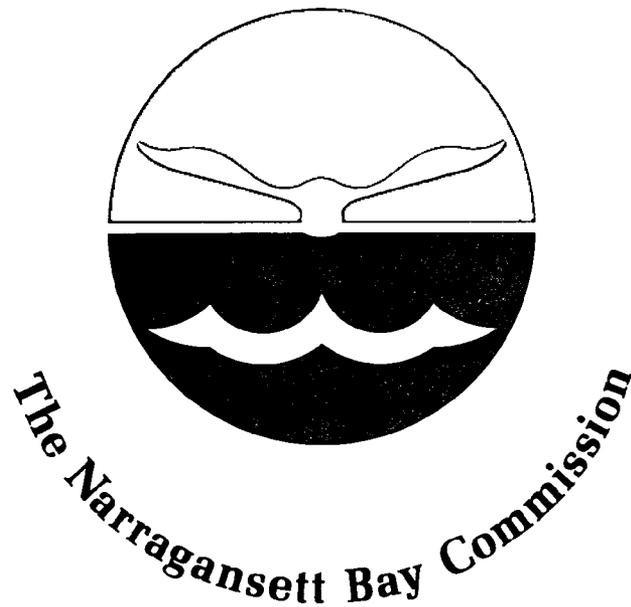


**FY 1996 - 2000
CAPITAL IMPROVEMENT
PROGRAM**



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**Vincent Mesolella, Jr.
Chairman**

**Paul Pinault
Executive Director**

JULY, 1995

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Rep. Vincent J. Mesolella
Chairman

Paul Pinault
Executive Director



Dear Friends:

I am pleased to present the Narragansett Bay Commission's (NBC) fiscal year 1996 - 2000 Capital Improvement Program (CIP). This document serves to summarize the major projects that will be initiated or completed within the NBC's service area over the next five years.

This past year proved to be a rewarding one for the NBC. During the year, the NBC's Field's Point facility was presented with the U.S. Environmental Protection Agency's (EPA) Regional "Excellence Award", recognizing the NBC's commitment to clean water through continued permit compliance, outstanding operation and maintenance, effective financial management and ongoing operator training. In addition, EPA also recognized the NBC with an "Environmental Merit Award" for outstanding achievements in protecting the environment. Lastly, the NBC was presented with a "Public Service Award" by the Association of Metropolitan Sewerage Agencies for the establishment and furtherance of our Environmental Enforcement Fund.

One significant change to this year's CIP is the combining of NBC's service areas. The NBC was recently granted approval by the Public Utilities Commission to combine the user fee tariff structures of the Field's Point and Bucklin Point service area. This change coincides with the original intent of the merger in January 1992.

The CIP also serves to illustrate the NBC's commitment to improving our treatment facilities and interceptors. By planning for facility improvements and those changes that will be required as a result of new regulations, the NBC demonstrates its continued dedication to **A CLEAN BAY TODAY.**

Paul Pinault, P.E.
Executive Director

ACKNOWLEDGEMENTS

The fiscal year 1996-2000 Capital Improvement Program was prepared by Jackie Saul, Environmental Planner, based on input from staff from all sections and divisions of the NBC. This plan was completed with the assistance and supervision of Karen Giebink, Policy Associate.

The development of this CIP also involved the cooperation, assistance and guidance of Juan Mariscal, Assistant Director Planning, Policy and Regulation and Paul Pinault, Executive Director, the Board of NBC Commissioners and its Construction, Engineering and Operations Committee as well as the NBC's Citizen's Advisory Committee.

TABLE OF CONTENTS

CAPITAL IMPROVEMENT PROGRAM

	<u>PAGE</u>
NBC SERVICE AREA MAP	i
BRIEF PROJECT LISTING	ii & iii

SECTION I (CIP OVERVIEW)

ACTIVITIES OF NBC	2
PROGRAM CHANGES	5
COST BY FUNCTIONAL AREA	6
FISCAL IMPACT	8
IMPACT ON TOTAL ANNUAL REVENUE REQUIREMENTS AND SEWER USER FEES	13

SECTION II (DETAILED PROJECT LISTINGS)

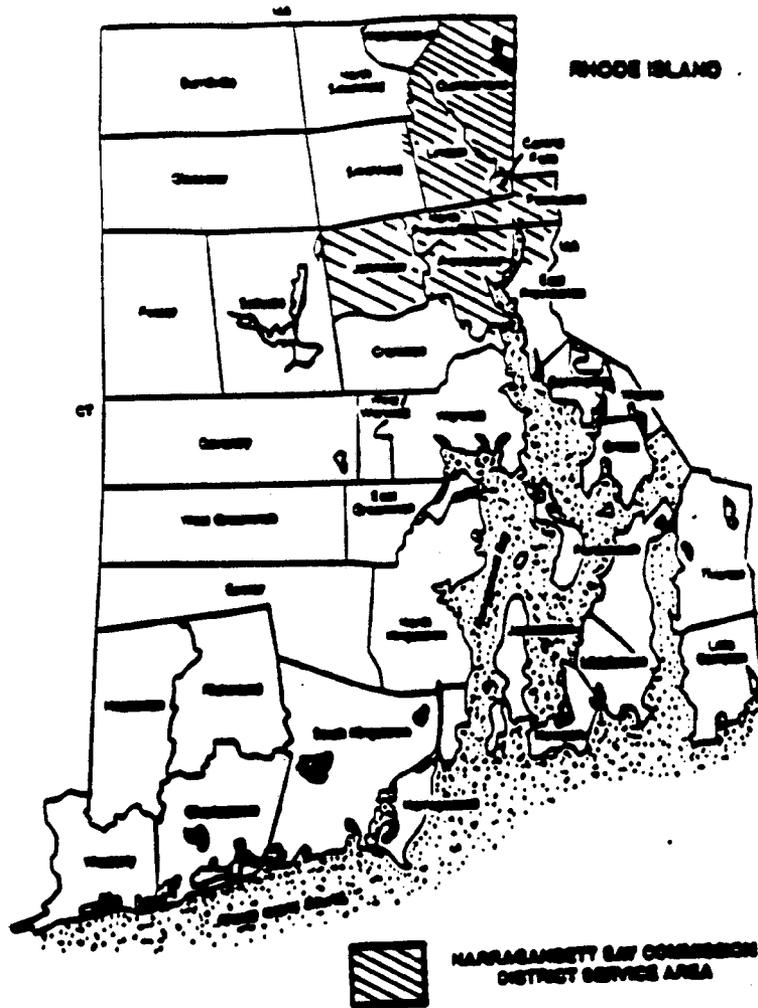
WASTEWATER TREATMENT FACILITY IMPROVEMENTS	16
SEWER SYSTEM IMPROVEMENTS	30
BUILDINGS & GROUNDS IMPROVEMENTS	45

SECTION III (APPENDIX)

ABBREVIATIONS & ACROYMNS	52
NBC'S FIELD'S POINT AND BUCKLIN POINT SERVICE AREA FACILITIES	53
PUBLIC REVIEW PROCESS WITH COMMENTS & RESPONSES	56
DEBT SERVICE CALCULATIONS	59

SERVICE AREA of the NARRAGANSETT BAY COMMISSION

The Narragansett Bay Commission (NBC) was created in 1980. In May 1982, the NBC acquired the Field's Point Wastewater Treatment Facility (FPWWTF) in Providence. This facility serves the communities of Providence and North Providence, and portions of the towns of Johnston, Lincoln and the City of Cranston. On January 1, 1992, the NBC assumed ownership of the Bucklin Point Wastewater Treatment Facility (BPWWTF) and expanded its district to include the Cities of Pawtucket and Central Falls, the Towns of Cumberland and Lincoln, and portions of East Providence and Smithfield.



A brief description of the facilities within NBC district is located in the appendix.

BRIEF PROJECT LISTINGS

CAPITAL IMPROVEMENT PROGRAM PROJECT LISTING

WASTEWATER TREATMENT FACILITY IMPROVEMENTS		1996-2000
CONTRACT 101: FINAL CLARIFIERS AND CONTROL SYSTEM UPGRADE		\$8,566,000
CONTRACT 102 C/D/P: CHLORINATION/DECHLORINATION SYSTEM		\$2,076,000
SITE SPECIFIC CRITERIA		\$300,000
INDUCTIVELY COUPLED PLASMA W/ MASS SPECTRO PHOTOMETER (ICP/MS) FOR LAB.		\$200,000
LABORATORY INFORMATION MANAGEMENT SYSTEM (LIMS)		\$120,000
INTERIM STORAGE BULDING		\$254,000
SHORT-TERM SOLIDS HANDLING IMPROVEMENTS		\$4,970,000
LONG TERM SOLIDS HANDLING IMPROVEMENTS		\$21,740,000
CONTRACT 803: LOCKER ROOM AND LUNCH ROOM		\$488,000
CONTRACT 807: BUCKLIN POINT WWTF IMPROVEMENTS PHASE II		\$11,387,000
CONTRACT 809: BUCKLIN POINT NORTH LANDFILL CLOSURE		\$470,000
CONTRACT 104: SEPTAGE RECEIVING FACILITY(S)		\$1,360,000
SUBTOTAL		\$51,931,000
SEWER SYSTEM IMPROVEMENTS		1996 - 2000
CONTRACT 401: BUTLER HOSPITAL INTERCEPTOR REPLACEMENT/REPAIRS		\$10,000
CONTRACT 404: GANO ST. TO PITMAN ST. INTERCEPTOR REPLACEMENT		\$2,501,000
CONTRACT 503: IMPROVEMENTS TO NBC-OWNED INTERCEPTORS IN JOHNSTON		\$1,953,000
CONTRACT 504: IMPROVEMENTS TO NBC-OWNED INTERCEPTORS IN JOHNSTON		\$5,477,000
CONTRACT 601: IMPROVEMENTS TO NBC-OWNED INTERCEPTORS IN N. PROVIDENCE		\$50,000
CSO 2B: HEADWALL IMPROVEMENTS		\$519,000
FLOWMETERS		\$134,000
CONTRACT 701: REPLACEMENT OF THE LINCOLN (SAYLESVILLE) PUMP STATION		\$1,737,000
REPLACEMENT OF THE MOSHASSUCK VALLEY INTERCEPTOR		\$726,000
CONTRACT 302: COMPREHENSIVE COMBINED SEWER OVERFLOW (CSO) PROGRAM- HIGH PRIORITY		\$139,500,000
GEOGRAPHIC INFORMATION SYSTEM IMPLEMENTATION		\$1,094,000
OF 049 OUTFALL MODIFICATIONS		\$750,000
SUBTOTAL		\$154,451,000
BUILDINGS AND GROUNDS		
WINDOW REPLACEMENT		\$40,000
HEATING SYSTEM		\$65,000
UPGRADE WIRING AND ELECTRICAL FACILITIES/ADDITIONAL OFFICE SPACE		\$55,000
VEHICLE REPLACEMENTS		\$905,000
SUBTOTAL		\$1,065,000
GRAND TOTAL		\$207,447,000

SECTION I

(CIP OVERVIEW)

FISCAL YEAR 1996- 2000 CAPITAL IMPROVEMENT PROGRAM

This year's Capital Improvement Program (CIP) identifies over \$207 million of capital improvement projects in progress, to be initiated or completed within the next five fiscal years (fiscal years 1996-2000). It also reflects total expenditures of over \$562 million for the completion of all scheduled projects.

The CIP identifies each capital project, defined as a capital expenditure greater than \$20,000, by functional area (wastewater treatment facilities (WWTF), sewer systems and buildings and grounds). Cash flows for each project and functional area are provided and the funding sources and schedules are also shown. Project costs are depicted by phase (planning, design and construction).

There are many events that can impact NBC's sources of capital. This CIP attempts to take into consideration the most significant of these factors such as the State of Rhode Island's capital budget, the maximum funding available under the State Revolving Fund program (SRF) and pending federal legislation. This is done to accurately reflect the costs associated with the funding of this program and the resulting impact upon users within the District.

It should also be noted that for the purpose of simplification, this CIP does not include the financing costs associated with new debt in the individual project description sheets. The debt service calculations; however, do reflect these costs.

ACTIVITIES OF THE NARRAGANSETT BAY COMMISSION

Combined Sewer Overflow Abatement Project

The most significant project underway by the Narragansett Bay Commission is the Combined Sewer Overflow Abatement Project. This project represents 68% of the total costs outlined in this document.

This project is a result of a federal mandate regarding clean up of the 86 combined sewer overflows (CSO) which contribute to the degradation of Narragansett Bay. During periods of heavy rain, the flow through these CSO's frequently exceed the capacity of the sewer system. This results in an untreated sewage and stormwater mixture entering our rivers and into the Narragansett Bay. These overflows have been a continual source of pollution in the Upper Bay, often requiring RI Department of Environmental Management to close parts of the Bay to shellfishing.

The NBC approved a comprehensive CSO Abatement plan in March 1993 to mitigate this problem. This plan involves the construction of seven near-surface storage facilities and twelve miles of deep rock storage tunnels. These near surface storage tanks and tunnels will contain the sewage that would have otherwise overflowed into the Rhode Island waterways. After the storm has passed, the stored flows will be returned to the system for treatment. As presently approved, the total annual volume of overflows is expected to decrease by 99% once these improvements have been completed.

