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Vincent J. Mesolella  
Chairman

Paul Pinault, P.E.  
Executive Director

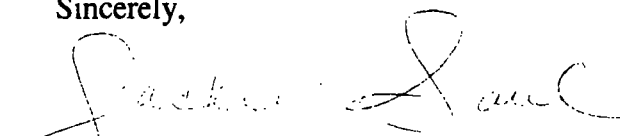
December 8, 1999

Dear Sir/Madam,

Enclosed please find a copy of The Narragansett Bay Commission's (NBC) Fiscal Years 2001-2005 Capital Improvement Program.

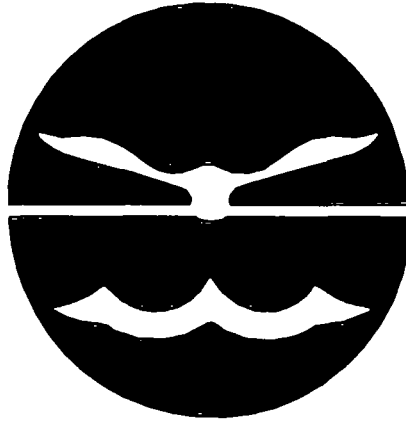
If you have any questions, please contact William Bowers at (401) 222-6680.

Sincerely,

  
Jackie Saul  
Financial Analyst

DEC 10 9 45 AM '99  
PROVIDENCE, R.I.  
DEPT. OF THE TREASURY

FILED



# **Capital Improvement Program**

*Fiscal Years 2001 - 2005*

IN CITY-COUNCIL

~~JAN 6 2000~~  
READ  
WHEREUPON IT IS ORDERED THAT  
THE SAME BE RECEIVED.

*Juan M. Gonzalez*

The Narragansett Bay Commission  
235 Promenade Street • Suite 500 • Providence, Rhode Island 02908  
(401) 222-6680 • TDD (401) 222-6680 • FAX (401) 222-2584

*Vincent J. Mesolella, Chairman • Paul Pinault, P.E., Executive Director*

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Paul Pinault, P.E.  
Executive Director



I am pleased to present the Narragansett Bay Commission's (NBC) 2001-2005 Capital Improvement Program (CIP). This plan is designed to describe all Capital Improvement efforts by the NBC over a five-year period.

The NBC remains committed to its mission of maintaining a leadership role in the protection and enhancement of water quality in Narragansett Bay and its tributaries by providing safe and reliable wastewater collection and treatment services to its customers at a reasonable cost.

I would like to take this opportunity to thank the NBC Board of Commissioners, the Citizens Advisory Committee, members of my staff, and everyone who contributed to the development of this year's CIP.

*Paul Pinault*  
Paul Pinault, P.E.  
Executive Director

# **Acknowledgements**

*The fiscal year 2001 - 2005 Capital Improvement Program was prepared by William Bowers, Financial Analyst, Division of Administration and Finance, based upon input from staff from all sections and divisions of the Narragansett Bay Commission. This plan was completed with the assistance and supervision of Jackie Saul, Financial Analyst.*

*The development of the CIP also involved the cooperation, assistance and guidance of Paul Pinault, P.E., Executive Director, the Narragansett Bay Commission Board of Commissioners and its Construction, Engineering and Operations Subcommittee, as well as the Narragansett Bay Commission's Citizens Advisory Committee.*

