston ownership
CULTURAL RESOURCES	None impacted	None exist	None impacted	None exist	None impacted	None exist	Moderate: pos- sible signifi- cant archaeo- logical & his- torical re- sources adja- cent to site
RECREATION	No current plans; pos- sible future uses/slight impact	No plans; pos- sible small scale future uses/slight benefit	No current plans; pos- sible future uses/slight impact	No plans; site precluded from future uses/ moderate	No current plans; pos- sible future uses/slight impact	No plans; pos- sible future small scale uses/benefit	State park plans; con- flict with some (passive) uses/moderate

¹These costs do not include estimates for barging, busing or noise mitigation which are estimated to be \$45 million (average cost).

TABLE 2. IMPACTS OF SECONDARY TREATMENT ALTERNATIVES

IMPACT CATEGORIES	1. ALL DEER ISLAND (1a,2)		2. SPLIT DEER ISLAND AND NUT ISLAND (1b,2)		3. ALL LONG ISLAND (2b,1)			4. SPLIT DEER ISLAND AND LONG ISLAND (2b,3)		
	D.I. (115A)	N.I. (2A)	D.I. (115A)	N.I. (18A)	D.I. (5A)	N.I. (2A)	L.I. (96A)	D.I. (52A)	N.I. (2A)	L.I. (82A)
COMMUNITY										
*Years Constr.	7 years	3-4 years	7 years	5 years	5 years	3-4 years	8-9 years	5-6 years	3-4 years	7-8 years
*Daily Construction Traffic										
*Avg. Trucks (w/barging)	8 - slight	8 - slight	8 - slight	4 - slight	8 - slight	8 - slight	8 - slight	6 - slight	8 - slight	8 - slight
Avg./Peak Buses	13/26-slt./mod.	1/2 - slight	11/25	2/3 - slight	2/2 - slight	2/2 - slight	14/28-slt./mod.	6/9 - slight	2/2 - slight	14/27-slt./mod.
Avg./Peak Constr. Workers *(6-12 mo. duration)	630/1310	55/70	560/1250	95/125	85/100	65/75	720/1405	285/430	65/75	690/1345
*Constr. Noise Levels dBA (mitigated)	Homes 46-58 Prison 66-78 slight moder.	72-84 moderate	Homes 46-58 Prison 66-78 slight moder.	72-84 moderate	Homes 46-58 Prison 66-78 slight moder.	72-84 moderate	Park 46-60 slight	Homes 46-58 Prison 66-78 slight moder.	72-84 moderate	Park 48-60 slight
*Property Values	Decline, may not rebound fully	Decline & rebound	Decline, may not rebound fully	Decline, may not rebound fully	Decline & rebound	Decline & rebound	Decline & rebound	Decline & rebound	Decline & rebound	Decline & rebound
*Infrequent Odor Problems (operations)	Homes Prison moder. moder.	Moderate	Homes Prison moder. moder.	Moderate	Homes Prison slight slight	Moderate	Park moderate	Homes Prison moder. moder.	Moderate	Park moderate
*Visual Impacts (operations)	Severe	Slight	Severe	Severe	Slight	Slight	Severe	Moderate	Slight	Severe
*Total Ops. Staff/Max. Daily Shift	227/93	20/8	215/86	83/37	34/14	20/8	219/90	118/53	20/8	209/86
ENVIRONMENTALLY SENSITIVE AREAS	None exist	None exist	None exist	None exist on site; bay fill- ing impacts	None exist	None exist	Adjacent wet- lands & bar- rier beach; no direct effects	None exist	None exist	Adjacent wet- lands & bar- rier beach; no direct effects
PROJECT COST ¹										
*Capital (million \$)	595		650		705			738		
*Annual										
*O & M (million \$)	44		45		45			53		
*Annualized (million \$)	107		114		120			131		
*Household User (\$)	91		96		99			111		
LEGAL AND INSTITUTIONAL OBSTACLES TO IMPLEMENTATION	Moderate: mul- tiple owner- ship & pos- sible legisla- tive approval	None	Moderate: mul- tiple owner- ship & pos- sible legisla- tive approval	Severe to fill if legislative approval or state & fed. permits re- quired; alter- natively, dem- olition of nearby homes to create buf- fer is limited	None	None	Severe: DEM approval, leg- islative ap- proval, "Sec- tion 106" re- view, City of Boston owner- ship, reloca- tion of Long Island Hospital	Moderate: pos- sible legisla- tive approval	None	Severe: DEM approval, leg- islative ap- proval, "Sec- tion 106" re- view, City of Boston owner- ship, reloca- tion of Long Island Hospital
CULTURAL RESOURCES	None impacted	None exist	None impacted	None exist	None exist	None exist	Severe: signifi- cant archae- ological & historical re- sources on site; hospital may be histor- ically eli- gible; roadway relocation	None impacted	None exist	Severe: Signi- ficant archae- ological & historical re- sources on site; hospital may be histor- ically eli- gible; road relocation
RECREATION	No current plans; site precluded from future uses/ moderate impact	No plans; pos- sible future small scale uses avail- able/benefit	No current plans; site precluded from future uses/ moderate impact	No current plans; site precluded from future uses/ moderate impact	No current plans; site possible for future uses/ benefit	No plans; site possible for future small scale uses/ benefit	State park plans; major conflict with recreational uses/severe impact	No current plans; site possible for future uses/ slight impact	No plans; site possible for future small scale uses/ benefit	State park plans; con- flict with proposed rec- reational uses/severe impact

¹These costs do not include estimates for barging, busing or noise mitigation which are estimated to be \$45 million (average cost).



H A R B O R

P R E S I D E N T

0110004862
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DAT

Spectacle
Island

Lead
Light

Fort Strong

Sculpin
Ledge

West
Head

Rainsford
Island

Quarantine
Rocks

Moon Head