The Rhode Island Department of Environmental Management (RIDEM) approved the CSO Abatement Plan in July, 1994. Preliminary design of the high priority facilities was initiated subsequent to receiving RIDEM approval of the Abatement Plan. Preliminary design is expected to be completed by July 1996. After DEM approves the preliminary design plans, the NBC will initiate final design of the high priority facilities. Construction is expected to begin in 1998 and will take approximately twelve to fifteen years to complete. Total project costs are estimated at \$481 million.

Disinfection Alternatives Systems Project

The Narragansett Bay Commission has embarked on a project which will change the way we presently disinfect effluent at our facilities. This year's CIP contains a Disinfection Alternatives Systems Project which will provide an effective and safe method of disinfection at the most economical cost. The need for this project resulted from stricter RIPDES permit limits for total residual chlorine. The Disinfection Alternative Study was initiated in May of 1992 and a draft Facilities Plan was completed in March 1993. This plan recommended switching from the use of chlorine gas at Field's Point to the use of liquid sodium hypochlorite for disinfection for safety reasons and that dechlorination be used at both facilities using liquid sodium bisulfite.

Comments received from the Rhode Island Department of Environmental Management (RIDEM) on the effects of chlorination/dechlorination on the toxicity of the effluent in the receiving water prompted tests on the toxicity of dechlorination and pilot testing of ultraviolet irradiation at both facilities. The results of the toxicity tests indicated that there is virtually no difference in toxicity between the untreated effluent and the treated effluent.

Based on the results of these tests, capital and operation and maintenance costs for the technologies were developed. It has been determined that disinfection using sodium hypochlorite followed by dechlorination using sodium bisulfite is the most effective, safest and most economical means of disinfection for both of our facilities.

Sludge Disposal

In March, 1994 the Governor of Rhode Island asked the Rhode Island Public Utilities Commission (PUC) to examine certain aspects of NBC's proposal to enter into a long term contract with NETCO-ER for the disposal of all of our sludge through incineration. Particular concerns included the possible infringement on the franchise rights of the Narragansett Electric Company for the generation of electricity and the fiscal prudence of the contract. After numerous hearings, the PUC concluded that: 1) the electricity that would be generated through this project would infringe upon Narragansett Electric's franchise rights and, 2) the PUC lacked sufficient information to determine whether the NBC had obtained a reasonable contract with NETCO-ER based upon the fact that, although other proposals were received, NETCO-ER was the sole incineration proposal received by the NBC. The PUC recommended that NBC rebid the project.

Another issue that was raised in these proceedings was whether or not incineration of sludge would be legal as a result of the "1992 Henseler Amendment", which amended the Rhode Island Solid Waste Management's (SWMC) statute to ban the incineration of solid waste. The Attorney General's office filed for a decision with the Superior Court on whether or not the 1992 Ban on the incineration of solid waste applied to sludge incineration. In February 1995, the Superior Court concluded that "sludge" is not included in the Rhode Island Solid Waste statute's definition of a "solid waste" and that the SWMC statute was not intended to apply to the NBC, therefore, the Amendment does not apply to sludge incinerators.

In the meantime, the NBC filed an application with the PUC for a rate increase in June, 1994. Included in this filing was a request for funds to implement the short-term or interim portion of the NETCO-ER contract. In the PUC's Report and Order issued on March 24, 1995, they approved the NBC's proposed sludge loading and disposal expense in full contingent upon the NBC reissuing the sludge disposal project in order to seek additional incineration proposals.

The proposed interim portion of the long-term sludge plan with NETCO-ER would have addressed the NBC's immediate sludge disposal needs for Bucklin Point and Field's Point as early as July 1994, but because the PUC Order prevents NBC from entering into a contract with NETCO-ER, these problems must be resolved by the NBC. Currently, sludge is landfilled on-site at the Bucklin Point facility; however, this sludge landfill is expected to reach capacity in February 1996. The sludge facilities at Field's Point require upgrading to improve emissions and to replace dewatering equipment. Staff has developed a plan which outlined a number of options for sludge disposal including short-term solids handling improvements to our incinerator

which will enable the continued incineration of sludge. The NBC's Board of Commissioners recently approved this proposed interim sludge plan for both Field's Point and Bucklin Point. The intention of the NBC is to proceed with the least costly alternatives possible for sludge disposal at each of its facilities.

The NBC must also address its long-term sludge disposal needs. Along with this short-term solids handling project, we have also included a long term solids handling project which would involve the construction of new solids handling equipment for sludge disposal. Total cost for these two projects is in excess of \$26 million. It is anticipated that state revolving loans would be pursued to finance the projects.

With regard to the long term needs at Bucklin Point, we have added the planning of new facilities as a task item into the Bucklin Point Improvements Phase II project.

PROGRAM CHANGES

Wastewater Treatment Facilities

A number of program changes are reflected in this year's CIP. Contract 103 was completed this past year. This project included the installation of two standby power generator stations, a hazardous gas monitoring system, relocation of two heated sludge circulation pumps and a series of other improvements at the Bucklin Point Facility and associated pump stations. Contract 802 which involved the replacement of the existing main electrical transformer which contained PCB contaminated oil with a dry type transformer was also completed. The painting of the ash lagoon was completed this past year, but instead of subcontracting the work, it was completed by NBC personnel. The painting of the crane system portion, although not complete, has also been removed from the CIP due to our contracting with Prison Industries to perform the work for less than \$20,000. The Incinerator Continuous Emissions Total Hydrocarbon Monitoring System has been purchased and installed. The replacement of new corrosion resistant weirs at the Bucklin Point WWTF was completed last year. The Return Activated & Waste Activated Sludge Pump Flow Control has been incorporated into the Bucklin Point Improvements Phase II project. Lastly, due to the continual lowering of detection limits by EPA for metal analyses, the purchase of an AA-graphite furnace unit for the Laboratory has been canceled and replaced with a purchase of an Inductively Coupled Plasma with a Mass Spectro Photometer (ICP/MS) unit.

Other new projects include: Contract 809 - Bucklin Point North Landfill Closure. It has become necessary to initiate landfill closure by February 1996 due to capacity limits being reached for sludge disposal. The NBC's laboratory section has included the purchase and installation of additional

monitoring equipment which will automate laboratory functions in order to analyze industrial waste samples in accordance with new EPA requirements.

Sewer System Improvements

The Rehabilitation of the Reservoir Avenue and Washington Park Pumping stations were completed this past year. Contract 301, which involved the separation of stormwater and sanitary flow on Smith Street, was completed. This project allowed the CSO for this area to be abandoned. Improvements to NBC owned interceptors in the Town of Johnston along Silver Lake Avenue, Pocasset River, Plainfield Street and Atwood to Central Avenue was essentially completed in July 1993. Contract 806: Omega Pumping Station Well was completed last year. This project involved the development of a well source of water to replace the City of East Providence water connection. This was done as a result of the unreliability of water service due to the age and condition of the existing pipe. The purchase and installation of permanent flow meters has been added to this year's CIP which will allow us to gather information on surcharge conditions during wet weather events.

Buildings and Grounds

Program changes for building and grounds include the upgrade of wiring and electrical facilities at NBC's 459 Promenade Street building. This building is approximately 65 years old and has much of its original wiring. This project will allow for the purchase of new breaker panels, as well as the replacement and expansion of existing wiring.

For more detailed information on any of the projects in this CIP, contact the NBC offices.

COST BY FUNCTIONAL AREA

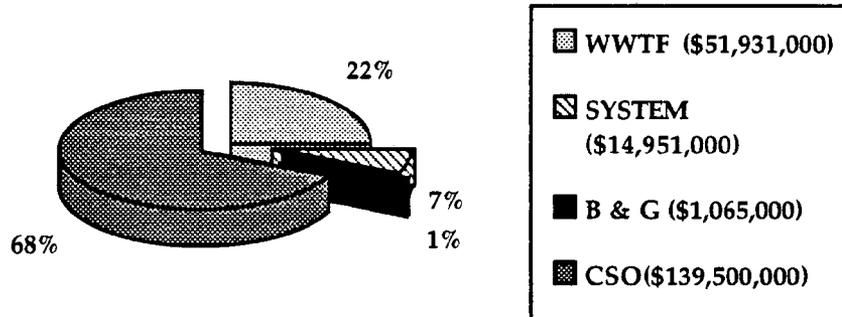
The capital projects have been assigned to functional areas as follows:

Buildings and Grounds (BG) projects include building repairs and equipment purchases to support staff. Field's Point and Bucklin Point Wastewater Treatment Facility improvements include the major facility upgrade contracts, septage receiving facility improvements and various maintenance projects. Sewer System and Interceptor Construction and Maintenance (ICM) projects include those for Combined Sewer Overflow Mitigation, interceptor rehabilitation, outlying sewer construction and pumping station improvements.

Most of the costs identified in the CIP are related to the CSO mitigation project which is within the sewer system functional area. As a result, this area accounts for 68% or \$139.5 million of the costs in the CIP. Of the

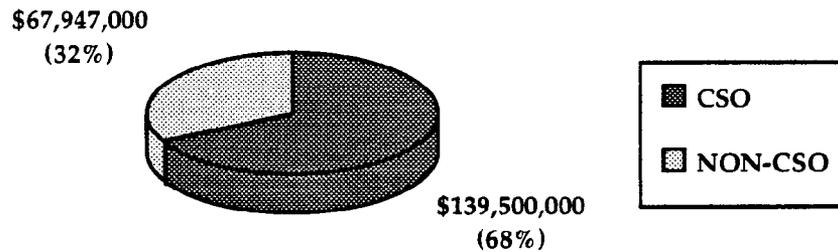
remaining costs, 22% are associated with treatment facility improvements, 7% are associated with sewer system improvements, and 1% are for buildings and grounds projects.

PROJECT COSTS BY FUNCTIONAL AREA



A percentage split of costs between CSO and non-CSO projects can be seen as follows:

CSO PROJECT VERSES NON-CSO PROJECT COSTS



FISCAL IMPACT

The CIP is a planning document and the costs and schedules it reflects are based on the best available information, however; experience indicates that as projects proceed from planning to construction, costs generally have increased.

There are several funding sources for scheduled CIP projects and many projects will have funding from more than one source. The funding options available include:

Grants

Federal grants were provided by the U.S. Environmental Protection Agency under the Construction Grants Program. Grants were between 55% and 75% of the total eligible project cost. In addition, RIDEM provided a federal grant match with a grant for 15% of the total eligible project cost. The Construction Grants Program; however, has been phased out and replaced with the State Revolving Loan Fund. Also included in this category are State Aquafund grants.

BVDC Bonds

The former Blackstone Valley District Commission (NBC merged with the former BVDC on 1/1/92) had the use of State general obligation bonds (g.o.) issued on their behalf. A statewide voter referendum approved in 1971 authorized \$3.3 million in g.o. bonds for site specific uses such as the planning, construction and equipping of interceptor sewer extension for the Washington Highway Interceptor. In 1986, a statewide voter referendum was passed by the voters authorizing the use of \$17.2 million for upgrades and improvements to the Bucklin Point facility and its interceptor system.

Prior to the merger, debt service was recovered through billings to each of the municipalities served by the Bucklin Point facility. Debt service was allocated in proportion to the community's flow to the total flow. However, as a result of NBC's most recent rate filing, all debt service will be billed directly to the users starting March 24, 1995.

Bay Bonds

In 1980, an \$87.7 million bond issue was passed to finance improvements to the NBC sewer system which would result in improved water quality. Of the \$87.7 million in Bay Bonds, \$15 million of the authorization was transferred to the former Blackstone Valley District Commission (\$6 million) and the Pawtuxet River Authority (\$9 million) during the 1990 session of the Rhode Island General Assembly. A \$15 million NBC Bond issue was placed on the

State Ballot in the 1992 general election to replace these funds for the NBC use and was passed by the voters to replace the funds that were transferred in 1990. As a result, there was a total of \$87.7 million in Bay Bonds available to the Field's Point facility and \$6.0 million in Bay Bonds available to the Bucklin Point facility for a total of \$93.7 million. To date, a total of \$58.9 million of the Bay Bonds has been issued. Of the \$93.7 million, RI General Laws 46-25 set the amount to be paid by sewer user charges for the debt service at \$14.059 million. To date, user charges are financing the debt service on \$13.485 million of this amount. This means that users will be responsible for the debt service on a maximum \$0.574 million of the remaining \$34.8 million in Bay Bonds to be issued. The remaining amount will become an obligation of the State.

In addition, the projected availability of Bay Bonds noted in this CIP is consistent with the latest State of Rhode Island Capital Budget's commitment to the distribution of Bay Bonds to the NBC over the next four years. The State Budget Office is responsible for the issuance of Bay Bonds on behalf of the Commission. It should be noted that on occasion, the State of Rhode Island modifies these issuances.

State Revolving Fund (SRF)

When the Construction Grants Program was phased out as a result of the 1987 reauthorization of the Federal Clean Water Act, it was replaced with the SRF program. The SRF finances water quality improvement projects through a low interest loan program. For planning purposes, we have estimated that the maximum funding that will be available through the end of fiscal year 2000 is \$250 million. The actual amount that will be available is dependent upon Congressional action and how much other Rhode Island communities borrow from the SRF.