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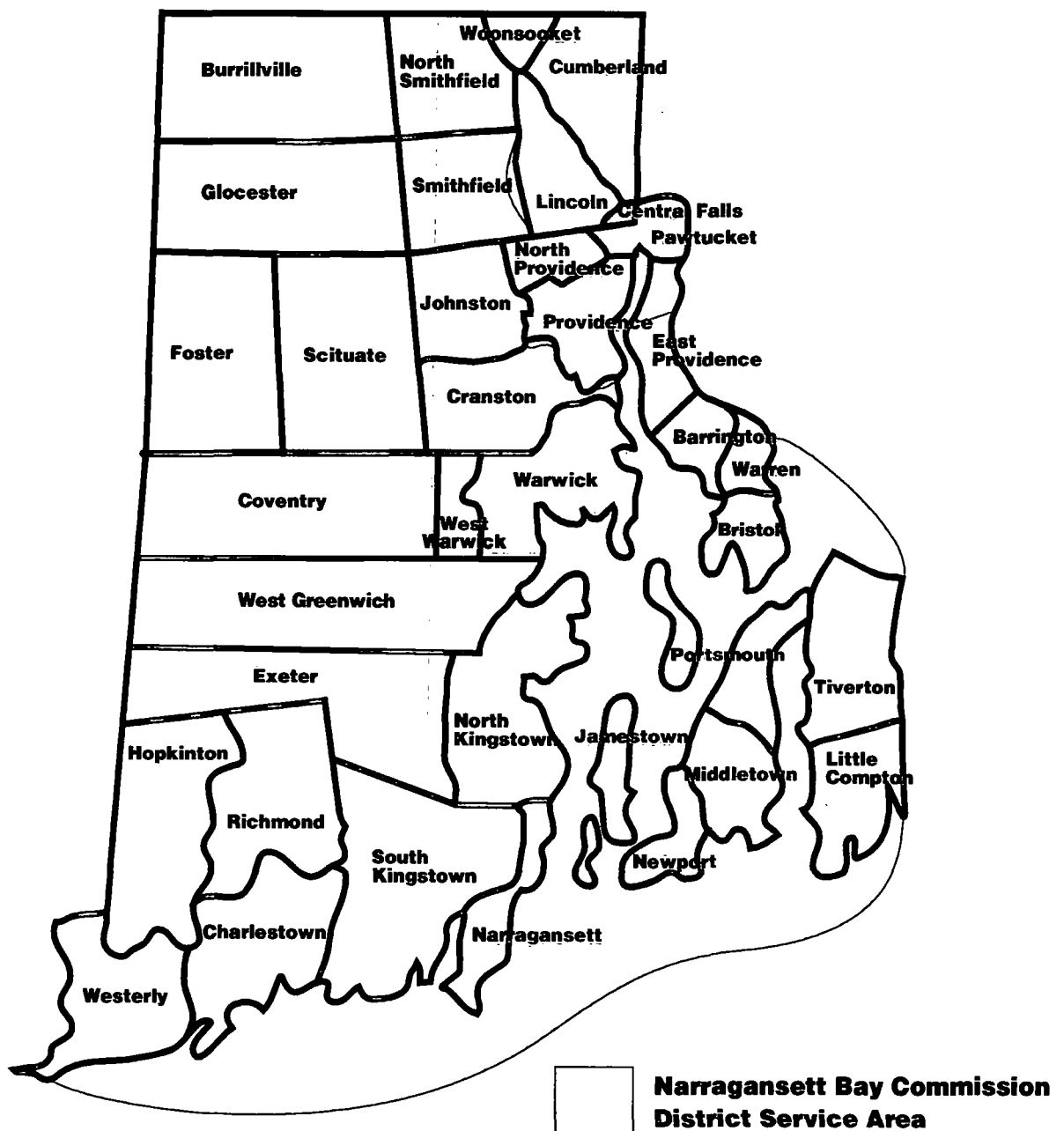
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# Narragansett Bay Commission

## Service Area

*The Narragansett Bay Commission is Rhode Island's largest wastewater authority dedicated to providing reliable, cost-effective wastewater collection and treatment services to over 360,000 residents and 8,000 businesses in ten Rhode Island communities in the metropolitan Providence and Blackstone Valley areas. These communities include: Providence, North Providence, Johnston, Pawtucket, Central Falls, Cumberland, Lincoln, the northern portion of East Providence and small sections of Cranston and Smithfield.*



# **Project Listings**

# FY 2001 - 2005 CAPITAL IMPROVEMENT PROGRAM

## PROJECT LIST

<b>WASTEWATER TREATMENT FACILITY IMPROVEMENTS</b>		<b>2001-2005</b>
CONTRACT 101: FINAL CLARIFIERS AND CONTROL SYSTEM	\$	- *
CONTRACT 102:FPWWTF DRY WEATHER AND CSO CHLORINATION/DECHLORINATION SYSTEM	\$	- *
CONTRACT 103: SHORT TERM SOLIDS HANDLING IMPROVEMENTS	\$	11,755,000
CONTRACT 104: SEPTAGE RECEIVING FACILITIES	\$	1,000,000
CONTRACT 105: FPWWTF STORAGE BUILDING AND MISCELLANEOUS CSO AND OTHER IMPR.	\$	50,000
CONTRACT 108: Y2K COMPLIANCE PROGRAM	\$	15,000
CONTRACT 109: FIELD'S POINT FACILITIES PLAN AMENDMENT	\$	125,000
CONTRACT 807: BPWWTF IMPROVEMENTS	\$	44,246,000
CONTRACT 807CD: BPWWTF IMPROVEMENTS - DECHLORINATION FACILITIES	\$	15,000
CONTRACT 809: BUCKLIN POINT NORTH LANDFILL CLOSURE	\$	- *
SITE SPECIFIC CRITERIA	\$	200,000
FIELD'S POINT: ROYCE SLUDGE ANALYZERS FOR 9 CLARIFIERS	\$	- *
FIELD'S POINT: REPLACEMENT OF GRAVITY THICKNER CATWALKS	\$	- *
FIELD'S POINT: PAINTING AND REPLACEMENT BUCKET FOR ASH CRANE	\$	50,000
FIELD'S POINT: REPLACEMENT OF DUMPSTERS	\$	50,000
LABORATORY EQUIPMENT: ICP/MS	\$	200,000
LABORATORY EQUIPMENT: MERCURY ANALYZER	\$	- *
SUBTOTAL		\$ 57,706,000
<b>SEWER SYSTEM IMPROVEMENTS</b>		<b>2001-2005</b>
CONTRACT 302.2: CSO REASSESSMENT	\$	- *
CONTRACT 302.03: COMPREHENSIVE COMBINED SEWER OVERFLOW PROGRAM	\$	132,400,000
CONTRACT 304: EVALUATION AND CLEANING OF CSO INTERCEPTORS	\$	250,000
CONTRACT 304.2C: BRANCH AVENUE INTERCEPTOR REHABILITATION	\$	59,000
CONTRACT: 304.03 SAYLESVILLE PS FORCE MAIN	\$	337,000
CONTRACT 305: CSO 2B HEADWALL IMPROVEMENTS	\$	- *
CONTRACT 504: IMPROVEMENTS TO NBC-OWNED INTERCEPTORS IN JOHNSTON	\$	- *
CONTRACT 701: REPLACEMENT OF THE SAYLESVILLE PUMPING STATION	\$	- *
CONTRACT 702: INFILTRATION/INFLOW STUDY: LOUISQUISSET PIKE AREA	\$	- *
CONTRACT 704P: INVESTIGATION AND REHAB. OF WASHINGTON HWY AND OMEGA PUMP STS	\$	25,000
CONTRACT 903: GEOGRAPHIC INFORMATION SYSTEM IMPLEMENTATION	\$	193,000
SUBTOTAL		\$ 133,264,000
<b>BUILDINGS AND GROUNDS</b>		<b>2001-2005</b>
PURCHASE AND MODIFICATIONS TO THE HUDSON BUILDING	\$	3,575,000
VEHICLE REPLACEMENTS	\$	590,000
SUBTOTAL		\$ 4,165,000
<b>GRAND TOTAL</b>		<b>\$ 195,135,000</b>