The SRF program is administered by the RI Clean Water Finance Agency. As a public corporation of the State, the Agency receives its funding through capitalization grants from the EPA and State bond issues and by selling its own tax-exempt revenue bonds supported by these capitalization grants. The Agency loans funds to municipalities, sewer commissions, and wastewater management districts for water pollution abatement projects upon approval by DEM. Loans are at a rate one-third below the borrowers market cost of borrowing. The Agency's operating expenses are funded solely by loan fees and investment income generated from administering the SRF.

The NBC has used \$8.0 million in SRF financing to fund Contracts 201, 401 and 601. In fiscal year 1993, the NBC was a recipient of a "pool" loan of \$14.781 million. After deducting financing costs, \$13.7 million is available for actual project costs. This pool loan has been used to finance a variety of projects including preliminary design for the CSO LDM Program, design of

Contracts 101, 102, 301, 504 and 701 and will also supplement the financing for the facilities planning of the Septage Receiving Station project. In fiscal year 1994, the NBC received another pool loan in an amount of \$17,800,000, which will be used for the construction of Contracts 101 and 404, and the facilities planning for Contracts 807 and 902, implementation of a GIS System.

The financing costs associated with the SRF program are reflected in the debt service calculations.

Revenue Bonds

This category includes those projects that are to be funded via Revenue Bonds and all debt service that will be paid from user charges. In general, revenue bonds will be used to: 1) only finance those projects that are not eligible for SRF funding or 2) will be used only when all SRF funds are exhausted. The financing costs associated with the issuance of revenue bonds are reflected in the debt service calculations.

Replacement Reserve

The NBC has established a replacement reserve to fund the replacement of vehicles and equipment at the end of their useful life. This account is funded by user charges.

Operating Budget

The operating budget is financed by sewer user charges. It funds the purchase of non-replacement capital equipment and facilities and may also reflect the annual operating expense associated with short term financing.

Funding source and cash flows by functional area are shown in Table 1.

Table 1
(Cash Flow Basis in Thousand \$)

Wastewater Treatment Facilities

FUNDING SOURCE	FY 96	FY 97	FY 98	FY 99	FY 00	FIVE YEAR TOTAL
GRANT	0	0	0	0	0	0
BVDC BONDS	228	61	0	0	0	289
BAY BONDS	588	0	0	0	0	588
SRF	8,091	11,923	10,443	12,095	7,332	49,884
REV. BONDS	0	0	0	0	0	0
REP.RESERVE	0	0	200	0	0	200
OP. BUDGET	970	0	0	0	0	970
TOTAL	9,877	11,984	10,643	12,095	7,332	51,931

Sewer System Improvements: Construction & Maintenance

FUNDING SOURCE	FY 96	FY 97	FY 98	FY 99	FY 00	FIVE YEAR TOTAL
GRANT	0	0	0	0	0	0
BVDC BONDS	0	0	0	0	0	0
BAY BONDS	2,950	9,236	18,000	8,609	0	38,795
SRF	8,218	8,190	7,657	41,457	50,000	115,522
REV. BONDS	0	0	0	0	0	0
REP.RESERVE	0	0	0	0	0	0
OP. BUDGET	134	0	0	0	0	134
TOTAL	11,302	17,426	25,657	50,066	50,000	154,451

Buildings and Grounds

FUNDING SOURCE	FY 96	FY 97	FY 98	FY 99	FY 00	FIVE YEAR TOTAL
GRANT	0	0	0	0	0	0
BVDC BONDS	0	0	0	0	0	0
BAY BONDS	0	0	0	0	0	0
SRF	0	0	0	0	0	0
REV. BONDS	0	0	0	0	0	0
REP.RESERVE	125	80	560	80	60	905
OP. BUDGET	0	160	0	0	0	160
TOTAL	315	320	250	85	65	1,065

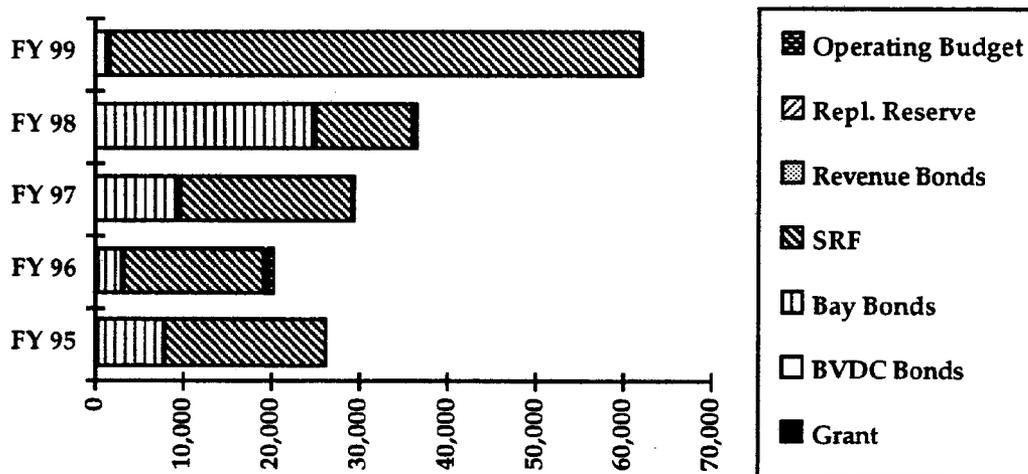
The 28 scheduled and ongoing projects have projected costs of \$207.4 million over the next five years. Table 2 below summarizes projected cash flows from each of the various funding sources.

Table 2
(Total Funding Source In Thousands \$)

FUNDING SOURCE	FY 96	FY 97	FY 98	FY 99	FY 00	FIVE YEAR TOTAL
GRANT	0	0	0	0	0	0
BVDC	228	61	0	0	0	289
BAY BONDS	3,538	9,236	18,000	8,609	0	39,383
SRF	16,309	20,113	18,100	53,552	57,332	165,406
REV. BONDS	0	0	0	0	0	0
REP. RESERVE	125	80	760	80	60	1,105
OP. BUDGET	1,104	160	0	0	0	1,264
TOTAL	21,304	26,150	36,860	62,241	57,392	207,447

When this information is displayed graphically, the increased dependence on State Revolving Loan Funds becomes clear. This is the result of a combination of factors such as the lack of federal financial assistance in the form of grants for CSO abatement and the fact that SRF funding is considerably more attractive than revenue bonds due to the subsidized interest rates. The State of Rhode Island's capital budget and NBC's cash flow projections indicate that Bay Bonds will be exhausted by fiscal year 2000.

TOTAL FUNDING SOURCES
(In Thousands \$)



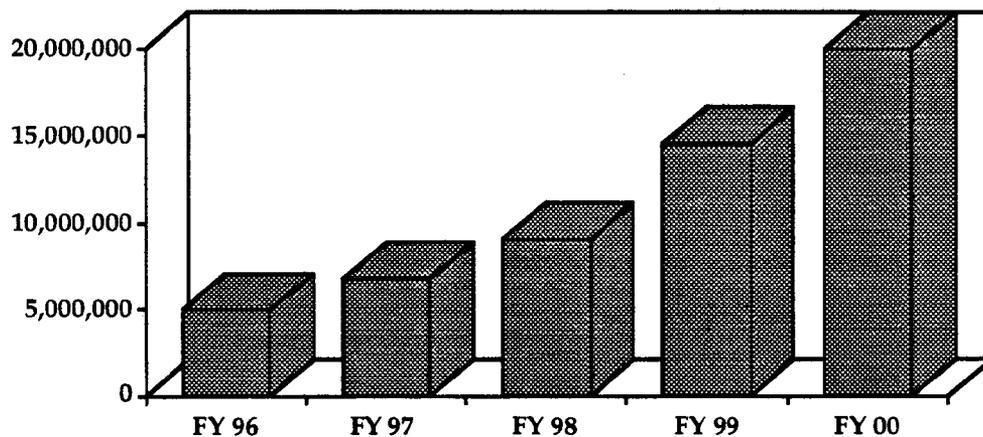
IMPACT ON TOTAL ANNUAL REVENUE REQUIREMENTS AND SEWER USER FEES

The changes in the financing sources and the advancement of the CSO mitigation project to the construction phase will have a significant impact on the NBC's total annual revenue requirements and sewer user fees. It should be noted that NBC's sewer user charges are regulated by the PUC. Any modifications to sewer user charges to recover additional debt service must be approved by the PUC.

In order to assess the fiscal impact of the scheduled capital improvements, debt service payments have been estimated from the cash flow projections. Debt service for the Field's Point and the Bucklin Point service area have been combined as a result of the recent approval by the PUC to combine tariff structures.

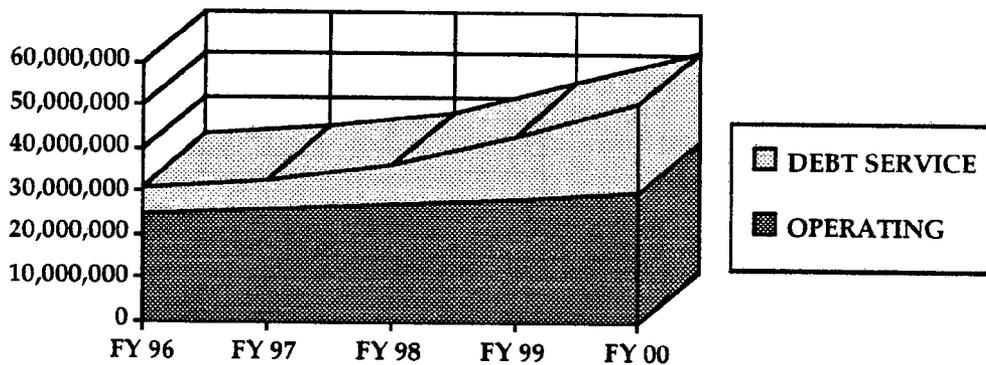
Annual debt service increases from \$5.0 million in fiscal year 1996 to \$7.7 million in fiscal year 1998. Debt service then increases significantly each subsequent fiscal year as debt service on SRF loans increases. By 2000, debt service is expected to rise to \$20.2 million as the NBC proceeds in the construction phase on portions of the CSO abatement project.

ANNUAL DEBT SERVICE



Assuming a reasonable increase of 5% per year to the operating budget (sans debt service) beginning with FY 96, a total revenue requirement of approximately \$58 million is needed in fiscal year 2000. Of this amount, debt service would account for approximately 40% of the total annual budget. This is depicted in the following graph.

**ANNUAL OPERATING
and DEBT SERVICE EXPENSE**



SEWER USER FEES

On March 24, 1995, the Public Utilities Commission (PUC) granted the NBC an increase of \$5.5 million over its prior total revenue requirement of \$26.6 million (approximately 21%). This results in an annual revenue requirement of \$32.1 million from both the Field's Point and Bucklin Point service area. Average debt service of \$7.2 million, including debt service coverage on SRF loans, is included in this revenue requirement. Despite this increase in revenues, in order for the NBC to implement all the projects noted in this CIP, additional revenue would still be required. Any additional modifications to sewer user fees, rate design and revenue requirements would require PUC approval.

Along with this revenue increase, the PUC has also approved the combining of tariff structures for the Field's Point and Bucklin Point service area. This will allow the NBC to bill all users under one rate design. The PUC also ordered that the NBC's next general rate filing provide for the same rates in both service areas in addition to the same rate structure.

SECTION II

(DETAILED PROJECT LISTINGS)

WASTEWATER TREATMENT FACILITY IMPROVEMENTS

WASTEWATER TREATMENT FACILITY PROJECTS ...A LISTING

The following is a listing of the 12 Wastewater Treatment Facility Projects which
 have been included in the current Capital Improvement Program.
 An explanation and cost breakdown of each of these projects
 is included in this section. The total cost of these
 projects during this 5-year period is
 \$51,931,000

PROPOSED PROJECT:	5 YEAR PERIOD COST:
	<i>FIELD'S POINT</i>
CONTRACT 101: FINAL CLARIFIERS AND CONTROL SYSTEM UPGRADE	\$8,566,000
CONTRACT 102 C/D/P: CHLORINATION/DECHLORINATION SYSTEM	\$2,076,000
SITE SPECIFIC CRITERIA	\$300,000
INDUCTIVELY COUPLED PLASMA W/ MASS SPECTRO PHOTOMETER (ICP/MS) FOR LAB.	\$200,000
LABORATORY INFORMATION MANAGEMENT SYSTEM (LIMS)	\$120,000
INTERIM STORAGE BULDING	\$254,000
SHORT-TERM SOLIDS HANDLING IMPROVEMENTS	\$4,970,000
LONG TERM SOLIDS HANDLING IMPROVEMENTS	\$21,740,000
CONTRACT 803: LOCKER ROOM AND LUNCH ROOM	\$488,000
CONTRACT 807: BUCKLIN POINT WWTF IMPROVEMENTS PHASE II	\$11,387,000
CONTRACT 809: BUCKLIN POINT NORTH LANDFILL CLOSURE	\$470,000
CONTRACT 104: SEPTAGE RECEIVING FACILITY(S)	\$1,360,000
TOTAL	\$51,931,000

**FY 96-00
CAPITAL
IMPROVEMENT
PROGRAM**

PROJECT DESCRIPTION

**CONTRACT 101:

IMPROVEMENTS TO
FIELD'S POINT
WASTEWATER
TREATMENT FACILITY
FINAL CLARIFIER AND
CONTROL SYSTEM
UPGRADE**

Contract 101 encompasses several improvements to the FPWWTF including: the demolition of the seven existing final clarifiers, Chlorine Field Lab and a Chlorine Contact Tank; construction of three 125' diameter final clarifiers, a Return Sludge Pump Station, a valve station and splitter box; replacement of the existing instrumentation and control computer system; and miscellaneous other improvements throughout the plant.