\*project costs through FY 2000 only.



# **Section I**

## *CIP Overview*

## FISCAL YEAR 2001 - 2005 CAPITAL IMPROVEMENT PROGRAM

This year's Capital Improvement Program (CIP) identifies over \$195 million of capital improvement projects in progress, to be initiated or completed within the five fiscal years of 2001-2005. It also reflects total expenditures of approximately \$280 million for the completion of all scheduled projects.

The CIP defines each capital project, as a capital expenditure greater than \$20,000, by functional area (wastewater treatment facilities, sewer systems, and buildings and grounds). Cash flow projections for each project are shown along with the functional area, funding sources and projected schedule. Project costs are also depicted by phase (planning, design, and construction).

There are many factors that can impact the Narragansett Bay Commission's (NBC) 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 Loan Fund program (SRF) and pending federal legislation to accurately reflect the costs associated with the funding of this program and the resulting impact upon users within the service area.

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. These costs are reflected in the debt service calculations.

## SIGNIFICANT CAPITAL PROJECTS

### Contract 302.03: Phase I Combined Sewer Overflow (CSO) Facilities

The Combined Sewer Overflow (CSO) Facilities Project represents 68% of the total costs outlined in this plan. It remains the most significant project underway at the NBC.

Phase I is the first of three phases that comprise the Commission's CSO Program. In March of 1993, after several years of study, the NBC originally approved a comprehensive CSO Abatement Program that would cost \$559 million to construct. The NBC received final approval from the Rhode Island Department of Environmental Management (RIDEM) in July of 1994 and began preliminary design of the "high priority" facilities identified in the program. In April 1994, shortly before RIDEM approved the NBC program, the United States Environmental Protection Agency (USEPA) adopted a national CSO policy

and offered the potential of reducing the cost of the CSO abatement program, which was the biggest issue raised against the proposed program.

Based upon this new guidance, the NBC decided to reassess its proposed program to determine if a less expensive program could be developed and still meet regulatory requirements.

With the assistance of a stakeholders group, a revised CSO abatement plan was selected in August 1997. This new program was selected because it has the lowest operation and maintenance cost and construction costs are approximately \$170 million less than the originally proposed plan. This new proposed CSO abatement plan which will be implemented in three phases is expected to cost \$389 million. On April 17, 1998 the NBC submitted the revised plan embodied in a Concept Design Report Amendment to RIDEM. This plan was approved by DEM on July 12, 1999. The description, schedule, and costs reflected in the detailed portion of project listings in this document are for the first phase only. At the end of this phase, the NBC is committed to a two-year re-evaluation period to evaluate the water quality improvements and reassess the technologies to determine if future phases of the plan should be modified. The NBC has fully explored all available alternatives for satisfying the Federal Clean Water Act mandate to eliminate or mitigate the CSO's in its service area. The stakeholder process, along with the assistance of Louis Berger and Associates, Inc., has resulted in a program that will impose the least cost burden on NBC's ratepayers while meeting regulatory requirements.

Because of the enormous cost burden of the CSO project, the NBC is currently lobbying its Rhode Island Congressional Delegation for their assistance to advocate on our behalf in congress for a special federal appropriation to offset a portion of the financial burden associated with the implementation of the CSO program.

## PROGRAM CHANGES

### Wastewater Treatment Facilities (WWTF)

One project that has been removed from this year's CIP was Contract 803: Bucklin Point Wastewater Treatment Facility Service Building Improvements. Although this project was declared complete on February 14, 1997, retainage was not released until FY 1999.

Projects added this year include Contract 108: Y2K Compliance, which will identify and replace any non-compliant Y2K equipment and Contract 109: Fields Point Facilities Plan Amendment. This plan will evaluate how to meet new

permit requirements for nitrogen and any other improvements or equipment replacement needed at the Field's Point Wastewater Treatment Facility.

Improvements in NBC's laboratory are needed to continue to comply with EPA requirements. This year's CIP includes the purchase of additional monitoring equipment for the laboratory section, which will enhance laboratory performance when analyzing industrial waste samples in accordance with these EPA requirements. The Automatic Ammonia System has been removed because the estimated cost for a purchase of an Automatic Ammonia System have dropped below \$20,000.

#### Sewer System

Contract 404: Gano Street to Pitman Street interceptor replacement has been completed and the CSO Flowmeter project was incorporated into Contract 302.03.

Contract 304.03: Saylesville Pump Station Force Main Improvements has been added to this year's CIP. This project will determine the extent of the improvements needed for the force main since a leak was detected there in October 1998.

#### Buildings and Grounds

The Office Space Planning Project has been renamed the NBC Corporate Headquarters Building project. This project will establish a corporate headquarters to centralize all of NBC's main administration functions, laboratory operation, interceptor-construction-maintenance, pretreatment and environmental monitoring sections to one location.

#### COSTS BY FUNCTIONAL AREA

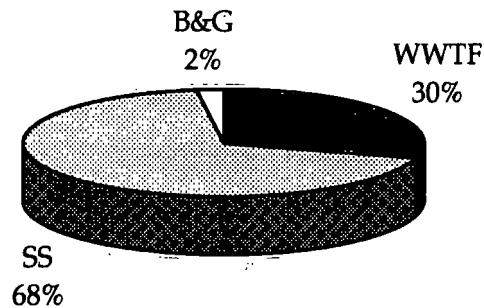
The capital projects have been assigned to functional area as follows:

Field's Point and Bucklin Point Wastewater Treatment Facility (WWTF) improvements include the contracts related to facility improvements, laboratory, septage receiving and various facility maintenance projects. Sewer System (SS) improvements include the Combined Sewer Overflow project, interceptor rehabilitation, sewer construction, and pumping station improvements. Buildings and Grounds (BG) projects include building repair and equipment purchases to support NBC staff.

Of the \$195 million in capital improvements scheduled over the five year period, 68% or \$133.2 million of the total costs are in the sewer system category; 30% or

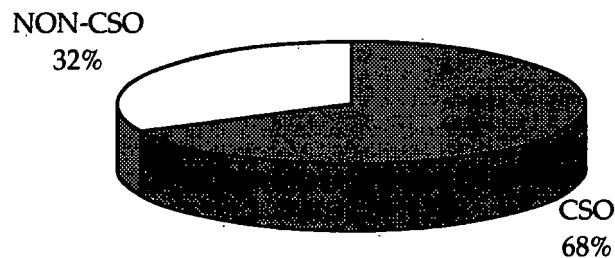
\$57.8 million are for wastewater treatment facility improvements; and 2% or \$4.2 million are for buildings and grounds projects. These costs are depicted in the chart below.

### **COST BY FUNCTIONAL AREA**



To readily view the magnitude of the CSO program, the chart below shows that the CSO program related costs account for \$132 million or 68% of the total five-year capital program.

### **CSO vs. NON-CSO**



### **FISCAL IMPACT**

The CIP is a planning document and the costs and schedules it reflects are based on the best available information. Experience has shown that as projects proceed from planning to construction, costs generally increase. There are several funding sources for scheduled CIP projects and many projects will have funding

from more than one source. The funding options available are described in the following paragraphs.

### Grants

In the past, Federal grants were provided by the United States 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 of 15% of the total eligible project cost. The Construction Grants Program has been phased out and replaced with the State Revolving Loan Fund.

### BVDC Bonds

The NBC merged with the former Blackstone Valley District Commission (BVDC) on January 1, 1992. The former BVDC had the use of state general obligation (g.o.) bonds 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 based on the proportion of the community's flow to the total flow. As a result of NBC's most recent rate filing, all debt service is now billed directly to the users.

### Bay Bonds

In 1980, an \$87.7 million bond issue was passed by the voters to finance improvements to the NBC sewer system that 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 passed in the 1992 general election to replace these funds. As a result, voters have authorized a total of \$93.7 million in Bay Bonds for NBC. A total of \$73.9 million has been issued to date.

Of the \$93.7 million authorized, R.I. General Law 46-25 requires that NBC users be responsible for the debt service on \$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 of \$0.574 million of

the unissued \$19.735 million Bay Bonds. The remaining amount will become an obligation of the State.

The State Budget Office is responsible for the issuance of Bay Bonds on behalf of NBC. The projected availability of Bay Bonds noted in the CIP is consistent with the State of Rhode Island's Capital Budget. It should be noted, however, that the State occasionally modifies the bond issuance schedule set forth in the State Capital Budget.