**PROJECT FINANCING & EXPENDITURES
(Cash Flow Basis in Thousands)**

SOURCE OF FUNDING	BEFORE JULY '95	FY 96	FY 97	FY 98	FY 99	FY 00	5 YEAR TOTAL	AFTER JULY '00	TOTAL PROJECT COSTS
GRANT								0	0
BVDC BONDS								0	0
BAY BONDS	163							0	163
SRF	3,786	6,778	1,558	230			8,566		12,352
REVENUE BONDS								0	0
REPL RESV								0	0
OPER BUDGET								0	0
TOTAL	3,949	6,778	1,558	230	0	0	8,566		12,515

PHASE (Description)	PROJECT COST BY PHASE (Project Schedule)	COST BY PHASE
PLANNING	From 3/92 to 4/93 (13 Months)	\$163
DESIGN	From 4/93 to 6/94 (14 Months)	\$878
CONSTRUCTION	From 10/94 to 10/96 (24 Months)	\$11,474
TOTAL		\$12,515

**FY 96-00
CAPITAL
IMPROVEMENT
PROGRAM**

PROJECT DESCRIPTION

**CONTRACT 102 C
CONTRACT 102 D
CONTRACT 102 P**

**FIELD'S POINT WWTF
CHLORINATION/
DECHLORINATION
SYSTEM**

This design and construction project will implement the recommendation for the Field's Point WWTF portion of the Facilities Plan Amendment for Disinfection Alternatives at the Field's Point and Bucklin WWTF's. The recommendation for the Bucklin Point WWTF will be implemented under the Bucklin Point Improvements Project (Contract 807). The FPWWTF recommendation is to switch to sodium hypochlorite for disinfection and use sodium bisulfite for dechlorination.

PROJECT FINANCING & EXPENDITURES
(Cash Flow Basis in Thousands)

SOURCE OF FUNDING	BEFORE JULY '95	FY 96	FY 97	FY 98	FY 99	FY 00	5 YEAR TOTAL	AFTER JULY '00	TOTAL PROJECT COSTS
GRANT								0	0
BVDC BONDS								0	0
BAY BONDS	253							0	253
SRF		219	1,114	743			2,076		2,076
REVENUE BONDS								0	0
REPL RESV								0	0
OPER BUDGET								0	0
TOTAL	253	219	1,114	743	0	0	2,076		2,329

PHASE (Description)	PROJECT COST BY PHASE (Project Schedule)	COST BY PHASE
PLANNING	Completed Under Contract 102P	\$253
DESIGN	From 8/95 to 6/96 (10 Months)	\$219
CONSTRUCTION	From 12/96 to 12/97 (12 Months)	\$1,857
TOTAL		\$2,329

**FY 96-00
CAPITAL
IMPROVEMENT
PROGRAM**

PROJECT DESCRIPTION

**SITE SPECIFIC
CRITERIA
EVALUATION FOR
FIELD'S POINT**

This project entails the development of site specific criteria in accordance with the Rhode Island Site Specific Criteria Development Policy to evaluate the appropriateness of the criteria used to establish the limitations for metals and other effluent parameters contained in the 1992 permit for the Field's Point Wastewater Treatment Facility. This project is required by the RIPDES Consent Agreement between DEM and the NBC effective December 15, 1992.

**PROJECT FINANCING & EXPENDITURES
(Cash Flow Basis in Thousands)**

SOURCE OF FUNDING	BEFORE						5 YEAR	AFTER	TOTAL
	JULY '95	FY 96	FY 97	FY 98	FY 99	FY 00	TOTAL	JULY '00	PROJECT COSTS
GRANT							0		0
BVDC BONDS							0		0
BAY BONDS		300					300		300
SRF							0		0
REVENUE BONDS							0		0
REPL RESV							0		0
OPER BUDGET							0		0
TOTAL	0	300	0	0	0	0	300		300

PHASE (Description)	PROJECT COST BY PHASE (Project Schedule)	COST BY PHASE
STUDY	From 9/95 to 8/96 (12 Months)	\$300
TOTAL		\$300

**FY 1996-2000
CAPITAL
IMPROVEMENT
PROGRAM**

PROJECT DESCRIPTION

**INDUCTIVELY
COUPLED PLASMA
WITH A MASS
SPECTRO
PHOTOMETER
(ICP/MS)**

Due to the continual lowering of detection limits by EPA for metals analyses, the current AA/Graphite Furnace will not be adequate to meet the new requirements. What is being suggested by EPA is the ICP/MS. This unit has the detection power, sensitivity and elemental coverage to comply with more stringent EPA regulations.

**PROJECT FINANCING & EXPENDITURES
(Cash Flow Basis in Thousands)**

SOURCE OF FUNDING	BEFORE						5 YEAR TOTAL	AFTER FY '00	TOTAL PROJECT COSTS
	JULY '95	FY 96	FY 97	FY 98	FY 99	FY 00			
GRANT							0		0
BVDC BONDS							0		0
BAY BONDS							0		0
SRF							0		0
REVENUE BONDS							0		0
REPL RESV							0		0
OPER BUDGET				200			200		200
TOTAL				200			200		200

**PHASE
(Description)**

**PROJECT COST BY PHASE
(Project Schedule)**

COST BY PHASE

PURCHASE

From 6/97 to 6/98 (12 Months)

\$200

TOTAL

\$200

**FY 1996-2000
CAPITAL
IMPROVEMENT
PROGRAM**

PROJECT DESCRIPTION

**LABORATORY
INFORMATION
MANAGEMENT
SYSTEM (LIMS)**

There are many instruments producing individual data that needs manual data reduction before release to other departments. A LIMS would automatically handle calculations, quality control and under strict controls will make data available to entire Commission.

**PROJECT FINANCING & EXPENDITURES
(Cash Flow Basis in Thousands)**

SOURCE OF FUNDING	BEFORE JULY '95	FY 96	FY 97	FY 98	FY 99	FY 00	5 YEAR TOTAL	AFTER FY '00	TOTAL PROJECT COSTS
GRANT							0		0
BVDC BONDS							0		0
BAY BONDS							0		0
SRF							0		0
REVENUE BONDS							0		0
REPL RESV							0		0
OPER BUDGET		120					120		120
TOTAL	0	120	0	0	0	0	120		120

**PHASE
(Description)**

**PROJECT COST BY PHASE
(Project Schedule)**

COST BY PHASE

PURCHASE

From 6/96 to 6/97 (12 months)

\$120

TOTAL

\$120

**FY 96-00
CAPITAL
IMPROVEMENT
PROGRAM**

PROJECT DESCRIPTION

**FIELD'S POINT WWTF
STORAGE BUILDING
(INTERIM)**

This design and construction project will meet the immediate storage needs at the Field's Point WWTF until a permanent storage building can be constructed. This building will provide one location to store archived files, maintenance equipment and supplies. Currently, these materials are stored in several different locations throughout the plant. Space within the building will also be allocated to provide indoor parking for the scum truck during the winter months.

**PROJECT FINANCING & EXPENDITURES
(Cash Flow Basis in Thousands)**

SOURCE OF FUNDING	BEFORE						5 YEAR	AFTER	TOTAL
	JULY '95	FY 96	FY 97	FY 98	FY 99	FY 00	TOTAL	JULY '00	PROJECT COSTS
GRANT							0		0
BVDC BONDS							0		0
BAY BONDS							0		0
SRF		31	223				254		254
REVENUE BONDS							0		0
REPL RESV							0		0
OPER BUDGET							0		0
TOTAL	0	31	223	0	0	0	254		254

PHASE (Description)	PROJECT COST BY PHASE (Project Schedule)	COST BY PHASE
PLANNING	Completed under Contract 101D	
DESIGN	From 12/95 to 4/96 (5 Months)	\$31
CONSTRUCTION	From 8/96 to 2/97 (6 Months)	\$223
TOTAL		\$254

**FY 96-00
CAPITAL
IMPROVEMENT
PROGRAM**

PROJECT DESCRIPTION

**SHORT-TERM
SOLIDS HANDLING
IMPROVEMENTS**

This project is for the implementation of a variety of improvements that are required to enable the NBC to continue to incinerate sludge at its Field's Point facility. Some of the improvements include: 1) the purchase of a regenerative thermal oxidizer and a wet electrostatic precipitator which will allow us to meet THC limits without the use of an afterburner and reduce particulates and metals; 2) the addition of incinerator controls, which we currently lack, for easier operation and control; 3) the installation of a blower and burner to Hearth #3 which will lower emissions and reduce slag formation; 4) addition of new centrifuges to existing vacuum filter building which will steady operation, lower emissions and increase redundancy; and 5) other miscellaneous incinerator equipment.

**PROJECT FINANCING & EXPENDITURES
(Cash Flow Basis in Thousands)**

SOURCE OF FUNDING	BEFORE						5 YEAR	AFTER	TOTAL
	JULY '95	FY 96	FY 97	FY 98	FY 99	FY 00	TOTAL	JULY '00	PROJECT COSTS
GRANT							0		0
BVDC BONDS							0		0
BAY BONDS							0		0
SRF		620	3,970				4,590		4,590
REVENUE BONDS							0		0
REPL RESV							0		0
OPER BUDGET		380					380		380
TOTAL	0	1,000	3,970	0	0	0	4,970		4,970

PHASE (Description)	PROJECT COST BY PHASE (Project Schedule)	COST BY PHASE
CONSTRUCTION	From 7/95 to 9/97 (26 Months)	\$4,970
TOTAL		\$4,970

**FY 96-00
CAPITAL
IMPROVEMENT
PROGRAM**

PROJECT DESCRIPTION

**LONG TERM SOLIDS
HANDLING
IMPROVEMENTS**

In 1987, just before RIDEM imposed restrictions on sludge disposed at the Central Landfill, the NBC had just completed a design for solids handling which entailed the transfer of some equipment for interim solids handling as well as construction of new solids handling equipment such as additional belt filter presses, sludge holding tanks and reliance on the incinerator (with SWMC landfilling as a back-up) for sludge disposal. If the long-term sludge project does not progress, this contract would be reinstated.

**PROJECT FINANCING & EXPENDITURES
(Cash Flow Basis in Thousands)**

SOURCE OF FUNDING	BEFORE						5 YEAR	AFTER	TOTAL
	JULY '95	FY 96	FY 97	FY 98	FY 99	FY 00	TOTAL	JULY '00	PROJECT COSTS
GRANT							0		0
BVDC BONDS							0		0
BAY BONDS							0		0
SRF			4,040	7,080	7,080	3,540	21,740		21,740
REVENUE BONDS							0		0
REPL RESV							0		0
OPER BUDGET							0		0
TOTAL	0	0	4,040	7,080	7,080	3,540	21,740		21,740

PHASE (Description)	PROJECT COST BY PHASE (Project Schedule)	COST BY PHASE
DESIGN	From 7/95 to 1/96 (6 Months)	\$500
CONSTRUCTION	From 1/96 to 1/98 (24 Months)	\$21,240
TOTAL		\$21,740

**FY 96-00
CAPITAL
IMPROVEMENT
PROGRAM**

PROJECT DESCRIPTION

CONTRACT 803:

**LOCKER ROOM AND
LUNCH ROOM**

The existing facilities for operations personnel are inadequate. The locker room is not large enough to accommodate the personnel and there is no centrally located lunch room. The second floor of the dewatering building No.2 formerly housed vacuum filter equipment which has been removed. In this space lockers would be constructed to accommodate 71 persons (men and women), along with showers, washing sinks, toilets, janitorial closet and laundry facilities. Open space would also be utilized for lunch room facilities. A paint shop and electrical shop will be constructed in the vacant areas of the first floor of the dewatering building.