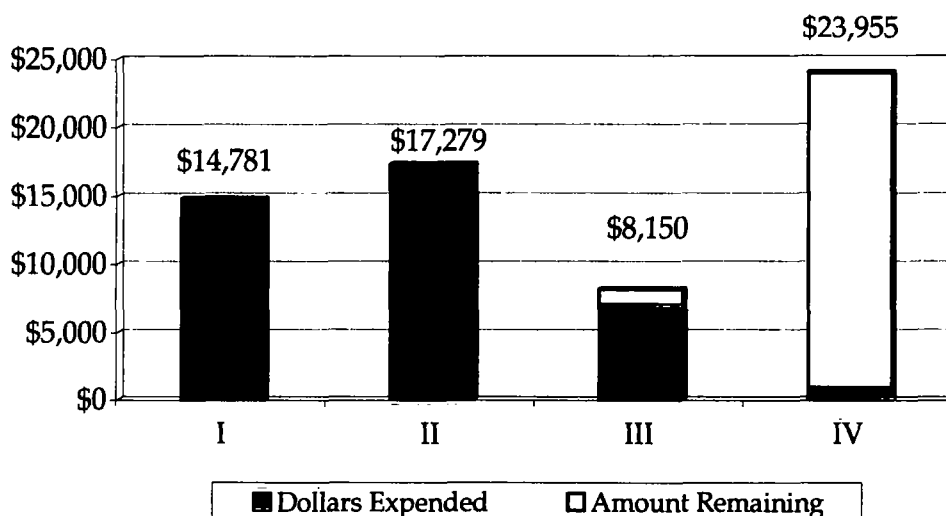
#### State Revolving Fund (SRF)

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. According to officials at the Rhode Island Clean Water Finance Agency (RICWFA), \$193 million is the maximum funding available through the end of fiscal year 2005. The actual amount that will be available is dependent upon congressional action and the borrowings of other Rhode Island communities.

The Rhode Island Clean Water Finance Agency administers the SRF program. 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 RIDEM. 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 received four different loans from the Rhode Island Clean Water Finance Agency. These Pool Loans are used to finance numerous NBC capital projects. The chart on the following page shows the total of each pool loan, total funds expended to date, and the remaining balance available.

## Rhode Island Clean Water Finance Agency Pool Loans



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 only to finance those projects that are not eligible for SRF funding or once all SRF funds are exhausted. The financing costs associated with the issuance of revenue bonds are reflected in the debt service calculations. This year's CIP does not propose to fund any projects with revenue bonds since it is the NBC's most expensive means of financing capital improvements.

### 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 via a restricted account.

### 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 below.

Table 1  
(Cash Flow Basis in Thousand \$'s)

Wastewater Treatment Facilities

Funding Source	FY 01	FY 02	FY 03	FY 04	FY 05	Total
Grant	-	-	-	-	-	-
BVDC Bonds	-	-	-	-	-	-
Bay Bonds	15	-	-	-	-	15
SRF	18,469	18,338	17,180	3,404	-	57,391
Revenue Bonds	-	-	-	-	-	-
Rep. Reserve	-	200	50	-	-	250
Op. Budget	50	-	-	-	-	50
Total	18,534	18,538	17,230	3,404	-	57,706

Sewer System Improvements

Funding Source	FY 01	FY 02	FY 03	FY 04	FY 05	Total
Grant	-	-	-	-	-	-
BVDC Bonds	-	-	-	-	-	-
Bay Bonds	10,000	9,161	-	-	-	19,161
SRF	864	21,439	30,600	30,600	30,600	114,103
Revenue Bonds	-	-	-	-	-	-
Rep. Reserve	-	-	-	-	-	-
Op. Budget	-	-	-	-	-	-
Total	10,864	30,600	30,600	30,600	30,600	133,264

Buildings and Grounds

Funding Source	FY 01	FY 02	FY 03	FY 04	FY 05	Total
Grant	-	-	-	-	-	-
BVDC Bonds	-	-	-	-	-	-
Bay Bonds	-	-	-	-	-	-
SRF	2,520	1,055	-	-	-	3,575
Revenue Bonds	-	-	-	-	-	-
Rep. Reserve	155	140	150	105	40	590
Op. Budget	-	-	-	-	-	-
Total	2,675	1,195	150	105	40	4,165

The estimated cost of the projects identified in this year's capital program is approximately \$195 million between FY 2001 - FY 2005. Table 2 summarizes the projected cash flows from each of the funding sources.

Table 2  
(In Thousand \$'s)

Total Funding Costs

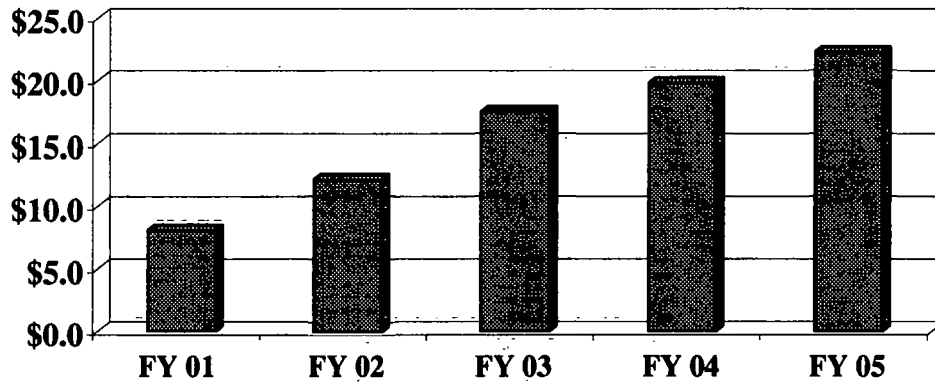
Funding Source	FY 01	FY 02	FY 03	FY 04	FY 05	Total
Grant	-	-	-	-	-	-
BVDC Bonds	-	-	-	-	-	-
Bay Bonds	10,015	9,161	-	-	-	19,176
SRF	21,853	40,832	47,780	34,004	30,600	175,069
Revenue Bonds	-	-	-	-	-	-
Rep. Reserve	155	340	200	105	40	840
Op. Budget	50	-	-	-	-	50
<b>Total</b>	<b>32,073</b>	<b>50,333</b>	<b>47,980</b>	<b>34,109</b>	<b>30,640</b>	<b>195,135</b>

Based on the State's current capital budget, existing bond authorizations, and projected rates of expenditure, it appears that the Bay Bonds will be exhausted by fiscal year 2002. At that point, the NBC will pursue the use of SRF funds as the least costly alternative and will utilize the SRF program as its primary source of funding for NBC's capital program. Approximately \$175 million in SRF funds are anticipated to be expended between FY 2001 through FY 2005.

IMPACT ON TOTAL ANNUAL REVENUE REQUIREMENTS  
AND SEWER USER FEES

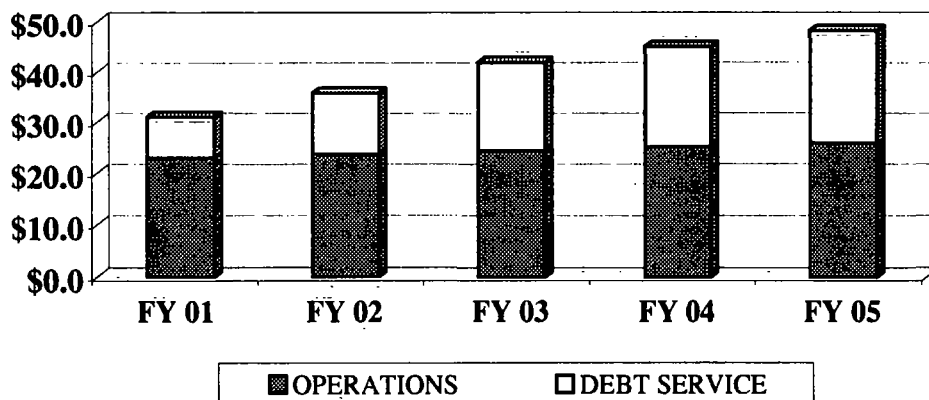
As the NBC proceeds with the construction phase of the CSO abatement project and financing resources become more costly, the impact of the capital program on NBC's budget and ultimately its users becomes more significant. In order to assess the fiscal impact of the improvements, debt service payments have been estimated from the cash flow projections. As shown graphically on the next page, annual debt service increases from \$8.1 million in fiscal year 2001 to \$22.4 million in fiscal year 2005.

**ANNUAL DEBT SERVICE**  
(In Millions \$'s)



Assuming a reasonable increase of 3% per year to the operating budget (minus debt service) and beginning in fiscal year 2001, NBC's total revenue requirement will increase from \$31.1 million in FY 2001 to approximately \$48.3 million in fiscal year 2005. Of this amount, debt service would account for 26% of the total annual budget in FY 2001 and approximately 46% of the total annual budget in FY 2005 as shown in the following graph.

**ANNUAL REVENUE REQUIREMENT**  
(In Million \$'s)



## SEWER USER FEES

The Public Utilities Commission (PUC) regulates the NBC. Any modifications to NBC user fees are subject to a lengthy review and approval process by the PUC. NBC's approved revenue requirement as of July 1, 1999 is \$30.4 million. Included in this revenue requirement is an allowance of \$7.2 million for debt service and debt service coverage on SRF loans. This capital program will require additional rate relief to fund debt service.