PROJECT FINANCING & EXPENDITURES
(Cash Flow Basis in Thousands)

SOURCE OF FUNDING	BEFORE						5 YEAR TOTAL	AFTER JULY '00	TOTAL PROJECT COSTS
	JULY '95	FY 96	FY 97	FY 98	FY 99	FY 900			
GRANT							0	0	
BVDC BONDS	24	200					200	224	
BAY BONDS		288					288	288	
SRF							0	0	
REVENUE BONDS							0	0	
REPL RESV							0	0	
OPER BUDGET							0	0	
TOTAL	24	488	0	0	0	0	488	512	

PHASE (Description)	PROJECT COST BY PHASE (Project Schedule)	COST BY PHASE
PLANNING	Planning included in Design Schedule	
DESIGN	From 10/94 to 4/95 (6 Months)	\$24
CONSTRUCTION	From 10/95 to 4/96 (6 Months)	\$488
TOTAL		\$512

FY 96-00
CAPITAL
IMPROVEMENT
PROGRAM

PROJECT DESCRIPTION

CONTRACT 807:

BPWWTF
IMPROVEMENTS
PHASE II

The 1991 RIPDES permit for the Bucklin Point WWTF indicates sufficient plant capacity to receive and treat peak sanitary flows of 46 mgd for sustained periods of time. At present, these flow levels do not reach the plant due to CSO discharges. The CSO mitigation plans, however, call for the storage of wet weather flows, with the pumpback to the BPWWTF at the maximum 46 mgd flow rate over a period of 2-3 days until stored volumes are depleted. This project will include the evaluation of unit processes to determine their capability of providing secondary treatment levels over an extended period of time. The project will involve a facilities plan update, as well as design and construction. Processes currently identified as requiring evaluation and/or improvements are: grit handling facilities, primary settling tanks, conversion to a fine bubble aeration system, effluent pumping station expansion and a new digester heat exchanger. Additional improvements include the replacement of the heating boilers in the Administration, Screen & Grit, Service and Dewatering Buildings. Also included is the replacement of the Administration Building air conditioning system. The design and construction phases of this project include chlorination/dechlorination facilities which were previously included in Contract 102, the Disinfection Alternatives Study.

PROJECT FINANCING & EXPENDITURES
(Cash Flow Basis in Thousands)

SOURCE OF FUNDING	BEFORE JULY '95	FY 96	FY 97	FY 98	FY 99	FY 00	5 YEAR TOTAL	AFTER JULY '00	TOTAL PROJECT COSTS
GRANT							0		0
BVDC BONDS							0		0
BAY BONDS							0		0
SRF		401	540	1,639	5,015	3,792	11,387		11,387
REVENUE BONDS							0		0
REPL RESV							0		0
OPER BUDGET							0		0
TOTAL	0	401	540	1,639	5,015	3,792	11,387		11,387

PHASE (Description)	PROJECT COST BY PHASE (Project Schedule)	COST BY PHASE
PLANNING	From 7/95 to 6/96 (12 Months)	\$401
DESIGN	From 12/96 to 11/97 (12 Months)	\$925
CONSTRUCTION	From 4/98 to 3/00 (24 Months)	\$10,031
TOTAL		\$11,387

FY 96-00
CAPITAL
IMPROVEMENT
PROGRAM

PROJECT DESCRIPTION

CONTRACT 809
BUCKLIN POINT
NORTH LANDFILL
CLOSURE

The Bucklin Point North landfill has nearly reached its capacity for sludge dumping. In February 1994, the landfill was reclassified a storage site which has a maximum storage holding time of two years. It is necessary to have the landfill closed or in the process of closing by February 1996.

PROJECT FINANCING & EXPENDITURES
(Cash Flow Basis in Thousands)

SOURCE OF FUNDING	BEFORE JULY '95	FY 96	FY 97	FY 98	FY 99	FY 00	5 YEAR TOTAL	AFTER JULY '00	TOTAL PROJECT COSTS
GRANT								0	0
BVDC BONDS								0	0
BAY BONDS								0	0
SRF								0	0
REVENUE BONDS								0	0
REPL RESV								0	0
OPER BUDGET	30	470					470		500
TOTAL	30	470*	0	0	0	0	470		500

PHASE (Description)	PROJECT COST BY PHASE (Project Schedule)	COST BY PHASE
DESIGN	5/95 to 8/95 (3 Months)	\$50
CONSTRUCTION	10/95 to 2/96 (5 Months)	\$450
TOTAL		\$500

* The PUC approved a landfill reserve to fund this project.

**FY 96-00
CAPITAL
IMPROVEMENT
PROGRAM**

**CONTRACT 104:
SEPTAGE RECEIVING
FACILITY(S)**

PROJECT DESCRIPTION

This project consists of a facilities planning study and marketing survey to evaluate which of two options would best serve the community's needs for septage receiving in the Commission's service area. The three options are:

- 1) to construct a new septage receiving facility within the Field's Point service area and make improvements to the Bucklin Point septage receiving facility, or;
- 2) to increase the capacity of the Bucklin Point septage receiving facility to accommodate the projected capacity required to meet the needs of the Bucklin Point and Field's Point service areas.
- 3) Upgrade the Bucklin Point facility with no expansion.

The recommended alternative will be implemented during the design and construction phases.

**PROJECT FINANCING & EXPENDITURES
(Cash Flow Basis in Thousands)**

SOURCE OF FUNDING	BEFORE JULY '95	FY 96	FY 97	FY 98	FY 99	FY 00	5 YEAR TOTAL	AFTER JULY '00	TOTAL PROJECT COSTS
GRANT							0		0
BVDC BONDS	11	28	61				89		100
BAY BONDS							0		0
SRF	16	42	478	751			1,271		1,287
REVENUE BONDS							0		0
REPL RESV							0		0
OPER BUDGET							0		0
TOTAL	27	70	539	751	0	0	1,360		1,387

PHASE (Description)	PROJECT COST BY PHASE (Project Schedule)	COST BY PHASE
PLANNING	3/94 to 2/96 (11 Months)	\$76
DESIGN	6/96 to 2/97 (6 Months)	\$185
CONSTRUCTION	4/97 to 12/97 (9 Months)	\$1,126
TOTAL		\$1,387

SEWER SYSTEM IMPROVEMENTS

SEWER SYSTEM IMPROVEMENTS & MAINTENANCE PROJECTS ...A LISTING

The following is a listing of the 12 Sewer System Improvements & Maintenance Projects
 which have been included in the current Capital Improvement Program.
 An explanation and cost breakdown of each of these projects
 is included in this section. The total cost of these
 projects during this 5-year period is
 \$154,451,000

PROPOSED PROJECT:	5 YEAR PERIOD COST:
	<i>FIELD'S POINT</i>
CONTRACT 401: BUTLER HOSPITAL INTERCEPTOR REPLACEMENT/REPAIRS	\$10,000
CONTRACT 404: GANO ST. TO PITMAN ST. INTERCEPTOR REPLACEMENT	\$2,501,000
CONTRACT 503: IMPROVEMENTS TO NBC-OWNED INTERCEPTORS IN JOHNSTON	\$1,953,000
CONTRACT 504: IMPROVEMENTS TO NBC-OWNED INTERCEPTORS IN JOHNSTON	\$5,477,000
CONTRACT 601: IMPROVEMENTS TO NBC-OWNED INTERCEPTORS IN N. PROVIDENCE	\$50,000
CSO 2B: HEADWALL IMPROVEMENTS	\$519,000
FLOWMETERS	\$134,000
CONTRACT 701: REPLACEMENT OF THE LINCOLN (SAYLESVILLE) PUMP STATION	\$1,737,000
REPAIR OF MVI NEAR HIGGINSON AVE.	\$726,000
CONTRACT 302: COMPREHENSIVE COMBINED SEWER OVERFLOW (CSO) PROGRAM- HIGH PRIORITY	\$139,500,000
GEOGRAPHIC INFORMATION SYSTEM IMPLEMENTATION	\$1,094,000
OF 049 OUTFALL MODIFICATIONS	\$750,000
TOTAL	\$154,451,000

**FY 96-00
CAPITAL
IMPROVEMENT
PROGRAM**

PROJECT DESCRIPTION

CONTRACT 401:

**BUTLER HOSPITAL
INTERCEPTOR
REPLACEMENT/
REPAIRS**

This project replaces approximately 1,200 feet of interceptor through the Butler Hospital property and includes repairs to headwalls at OF 023 and OF 025. This project was completed in November of 1993. The amount in FY'96 reflect retainage.

PROJECT FINANCING & EXPENDITURES
(Cash Flow Basis in Thousands)

SOURCE OF FUNDING	BEFORE JULY '95	FY 96	FY 97	FY 98	FY 99	FY 00	5 YEAR TOTAL	AFTER JULY '00	TOTAL PROJECT COSTS
GRANT								0	0
BVDC BONDS								0	0
BAY BONDS	770							0	770
SRF	1,169	10						10	1,179
REVENUE BONDS								0	0
REPL RESV								0	0
OPER BUDGET								0	0
TOTAL	1,939	10	0	0	0	0	10		1,949

PHASE (Description)	PROJECT COST BY PHASE (Project Schedule)	COST BY PHASE
PLANNING	Part of CSO A Wet Weather Facilities Plan	\$0
DESIGN	From 1/87 to 6/92 (66 Months)	\$770
CONSTRUCTION	From 9/92 to 7/93 (10 Months)	\$1,179
TOTAL		\$1,949

**FY 96-00
CAPITAL
IMPROVEMENT
PROGRAM**

PROJECT DESCRIPTION

CONTRACT 404:

**GANO ST. TO PITMAN
ST. INTERCEPTOR
REPLACEMENT**

Contract 404 is the replacement of approximately 2,285 feet of the 42" interceptor from Pitman Street to Gano Street with a new 42" PCCP interceptor because the existing interceptor has become misaligned both vertically and horizontally over the past 60 years.

**PROJECT FINANCING & EXPENDITURES
(Cash Flow Basis in Thousands)**

SOURCE OF FUNDING	BEFORE						5 YEAR TOTAL	AFTER JULY '00	TOTAL PROJECT COSTS
	JULY '95	FY 96	FY 97	FY 98	FY 99	FY 00			
GRANT							0	0	
BVDC BONDS							0	0	
BAY BONDS	866						0	866	
SRF	1,785	2,451	50				2,501	4,286	
REVENUE BONDS							0	0	
REPL RESV							0	0	
OPER BUDGET							0	0	
TOTAL	2,651	2,451	50	0	0	0	2,501	5,152	

PHASE (Description)	PROJECT COST BY PHASE (Project Schedule)	COST BY PHASE
PLANNING	Included as part of CSO A Wet Weather FP	\$0
DESIGN	1/87 to 3/94 (75 Months)	\$866
CONSTRUCTION	From 11/94 to 8/95 (9 Months)	\$4,286
TOTAL		\$5,152

**FY 96-00
CAPITAL
IMPROVEMENT
PROGRAM**

**CONTRACT 503:

IMPROVEMENTS TO
NBC OWNED
INTERCEPTORS IN
JOHNSTON**

PROJECT DESCRIPTION

A group of residents within the general area of Cherry Hill Road formed the Cherry Hill Association in order to achieve their goal of connecting present and future dwellings into NBC's sewer system. Contingent on the number of homes connecting to the sewer system, NBC has indicated that it would design and construct the necessary facilities to convey flow to its existing interceptors. NBC has completed a preliminary engineering study outlining project requirements. Subsequent to the initiation of this project, however, a draft Facilities Plan for the Johnston area indicated that there was insufficient capacity downstream from the Cherry Hill site to handle any additional flows. Contract 504 has been initiated to upgrade and expand the downstream interceptors so that Contract 503 can proceed. As a result of mandated improvements to our existing wastewater system and treatment facility, this project has been placed in a lower priority. Should funding become available this project will move higher on the priority list.

**PROJECT FINANCING & EXPENDITURES
(Cash Flow Basis in Thousands)**

SOURCE OF FUNDING	BEFORE JULY '95	FY 96	FY 97	FY 98	FY 99	FY 00	5 YEAR TOTAL	AFTER JULY '00	TOTAL PROJECT COSTS
GRANT							0		0
BVDC BONDS							0		0
BAY BONDS	35						0		35
SRF		1,145	680	62	66		1,953		1,953
REVENUE BONDS							0		0
REPL RESV							0		0
OPER BUDGET							0		0
TOTAL	35	1,145	680	62	66	0	1,953		1,988

PHASE (Description)	PROJECT COST BY PHASE (Project Schedule)	COST BY PHASE
PLANNING	Completed	\$35
DESIGN	From 8/96 to 2/97 (6 Months)	\$35
CONSTRUCTION	From 7/96 to 10/98 (27 Months)	\$1,918
TOTAL		\$1,988

**FY 96-00
CAPITAL
IMPROVEMENT
PROGRAM**

PROJECT DESCRIPTION

**CONTRACT 504:
IMPROVEMENTS TO
NBC OWNED
INTERCEPTORS IN
THE TOWN OF
JOHNSTON - NORTH
END**

In order to correct capacity problems in the northern portion of the Town of Johnston, the NBC is currently designing improvements in the interceptor system. These improvements will provide sufficient capacity for future growth in this portion of the town. Construction has been segmented into three contracts, the first two contracts will cover the railroad interceptor area, the third the Central Avenue area. The third contract will not begin until the target growth value is established for the area affected.

**PROJECT FINANCING & EXPENDITURES
(Cash Flow Basis in Thousands)**

SOURCE OF FUNDING	BEFORE JULY '95	FY 96	FY 97	FY 98	FY 99	FY 00	5 YEAR TOTAL	AFTER JULY '00	TOTAL PROJECT COSTS
GRANT								0	0
BVDC BONDS								0	0
BAY BONDS		120					120		120
SRF	725	598	4,759				5,357	1,077	7,159
REVENUE BONDS							0		0
REPL RESV							0		0
OPER BUDGET							0		0
TOTAL	725	718	4,759	0	0	0	5,477		7,279

PHASE (Description)	PROJECT COST BY PHASE (Project Schedule)	COST BY PHASE
PLANNING	Planning included as part of SSES	
DESIGN	From 11/93 to 3/96 (30 Months)	\$865
CONSTRUCTION	From 4/96 to 6/97 (15 Months)	\$6,414
TOTAL		\$7,279

**FY 96-00
CAPITAL
IMPROVEMENT
PROGRAM**

PROJECT DESCRIPTION

CONTRACT 601:

**IMPROVEMENTS TO
NBC OWNED
INTERCEPTORS IN
NORTH PROVIDENCE**

This project involves the lining of approximately 11,000 feet of 24" and 30" interceptor in North Providence to eliminate excess infiltration and inflow. Substantial completion was declared on December 23, 1994.