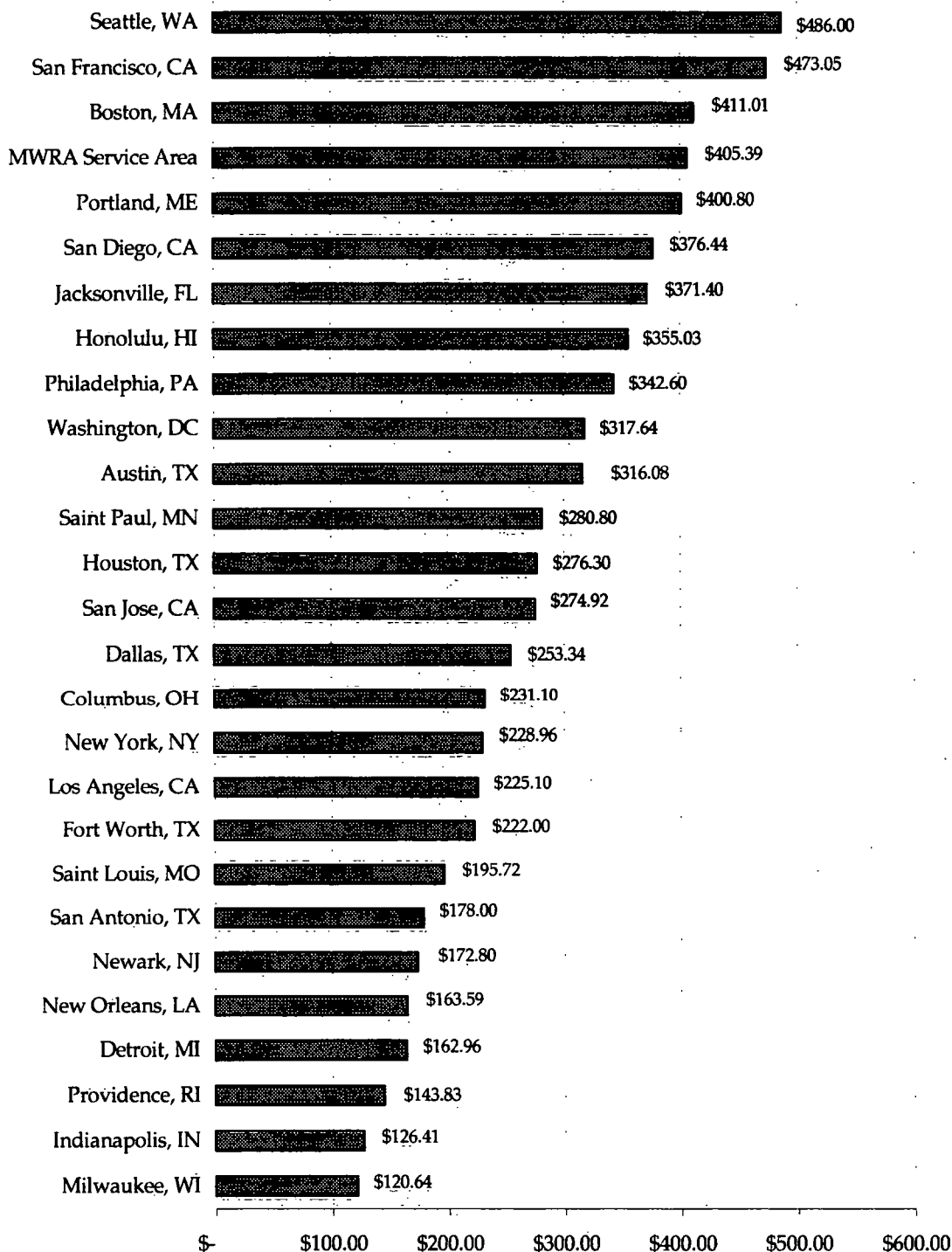
Despite the substantial number of capital improvements that the NBC has made to its facilities it should be noted that the NBC and its users continue to enjoy one of the lowest annual sewer user bills both locally and nationally.

Below is a comparison of NBC's current residential sewer rates with other Rhode Island Communities.

MUNICIPALITY / WASTEWATER TREATMENT FACILITY	ANNUAL SEWER USER FEE	BASED ON 200 GPD or 97.6 HCF
EAST PROVIDENCE	\$10.00 Plus \$1.06/hcf over 35 hcf	\$76.36
WOONSOCKET	Flat Rate \$91.58	\$91.58
NBC FIELD'S POINT	\$44.23 Plus \$.85/hcf	\$127.19
SOUTH KINGSTOWN	Flat Rate: \$140 Plus \$1.74/hcf over 100 hcf*	\$140.00
NBC BUCKLIN POINT	\$44.23 Plus \$.99/hcf	\$140.85
WESTERLY	Flat Rate \$148.00 *	\$148.00
EAST GREENWICH	\$1.90/hcf for 85% of Water Usage	\$157.62
SMITHFIELD	Flat Rate \$162.00 *	\$162.00
NORTH SMITHFIELD	Flat Rate \$180 *	\$180.00
BRISTOL	Flat Rate \$183.00 *	\$183.00
WARWICK	\$45.42 Plus \$1.91/hcf For 85% of Water Usage *	\$203.85
BARRINGTON	\$2.15/hcf	\$209.84
BURRILLVILLE	Flat Rate \$222.00 *	\$222.00
CRANSTON	Flat Rate \$236.21	\$236.21
WEST WARWICK	\$73.27, Plus \$2.34/hcf For 80% of Water Usage	\$255.95
MIDDLETOWN	\$3.22/hcf	\$314.27
NARRAGANSETT	Flat Rate \$345.00 Plus \$2.75/hcf for 101-200 hcf; \$3.25/hcf for 201-300 hcf; Over 301 hcf - \$2.75/hcf	\$345.00
JAMESTOWN	\$3.57/hcf	\$348.43
NEWPORT	\$3.68/hcf	\$359.17
WARREN	Ad-Valorem Taxes	N/A
AVERAGE	EXISTING RATE:	\$205.33

Source: NBC's 1998 user fee survey

A survey comparing annual residential sewer charges for major U.S. Cities conducted by the Massachusetts Water Resource Authority (MWRA) in 1998 showed that Providence ranked 3<sup>rd</sup> lowest in the country.