PROJECT FINANCING & EXPENDITURES
(Cash Flow Basis in Thousands)

SOURCE OF FUNDING	BEFORE JULY '95	FY 96	FY 97	FY 98	FY 99	FY 00	5 YEAR TOTAL	AFTER JULY '00	TOTAL PROJECT COSTS
GRANT								0	0
BVDC BONDS								0	0
BAY BONDS	430							0	430
SRF	2010	50						50	2,060
REVENUE BONDS								0	0
REPL RESV								0	0
OPER BUDGET								0	0
TOTAL	2,440	50	0	0	0	0	50		2,490

**PHASE
(Description)**

**PROJECT COST BY PHASE
(Project Schedule)**

COST BY PHASE

PLANNING
DESIGN
CONSTRUCTION
TOTAL

From 9/88 to 10/89 (13 Months)
From 4/90 to 6/91 (14 Months)
From 7/93 to 1/95 (18 Months)

\$312
\$118
\$2,347
\$2,777

**FY 96-00
CAPITAL
IMPROVEMENT
PROGRAM**

PROJECT DESCRIPTION

**CSO 2B:
HEADWALL
IMPROVEMENTS**

The headwalls along the Woonasquatucket River in CSO Area 2 are in disrepair. Plans and specifications have been completed for these repairs, however, construction cannot be initiated until the Department of Transportation's moratorium on road cuts for the Promenade Street area is lifted.

PROJECT FINANCING & EXPENDITURES
(Cash Flow Basis in Thousands)

SOURCE OF FUNDING	BEFORE JULY '95	FY 96	FY 97	FY 98	FY 99	FY 00	5 YEAR TOTAL	AFTER JULY '00	TOTAL PROJECT COSTS
GRANT								0	0
BVDC BONDS								0	0
BAY BONDS	132							0	132
SRF			519					519	519
REVENUE BONDS								0	0
REPL RESV								0	0
OPER BUDGET								0	0
TOTAL	132	0	519	0	0	0	519		651

PHASE (Description)	PROJECT COST BY PHASE (Project Schedule)	COST BY PHASE
PLANNING/ DESIGN	From 10/88 to 3/91 (30 Months)	\$132
CONSTRUCTION	From 7/96 to 11/96 (4 Months)	\$519
TOTAL		\$651

**FY 96-00
CAPITAL
IMPROVEMENT
PROGRAM**

PROJECT DESCRIPTION

FLOWMETERS

This project involves the purchase and installation of seven ultrasonic flowmeters and appurtenant equipment for the Field's Point service area. Two meters would be installed to upgrade existing metering locations. The other five meters would be installed in locations downstream of proposed CSO underground storage facilities to gather information on surcharge conditions during wet weather events.

PROJECT FINANCING & EXPENDITURES
(Cash Flow Basis in Thousands)

SOURCE OF FUNDING	BEFORE JULY '95	FY 96	FY 97	FY 98	FY 99	FY 00	5 YEAR TOTAL	AFTER JULY '00	TOTAL PROJECT COSTS
GRANT							0		0
BVDC BONDS							0		0
BAY BONDS							0		0
SRF							0		0
REVENUE BONDS							0		0
REPL RESV							0		0
OPER BUDGET		134					134		134
TOTAL	0	134	0	0	0	0	134		134

PHASE (Description)	PROJECT COST BY PHASE (Project Schedule)	COST BY PHASE
PURCHASE/INSTALLATION	From 7/95 to 10/95 (4 Months)	\$134
TOTAL		\$134

**FY 96-00
CAPITAL
IMPROVEMENT
PROGRAM**

PROJECT DESCRIPTION

CONTRACT 701:

**REPLACEMENT OF
THE LINCOLN
(SAYLESVILLE) PUMP
STATION**

An evaluation of the adequacy of the existing package type pumping station in Saylesville was undertaken as part of Contract 103. It was determined that the existing station has limitations of size in both the wet well and dry pit. A new pumping station is necessary in order to provide firm capacity and reliable operation for future flows.

**PROJECT FINANCING & EXPENDITURES
(Cash Flow Basis in Thousands)**

SOURCE OF FUNDING	BEFORE						5 YEAR TOTAL	AFTER JULY '00	TOTAL PROJECT COSTS
	JULY '95	FY 96	FY 97	FY 98	FY 99	FY 00			
GRANT							0	0	
BVDC BONDS	151						0	151	
BAY BONDS							0	0	
SRF	142	972	765				1,737	1,879	
REVENUE BONDS							0	0	
REPL RESV							0	0	
OPER BUDGET							0	0	
TOTAL	293	972	765	0	0	0	1,737	2,030	

PHASE (Description)	PROJECT COST BY PHASE (Project Schedule)	COST BY PHASE
PLANNING	Before 7/95	\$151
DESIGN	From 11/94 to 9/95 (11 Months)	\$195
CONSTRUCTION	From 1/96 to 11/96 (11 Months)	\$1,684
TOTAL		\$2,030

**FY 96-00
CAPITAL
IMPROVEMENT
PROGRAM**

PROJECT DESCRIPTION

**REPLACEMENT
OF
THE MOSHASSUCK
VALLEY
INTERCEPTOR

NEAR
HIGGINSON AVE.**

A portion of the Moshassuck Valley Interceptor south of Higginson Avenue in Central Falls was constructed south of peat and has subsided over the years. The extent of the problem is not known at this time, but flow is not obstructed. This project consists of identifying the extent of the problem and designing and constructing a replacement sewer.

**PROJECT FINANCING & EXPENDITURES
(Cash Flow Basis in Thousands)**

SOURCE OF FUNDING	BEFORE JULY '95	FY 96	FY 97	FY 98	FY 99	FY 00	5 YEAR TOTAL	AFTER JULY '00	TOTAL PROJECT COSTS
GRANT							0		0
BVDC BONDS							0		0
BAY BONDS							0		0
SRF		17	114	595			726		726
REVENUE BONDS							0		0
REPL RESV							0		0
OPER BUDGET							0		0
TOTAL	0	17	114	595	0	0	726		726

PHASE (Description)	PROJECT COST BY PHASE (Project Schedule)	COST BY PHASE
PLANNING	From 3/96 to 9/96 (6 Months)	\$35
DESIGN	From 9/96 to 3/97 (6 Months)	\$96
CONSTRUCTION	From 7/97 to 12/97 (6 Months)	\$595
TOTAL		\$726

**FY 96-00
CAPITAL
IMPROVEMENT
PROGRAM**

PROJECT DESCRIPTION

**CONTRACT 302:

COMPREHENSIVE
COMBINED
SEWER
OVERFLOW (CSO)
PROGRAM

HIGH PRIORITY
FACILITIES**

Providence, Pawtucket and Central Falls all have combined sewers which overflow at about 80 locations during wet weather. This Comprehensive Combined Sewer Overflow (CSO) program will mitigate the impact of these overflows through the construction of wet weather control facilities. The work will be completed in three phases. Phase I, which was completed in June, 1993, involved the development of a conceptual design report which recommended facilities to be constructed and established priorities for construction. The recommended facilities include seven (7) near surface storage facilities and 61,350 linear feet of tunnels. Phase II will involve design of recommended facilities and Phase III will be construction of the facilities. This project involves the design and construction of only the high priority facilities which are: the Main Spine and Seekonk Tunnels and the C-East and C-West underground storage facilities.

**PROJECT FINANCING & EXPENDITURES
(Cash Flow Basis in Thousands)**

SOURCE OF FUNDING	BEFORE JULY '95	FY 96	FY 97	FY 98	FY 99	FY 00	5 YEAR TOTAL	AFTER JULY '00	TOTAL PROJECT COSTS
GRANT							0		0
BVDC BONDS							0		0
BAY BONDS	5,000	2,830	9,236	18,000	8,609		38,675		43,675
SRF	9,000	2,070	364	7,000	41,391	50,000	100,825	94,654	204,479
REVENUE BONDS							0	56,846	56,846
REPL RESV							0		0
OPER BUDGET							0		0
TOTAL	14,000	4,900	9,600	25,000	50,000	50,000	139,500	151,500	305,000

PHASE (Description)	PROJECT COST BY PHASE (Project Schedule)	COST BY PHASE
PLANING	From 1/92 to 6/93 (18 Months)	\$5,000
DESIGN	From 7/93 to 7/97 (48 Months)	\$23,500
CONSTRUCTION	From 1/98 to 1/04 (72 Months)	\$276,500
TOTAL		\$305,000

**FY 96-00
CAPITAL
IMPROVEMENT
PROGRAM**

PROJECT DESCRIPTION

CONTRACT 302:

**COMPREHENSIVE
COMBINED
SEWER
OVERFLOW (CSO)
PROGRAM**

**LOW PRIORITY
FACILITIES**

This project involves the continuation of the design and construction of CSO wet weather facilities. Under this project the low priority CSO facilities identified in the 1993 Conceptual Design Report will be designed and constructed. These facilities include: the Pawtucket tunnel and underground storage facilities 2-2, 2-3, 2-4, B-1 and BPSA 7. Design and construction of these facilities will be initiated upon completion of the high priority CSO facilities.

PROJECT FINANCING & EXPENDITURES
(Cash Flow Basis in Thousands)

SOURCE OF FUNDING	BEFORE JULY '95	FY 96	FY 97	FY 98	FY 99	FY 00	5 YEAR TOTAL	AFTER JULY '00	TOTAL PROJECT COSTS
GRANT								0	0
BVDC BONDS								0	0
BAY BONDS								0	0
SRF								0	0
REVENUE BONDS								0 176,430	176,430
REPL RESV								0	0
OPER BUDGET								0	0
TOTAL	0	0	0	0	0	0	0	0 176,430	176,430

PHASE (Description)	PROJECT COST BY PHASE (Project Schedule)	COST BY PHASE
DESIGN	From 1/03 to 1/07 (48 Months)	\$15,000
CONSTRUCTION	From 7/07 to 7/13 (72 Months)	\$161,430
TOTAL		\$176,430

FY 96-00
CAPITAL
IMPROVEMENT
PROGRAM

GEOGRAPHIC
INFORMATION
SYSTEM
IMPLEMENTATION

PROJECT DESCRIPTION

The Geographic Information System (GIS) is used to analyze and organize geographic data. The NBC has used GIS systems for data developed during the CSO mitigation program. An implementation study is currently in progress to evaluate use of GIS systems in all sections of the NBC. The results of the study will provide recommendations for further database development and computer hardware to expand the use of GIS systems throughout the NBC. Implementation costs and schedules will be refined upon completion of the study.

PROJECT FINANCING & EXPENDITURES
(Cash Flow Basis in Thousands)

SOURCE OF FUNDING	BEFORE						5 YEAR TOTAL	AFTER JULY '00	TOTAL PROJECT COSTS
	JULY '95	FY 96	FY 97	FY 98	FY 99	FY 00			
GRANT							0		0
BVDC BONDS							0		0
BAY BONDS							0		0
SRF	30	405	689				1,094		1,124
REVENUE BONDS							0		0
REPL RESV							0		0
OPER BUDGET							0		0
TOTAL	30	405	689	0	0	0	1,094		1,124

PHASE
(Description)

PROJECT COST BY PHASE
(Project Schedule)

COST BY PHASE

PLANNING
IMPLEMENTATION
TOTAL

From 5/95 to 10/95 (6 Months)
From 7/96 to 6/97 (12 Months)

\$91
\$1,033
\$1,124

**FY 1996-2000
CAPITAL
IMPROVEMENT
PROGRAM**

PROJECT DESCRIPTION

**OF 049 OUTFALL
MODIFICATIONS**

During large rainstorms a flooding condition exists on Valley Street near the Moshossuck River. During design of the L-East Underground Storage Facility it was determined that this condition could be improved through modifications to the existing facilities. Design of these modifications will be done through the CSO LDM Design Contract. Construction will be done as a separate contract in order to implement these modifications and alleviate the flooding condition as soon as possible.

PROJECT FINANCING & EXPENDITURES
(Cash Flow Basis in Thousands)

SOURCE OF FUNDING	BEFORE JULY '95	FY 96	FY 97	FY 98	FY 99	FY 2000	5 YEAR TOTAL	AFTER FY 2000	TOTAL PROJECT COSTS
GRANT								0	0
BVDC BONDS								0	0
BAY BONDS									
SRF		500	250				750		750
REVENUE BONDS								0	0
REPL RESV								0	0
OPER BUDGET								0	0
TOTAL	0	500	250	0	0	0	750		750

PHASE (Description)	PROJECT COST BY PHASE (Project Schedule)	COST BY PHASE
PLANNING	Part of CSO LDM Contract	
DESIGN	" " " " "	
CONSTRUCTION	4/96 to 10/96 (7Months)	\$750
TOTAL		\$750

BUILDINGS & GROUNDS IMPROVEMENTS

BUILDING AND GROUNDS PROJECTS ...A LISTING

The following is a listing of the 4 Building and Grounds Projects
 which have been included in the current Capital Improvement Program.
 An explanation and cost breakdown of each of these projects
 is included in this section. The total cost of these
 projects during this 5-year period is
\$1,065,000

PROPOSED PROJECT:	5 YEAR PERIOD COST:
	<i>FIELD'S POINT</i>
WINDOW REPLACEMENT	\$40,000
HEATING SYSTEM	\$65,000
UPGRADE WIRING AND ELECTRICAL FACILITIES/ADDITIONAL OFFICE SPACE PLANNING	\$55,000
VEHICLE REPLACEMENTS	\$905,000
TOTAL	\$1,065,000

**FY 96-00
CAPITAL
IMPROVEMENT
PROGRAM**

PROJECT DESCRIPTION

**IMPROVEMENTS TO
NBC OWNED
PROPERTY LOCATED
AT 459 PROMENADE
ST.

WINDOW
REPLACEMENT**

The windows in the building on Promenade St. were installed 60 years ago when the facility was built. They are old, drafty, do not close tightly, and are energy inefficient. The office windows were replaced in 1991 but it is recommended that all the garage windows also be replaced with properly fitted, energy efficient thermopane windows.

**PROJECT FINANCING & EXPENDITURES
(Cash Flow Basis in Thousands)**

SOURCE OF FUNDING	BEFORE JULY '95	FY 96	FY 97	FY 98	FY 99	FY 00	5 YEAR TOTAL	AFTER JULY '00	TOTAL PROJECT COSTS
GRANT								0	0
BVDC BONDS								0	0
BAY BONDS								0	0
SRF								0	0
REVENUE BONDS								0	0
REPL RESV								0	0
OPER BUDGET			40				40		40
TOTAL	0	0	40	0	0	0	40		40

PHASE (Description)	PROJECT COST BY PHASE (Project Schedule)	COST BY PHASE
PLANNING		
DESIGN	From 9/95 to 2/96 (6 Months)	\$10
CONSTRUCTION	From 4/96 to 7/97 (4 Months)	\$30
TOTAL		\$40

**FY 96-00
CAPITAL
IMPROVEMENT
PROGRAM**

PROJECT DESCRIPTION

**IMPROVEMENTS TO
NBC OWNED
PROPERTY LOCATED
AT 459 PROMENADE
ST.

HEATING SYSTEM**

The Promenade St. building has an old, inadequate and inefficient heating system. The system does not distribute heat evenly which results in cold spots in office areas and also requires frequent repairs. Replacement of the old system with a new gas fired heating system that can be zoned to provide efficient heating is recommended.

**PROJECT FINANCING & EXPENDITURES
(Cash Flow Basis in Thousands)**

SOURCE OF FUNDING	BEFORE						5 YEAR TOTAL	AFTER JULY '00	TOTAL PROJECT COSTS
	JULY '95	FY 96	FY 97	FY 98	FY 99	FY 00			
GRANT							0	0	
BVDC BONDS							0	0	
BAY BONDS							0	0	
SRF							0	0	
REVENUE BONDS							0	0	
REPL RESV							0	0	
OPER BUDGET			65				65	65	
TOTAL	0	0	65	0	0	0	65	65	

PHASE (Description)	PROJECT COST BY PHASE (Project Schedule)	COST BY PHASE
PLANNING		
DESIGN	From 7/96 to 12/96 (6 Months)	\$10
CONSTRUCTION	From 1/96 to 7/97 (7 Months)	\$55
TOTAL		\$65

**FY 1996-2000
CAPITAL
IMPROVEMENT
PROGRAM**

PROJECT DESCRIPTION

**IMPROVEMENTS TO
NBC OWNED
PROPERTY LOCATED
AT 459 PROMENADE
STREET**

**UPGRADE WIRING
AND ELECTRICAL**

**ADDITIONAL OFFICE
SPACE PLANNING**

The 65 year old building at 459 Promenade Street has original wiring and fixtures. Much wiring has been abandoned and should be removed. Breaker panels should be consolidated and relocated. Fixtures (lights, etc.) should be replaced and existing wiring examined and replaced where necessary.

Planning of additional office space to accomodate staff presently located in other buildings.

**PROJECT FINANCING & EXPENDITURES
(Cash Flow Basis in Thousands)**

SOURCE OF FUNDING	BEFORE JULY '95	FY 96	FY 97	FY 98	FY 99	FY 00	5 YEAR TOTAL	AFTER FY '00	TOTAL PROJECT COSTS
GRANT								0	0
BVDC BONDS								0	0
BAY BONDS								0	0
SRF								0	0
REVENUE BONDS								0	0
REPL RESV								0	0
OPER BUDGET								0	0
TOTAL		30	25				55		55
	0	30	25	0	0	0	55		55

PHASE (Description)	PROJECT COST BY PHASE (Project Schedule)	COST BY PHASE
PLANNING	From 7/95 to 6/96 (12 Months)	\$30
DESIGN	From 1/96 to 3/96 (3 Months)	\$0
CONSTRUCTION	From 4/96 to 7/97 (4 Months)	\$25
TOTAL		\$55

VEHICLE REPLACE SCHEDULE
(In Thousands)

All items are to be funded from the replacement reserve

	FY 95	FY 96	FY 97	FY 98	FY 99	FY 00	Total
1984 Sewer Bucket Cleaning Machine				70			70
1984 Backhoe					80		80
1984 Digger Truck (Unit 12)			80				80
1984 Digger Truck (Unit 11)				80			80
1985 Flusher Truck (Unit 8)		80					80
101 Wheeler (Unit19)						60	60
1989 Vector Truck (Unit 17)				175			175
Van (Lab)		20					20
GMC 4 X4 Utility Truck (Main.)		25					
1983 2.5 CY Front End Loader							0
1981 6 CY Dump Truck				35			35
1985 15CY Dump Trucks (2)				200			200
TOTAL		125	80	560	80	60	905

SECTION III

(APPENDIX)

THE NARRAGANSETT BAY COMMISSION

ABBREVIATIONS & ACRONYMS FOR THE 1996-2000 CIP

Average Daily Flow	ADF
Buildings and Grounds	BG
Bucklin Point Wastewater Treatment Facility	BPWWTF
Blackstone Valley District Commission	BVDC
Blackstone Valley Interceptor	BVI
Capital Improvement Plan	CIP
Combined Sewer Overflow	CSO
Department of Environmental Management (Rhode Island)	DEM
Dissolved Oxygen	DO/D.O.
Environmental Protection Agency (United States)	EPA
Ernest Street Pumping Station	ESPS
Field's Point Wastewater Treatment Facility	FPWWTF
General Obligation Bonds (issued by The State of Rhode Island)	G.O./g.o.
Geographic Information System	GIS
Inductively Coupled Plasma w/Mass Spectro Photometer	ICP/MS
Interceptor Construction & Maintenance (Narragansett Bay Commission)	ICM
Laboratory Information Management System	LIMS
Linear Feet	LF
Million Gallons per Day	MGD/mgd
Moshassuck Valley Interceptor	MVI
Narragansett Bay Water Quality Management District Commission	NBC
National Pollution Discharge Elimination System	NPDES
Project O4	O 2
Out Fall	OF
Operating (to modify "budget")	OP/Oper.
Polychlorobiphenyls	PCBs
Public Utilities Commission (Rhode Island)	PUC
Replacement (used with "Reserve Fund")	REP./REPL.
Revenues (used with "Bonds")	REV.
Rhode Island Department of Environmental Management	RIDEM
Rhode Island Pollution Discharge Elimination System	RIPDES
State Revolving Fund (Rhode Island)	SRF
Wastewater Treatment Facility	WWTF

NARRAGANSETT BAY COMMISSION FACILITIES

NBC Field's Point Service Area Facilities

The FPWWTF can provide secondary treatment to average dry weather flows of 65 million gallons per day (mgd), sustained wet weather flows of 77 mgd, and peak hourly flows of 91 mgd. With the addition of the primary wet weather facilities, the plant provides primary treatment and disinfection for wet weather flows of up to 123 mgd beyond the primary and secondary process systems' capacity. Total treatment capacity at the Field's Point facility is 200 mgd.

The Field's Point facility uses an activated sludge process for secondary treatment, incorporating grit removal, primary sedimentation, secondary aeration, final clarification and chlorination for disinfection in the overall treatment process. Final effluent discharge is to the Providence River. The majority of the flow is pumped to the treatment facility by the Ernest Street Pumping Station (ESPS).

Sludge is processed through gravity thickeners and then to two 2-meter Parkson Magnum 3000 belt filter presses which went on-line in mid June, 1988. Sludge is then conveyed to a Nichols nine-hearth sludge incinerator (16 feet diameter, 10 wet ton/hour maximum capacity). The resulting ash from the incinerator is conveyed in a wet state to ash settling tanks. The settled ash is then landfilled.

NBC also owns, operates and maintains five outlying pump stations. The Washington Park and Reservoir Ave. pump stations located within the City of Providence are listed on the National Historic Register and have recently completed construction improvements. There are three additional pump stations in Johnston. The newest, Central Avenue, came on-line in 1987.

NBC is also responsible for the maintenance of seven flow metering stations that are used to measure flows from the various service areas. These meters are read weekly.

In addition, NBC owns and is responsible for the maintenance and correction of 57 Combined Sewer Overflows (CSO's), 32 tidegates and 68 miles of interceptors.

NBC Bucklin Point Service Area Facilities

The Blackstone Valley District Commission (BVDC) was established by the Rhode Island General Assembly in 1947 to plan, design, construct and operate and maintain facilities for the abatement of pollution generated from wastewater. Rhode Island voters also granted BVDC the ability to use state

issued (but BVDC retired) bonds. The Bucklin Point wastewater treatment plant, providing primary treatment, began operating in 1952. The plant was upgraded to secondary treatment in 1973.

The Bucklin Point Wastewater Treatment Facility (BPWWTF) can provide maximum secondary treatment to 46 mgd and primary treatment for flows up to 67mgd.

Wastewater treated at the Bucklin Point Facility first flows through a mechanically cleaned screen, a grit chamber, a pre-aeration channel, two primary settling tanks and then flows into four aeration tanks where it receives secondary treatment through the use of activated sludge technology. The activated sludge and the wastewater then flow to six final settling tanks. The effluent from the final settling tanks flows to the chlorine contact tank for disinfection. The treated effluent is discharged to the Seekonk River.

Waste sludge from the activated sludge process is pumped to the flotation thickener where it is thickened with the aid of chemicals and is then pumped to one of the digesters. The sludge is anaerobically digested and methane gas and carbon dioxide are produced as part of this process. The methane is used to heat the digesters and plant buildings. The digested sludge is dewatered with plate and frame recessed chamber presses and landfilled on the Bucklin Point site.

NBC also owns and operates three pump stations within the BPWWTF service area, the Omega (East Providence) Pump Station, the Saylesville (Lincoln) Pump Station and the Washington Highway Pump Station in Lincoln.

NBC is also responsible for five interceptors in the BPWWTF service area: the Blackstone Valley, Washington Highway, Moshassuck Valley, Abbott Run and East Providence. The total length of the interceptors is approximately 28 miles.

In addition, legislation passed by the Rhode Island General Assembly in 1989 assigned responsibility for the 27 CSO's in Pawtucket and Central Falls to BVDC in addition to the BVDC's North Diversion Structure located at Bucklin Point.

**PUBLIC REVIEW PROCESS
WITH
PUBLIC COMMENTS
AND
RESPONSES**

On June 14, 1995 the Draft CIP was presented to the Citizen Advisory Committee.

On June 19, 1995 the Draft CIP was distributed and presented to the Commission's Construction Engineering & Operations Committee and the Board of Commissioners.

A display advertisement for a public hearing on the Capital Improvement Program (CIP) was published in the Providence Journal Bulletin (see following page). The CIP Public Hearing was held on June 26, 1994 at 7:00 p.m. at The Narragansett Bay Commission Corporate Office, 235 Promenade Street, Suite 500. At the hearing it was noted that public comments would be accepted until June 30, 1995. Comments were received at the June 26 Public Hearing. The Commission prepared written responses which are included in the following pages. Where applicable, comments/suggestions were incorporated into the CIP.

On July 24, 1995 the Final Draft CIP was reviewed by the Commission's Construction, Engineering & Operations Committee and subsequently adopted by the Board of Commissioners.

Public Hearing

The Narragansett Bay Commission

invites the public to attend a Public Hearing concerning its

CAPITAL IMPROVEMENT PROGRAM FOR FISCAL YEARS 1996 - 2000

on Monday, June 26 at 7:00 p.m.

at

The NBC Offices

235 Promenade Street, Suite 500, in Providence.*

Comments will be taken from the public following an overview of the NBC's Capital Improvement Program (CIP) for fiscal years 1996 through 2000. The CIP is a planning document identifying over \$207 million in NBC major projects, repairs and purchases over the next five years. For further information or for copies of the CIP, contact Jackie Saul at (401) 277-6680.

*The meeting site is accessible.

Individuals requesting interpreter services must notify the NBC at 277-6680/TDD 277-6680 seventy-two hours in advance of the meeting date.

Rep. Vincent Mesolella, *Chairman*

Paul Pinault, *Executive Director*



The Foundry Corporate Office Center
235 Promenade Street – Suite 500
Providence, RI
02908-5739
401 • 277 • 6680
401 • 277 • 2584 Fax
401 • 277 • 6680 TDD

Rep. Vincent J. Mesolella
Chairman

Paul Pinault
Executive Director



July 19, 1995

Mr. Brian Bishop
199 Austin Farm Road
Exeter, Rhode Island 02827

Dear Mr. Bishop:

Thank you for providing testimony at the 1996-2000 Capital Improvement Program (CIP) Public Hearing on June 26, 1995. We would like to take this opportunity to directly address your concerns. In particular, those regarding the rate impacts of the Combined Sewer Overflow (CSO) Abatement Project.

Please be assured that the Commission shares your concerns and will continue to seek federal and state funding to alleviate the financial impacts of these improvements. The Commission recently met with the Rhode Island Department of Environmental Management (RIDEM) to review both state and federal CSOs Policies, the estimated cost of our proposed CSO Program, and the alternatives that might be pursued to reduce the cost of the project.

Further, the Commission is regulated by the Public Utilities Commission (PUC). As such, rates established are not only designed to be fair and equitable for all users but must be approved by the PUC prior to implementation. Residential rates within the NBC district remains one of the lowest in the State.

The Commission remains committed to its role to improve the water quality of Narragansett Bay at the least cost possible to our users.

Sincerely,

Jackie Saul
Environmental Planner
Planning, Policy & Regulation

/JS

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Rep. Vincent J. Mesolella
Chairman

Paul Pinault
Executive Director



July 19, 1995

Mr. Christopher Hamblett
434 Smith Street
Providence, RI 02908-3732

Dear Mr. Hamblett:

Thank you for providing testimony at the 1996-2000 Capital Improvement Program (CIP) Public Hearing on June 26, 1995. The NBC appreciates Save The Bay's support of this program and looks forward to working together to achieve our mutual goals.

Sincerely,

Jackie Saul
Environmental Planner
Planning, Policy & Regulation

/JS

NARRAGANSETT BAY COMMISSION

			FY '96	FY '97	FY '98	FY '99	FY '00
\$1.4 M	State/G.O.'s	Principal	2,027	4,055	8,110	16,219	33,959
		Interest	52,512	52,409	52,194	51,748	50,823
		Subtotal	54,539	56,464	60,304	67,967	84,782
1987 Bonds Refunded 5/92	State/G.O.'s	Principal	2,975	5,949	11,898	23,797	47,594
		Interest	164,165	164,013	163,698	163,044	161,687
		Subtotal	167,140	169,962	175,596	186,841	209,282
1984 Bonds	State/G.O.'s	Principal	20,000	20,000	15,000	15,000	15,000
		Interest	8,725	7,465	6,165	5,175	4,170
		Subtotal	28,725	27,465	21,165	20,175	19,170
1988 Bonds	State/G.O.'s	Principal	175,000	175,000	175,000	175,000	175,000
		Interest	165,200	153,125	141,050	128,975	116,725
		Subtotal	340,200	328,125	316,050	303,975	291,725
1986 Bonds City of Providence	State/G.O.'s	Principal	396,357	390,244	383,010	375,647	366,974
		Interest	150,822	125,456	100,090	74,812	49,642
		Subtotal	547,179	515,700	483,100	450,459	416,616
Promenade St. Property	3 yr. Payback	Principal	72,062	79,607	87,943	97,153	107,326
		Interest	28,938	21,393	13,057	3,847	11,294
		Subtotal	101,000	101,000	101,000	101,000	118,620
General Fund Payback	3 yr. Payback	Principal					
		Interest					
		Subtotal					
1991 Bonds \$21.55 M GOB's	State/G.O.'s	Principal	285,000	285,000	280,000	270,000	270,000
		Interest	250,058	232,958	215,858	199,058	182,858
		Subtotal	535,058	517,958	495,858	469,058	452,858
Contract 401-Butler	SRF	Principal	61,580	63,898	66,303	68,799	71,389
		Interest	57,021	54,659	52,208	49,665	47,026
		Subtotal	118,601	118,557	118,511	118,464	118,415
Contract 601-North Prov.	SRF	Principal	102,100	105,903	109,848	113,940	118,185
		Interest	86,125	82,252	78,234	74,065	69,742
		Subtotal	188,225	188,155	188,082	188,005	187,927

NARRAGANSETT BAY COMMISSION

			FY '96	FY '97	FY '98	FY '99	FY '00
Contract 201-Wash. Park	SRF	Principal	134,783	139,548	144,480	149,587	154,875
		Interest	122,997	118,172	113,177	108,006	79,652
		Subtotal	257,780	257,720	257,657	257,593	234,527
Pool Financing	SRF	Principal		512,750	531,500	551,250	571,500
		Interest	460,083	532,933	513,776	493,912	473,314
		Subtotal	460,083	1,045,683	1,045,276	1,045,162	1,044,814
Pool Financing I	SRF	Principal	0	512,750	531,500	551,250	571,500
		Interest	460,083	532,933	513,776	493,912	473,314
		Subtotal	460,083	1,045,683	1,045,276	1,045,162	1,044,814
Pool Financing II	SRF	Principal		676,271	623,610	636,729	660,718
		Interest	277,629	483,309	614,976	587,304	562,985
		Subtotal	277,629	1,159,580	1,238,586	1,224,033	1,223,703
8/6/92 Issue \$100,000	State/G.O.'s	Principal	5,000	5,000	5,000	5,000	5,000
		Interest	5,150	4,750	4,350	3,950	3,585
		Subtotal	10,150	9,750	9,350	8,950	8,585
8/6/92 Issue \$3,315,000	State/G.O.'s	Principal	100,000	105,000	110,000	120,000	125,000
		Interest	174,780	166,580	157,980	148,780	139,855
		Subtotal	274,780	271,580	267,980	268,780	264,855
3/1/76 Issue \$1,000,000	State/G.O.'s	Principal	200,000	0	0	0	0
		Interest	12,300	0	0	0	0
		Subtotal	212,300	0	0	0	0
4/1/86 Issue \$800,000	State/G.O.'s	Principal	0	0	0	0	0
		Interest	0	0	0	0	0
		Subtotal	0	0	0	0	0
3/1/76 Issue \$400,000	State/G.O.'s	Principal	30,000	0	0	0	0
		Interest	1,800	0	0	0	0
		Subtotal	31,800	0	0	0	0
5/15/92 Issue \$12,750,364.15	State/G.O.'s	Principal	15,686	31,373	62,745	125,490	247,619
		Interest	27,429	26,629	24,966	21,515	14,362
		Subtotal	43,115	58,001	87,711	147,005	261,981

NARRAGANSETT BAY COMMISSION

	FY '96	FY '97	FY '98	FY '99	FY '00
5/15/92 Issue \$7,731,583.1					
Principal	8,197	16,394	32,789	65,577	131,155
Interest	452,387	451,968	451,100	449,296	445,558
Subtotal	460,584	468,363	483,888	514,874	576,713
6/15/88 Issue \$4,770,000					
Principal	465,000	415,000	415,000	390,000	420,000
Interest	211,455	181,385	156,085	130,555	113,395
Subtotal	676,455	596,385	571,085	520,555	533,395
8/1/90 Issue \$200,000					
Principal	0	0	200,000	0	0
Interest	13,000	13,000	6,500	0	0
Subtotal	13,000	13,000	206,500	0	0
10/15/91 Issue \$900,000					
Principal	50,000	50,000	50,000	50,000	50,000
Interest	45,863	42,863	39,863	36,863	33,863
Subtotal	95,863	92,863	89,863	86,863	83,863
TOTALS					
Principal	2,125,767	1,891,971	2,157,126	2,061,210	2,339,076
Interest	2,308,354	2,382,386	2,391,550	2,236,658	2,087,223
Grand Total Existing	4,434,122	4,274,357	4,548,676	4,297,868	4,426,299

NARRAGANSETT BAY COMMISSION

NEW BAY BOND FINANCING FOR CAPITAL PROJECTS

ASSUMPTIONS:

9.00% INTEREST, 20 YEAR FINANCING
 MAXIMUM RESPONSIBILITY OF FPWWTF USERS in FY '97 (From State CIP)

		FY '96	FY '97	FY '98	FY '99	FY '00
FY 96 NEW BAY BONDS	\$0 Principal	0	0	0	0	0
	Interest	0	0	0	0	0
	Subtotal	0	0	0	0	0
FY 97 NEW BAY BONDS	\$9,000,000 Principal	0	0	0	0	0
	Interest	0	0	0	0	0
	Subtotal	0	0	0	0	0
FY 98 NEW BAY BONDS	\$17,426,000 Principal	0	0	9,173	10,162	11,257
	\$574,000 Interest	0	0	60,035	59,047	57,952
	Subtotal	0	0	69,209	69,209	69,209
FY 99 NEW BAY BONDS	\$8,035,000 Principal	0	0	0	0	0
	Interest	0	0	0	0	0
	Subtotal	0	0	0	0	0
FY 00 NEW BAY BONDS	\$0 Principal	0	0	0	0	0
	Interest	0	0	0	0	0
	Subtotal	0	0	0	0	0
Totals						
	Principal	0	0	9,173	10,162	11,257
	Interest	0	0	60,035	59,047	57,952
	Total Bay Bonds	0	0	69,209	69,209	69,209

NARRAGANSETT BAY COMMISSION

NEW SRF BOND FINANCING FOR CAPITAL PROJECTS

ASSUMPTIONS:

6% INTEREST FY95, 20 YEAR FINANCING
 INTEREST FY96 - FY 99, 20 YEAR FINANCING
 INCLUDES FINANCING COSTS OF 7%

	FY '96	FY '97	FY '98	FY '99	FY '00
FY 96 NEW SRF					
Principal	\$4,771,000				
Interest	238,550	238,550	238,550	238,550	238,550
Subtotal	286,260	271,947	257,634	243,321	229,008
	524,810	510,497	496,184	481,871	467,558
FY 97 NEW SRF					
Principal		922,500	922,500	922,500	922,500
Interest		1,107,000	1,051,650	996,300	940,950
Subtotal		2,029,500	1,974,150	1,918,800	1,863,450
FY 98 NEW SRF					
Principal			893,500	893,500	893,500
Interest			1,072,200	1,018,590	964,980
Subtotal			1,965,700	1,912,090	1,858,480
FY 99 NEW SRF					
Principal				2,677,600	2,677,600
Interest				3,213,120	3,052,464
Subtotal				5,890,720	5,730,064
FY 00 NEW SRF					
Principal					2,866,600
Interest					3,439,920
Subtotal					6,306,520
Totals					
Principal	238,550	1,161,050	2,054,550	4,732,150	7,598,750
Interest	286,260	1,378,947	2,381,484	5,471,331	8,627,322
Total New SRF	524,810	2,539,997	4,436,034	10,203,481	16,226,072

NARRAGANSETT BAY COMMISSION

SUMMARY OF ALL DEBT SERVICE SCHEDULES

	FY '96	FY '97	FY '98	FY '99	FY '00
EXISTING DEBT SERVICE					
Principal	2,125,767	1,891,971	2,157,126	2,061,210	2,339,076
Interest	2,308,354	2,382,386	2,391,550	2,236,658	2,087,223
NEW BAY BONDS					
Principal	0	0	9,173	10,162	11,257
Interest	0	0	60,035	59,047	57,952
NEW SRF BONDS					
Principal	238,550	1,161,050	2,054,550	4,732,150	7,598,750
Interest	286,260	1,378,947	2,381,484	5,471,331	8,627,322
TOTAL					
Principal	2,364,317	3,053,021	4,220,849	6,803,522	9,949,083
Interest	2,594,614	3,761,333	4,833,070	7,767,036	10,772,497
GrandTotal	4,958,932	6,814,354	9,053,919	14,570,557	20,721,580

-617-

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Rep. Vincent J. Mesolella
Chairman

Paul Pinault
Executive Director



IN CITY COUNCIL
OFFICE OF THE EXECUTIVE DIRECTOR
NARRAGANSETT BAY COMMISSION
PROVIDENCE, RI
FILE

August 10, 1995

Dear Interested Party:

Enclosed please find one (1) copy of the final NBC Capital Improvement Program (CIP) for FY 1996-2000.

If you have any questions, please contact Jackie Saul at 277-6680.

Sincerely,

Paul Pinault, P.E.
Executive Director

PP/amr
Enclosure

IN CITY COUNCIL
OCT 19 1995
READ
WHEREUPON IT IS ORDERED THAT
THE SAME BE RECEIVED.
Michael K. Alcott CLERK

IN CITY COUNCIL
SEP 7 1995
FIRST READING
REFERRED TO COMMITTEE ON
URBAN REDEVELOPMENT
RENEWAL & PLANNING
Michael P. Stewart
CLERK

THE COMMITTEE ON
RECOMMENDS
URBAN REDEVELOPMENT
RENEWAL & PLANNING
10/2/95
Clerk
Revised