Source: 1998 MWRA Water & Sewer Retail Rate Survey

## **Section II**

### *Detailed Project Listings*

# **Wastewater Treatment Facility Improvements**

# WASTEWATER TREATMENT FACILITY PROJECTS ...A LISTING

The following is a listing of the 19 Wastewater Treatment Facility Projects which  
have been included in the Capital Improvement Program.  
An explanation and cost breakdown of each of these projects  
is included in this section. The total costs of these  
projects during this five year period is  
\$57,706,000

<b>PROPOSED PROJECT</b>	<b>2001-2005</b>	
CONTRACT 101: FINAL CLARIFIERS AND CONTROL SYSTEM	\$ -	*
CONTRACT 102:FPWWTF DRY WEATHER AND CSO CHLORINATION/DECHLORINATION SYSTEM	\$ -	*
CONTRACT 103: SHORT TERM SOLIDS HANDLING IMPROVEMENTS	\$ 11,755,000	
CONTRACT 104: SEPTAGE RECEIVING FACILITIES	\$ 1,000,000	
CONTRACT 105: FPWWTF STORAGE BUILDING AND MISCELLANEOUS CSO AND OTHER IMPR.	\$ 50,000	
CONTRACT 108: Y2K COMPLIANCE PROGRAM	\$ 15,000	
CONTRACT 109: FIELD'S POINT PLAN AMENDMENT	\$ 125,000	
CONTRACT 807: BPWWTF IMPROVEMENTS	\$ 44,246,000	
CONTRACT 807CD: BPWWTF IMPROVEMENTS - DECHLORINATION FACILITIES	\$ 15,000	
CONTRACT 809: BUCKLIN POINT NORTH LANDFILL CLOSURE	\$ -	*
SITE SPECIFIC CRITERIA	\$ 200,000	
FIELD'S POINT: ROYCE SLUDGE ANALYZERS FOR 9 CLARIFIERS	\$ -	*
FIELD'S POINT: REPLACEMENT OF GRAVITY THICKENER CATWALKS	\$ -	*
FIELD'S POINT: PAINTING AND REPLACEMENT BUCKET FOR ASH CRANE	\$ 50,000	
FIELD'S POINT: REPLACEMENT OF DUMPSTERS	\$ 50,000	
LABORATORY EQUIPMENT: ICP/MS	\$ 200,000	
LABORATORY EQUIPMENT: MERCURY ANALYZER	\$ -	*
SUBTOTAL		\$ 57,706,000

\*project costs through FY 2000 only.



# CONTRACT 101:

## PROJECT DESCRIPTION

### FPWWTF IMPROVEMENTS TO FINAL CLARIFIER AND CONTROL SYSTEM UPGRADE

Contract 101 encompasses several improvements to the FPWWTF including: the demolition of the seven (7) existing final clarifiers chlorine field lab and chlorine contact tank; construction of three (3) 125 foot final clarifiers; a return sludge pump station; a valve station and a splitter box; replacement of the existing instrumentation and control computer system; and other miscellaneous improvements throughout the plant. This project was declared substantially complete on February 14, 1997.

## PROJECT FINANCING & EXPENDITURES (Cash Flow Basis in Thousand \$)

FUNDING SOURCE	BEFORE JULY '99	FY '00	FY '01	FY '02	FY '03	FY '04	FY '05	5 YEAR TOTAL	AFTER FY '05	TOTAL COSTS
GRANT								0		0
BVDC BONDS								0		0
BAY BONDS	163							0		163
SRF	12,193	75						0		12,268
REVENUE BONDS								0		0
REP. RESERVE								0		0
OP. BUDGET								0		0
<b>TOTAL</b>	<b>12,356</b>	<b>75</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12,431</b>

## PROJECT COST BY PHASE

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 2/97 (28 months)	\$11,390
<b>TOTAL</b>		<b>\$12,431</b>

**CONTRACT 102 :**

**FPWWTF DRY WEATHER AND  
CSO  
CHLORINATION/  
DECHLORINATION  
SYSTEM**

**PROJECT DESCRIPTION**

This design and construction project will implement the recommendation for the Field's Point portion of the Facilities Plan Amendment for Disinfection Alternatives at the Field's Point and Bucklin Point WWTF's. At Field's Point it is recommended that sodium hypochlorite be used for disinfection and sodium bisulfite for dechlorination. The recommendation for the Bucklin Point WWTF will be implemented separately under Contract 807 (Bucklin Point WWTF Improvements). Substantial completion was declared on March 1, 1999

**PROJECT FINANCING & EXPENDITURES**  
(Cash Flow Basis in Thousand \$)

FUNDING SOURCE	BEFORE JULY '99	FY '00	FY '01	FY '02	FY '03	FY '04	FY '05	5 YEAR TOTAL	AFTER FY '05	TOTAL COSTS
GRANT								0		0
BVDC BONDS								0		0
BAY BONDS	3,653							0		3,653
SRF	290	100						0		390
REVENUE BONDS								0		0
REP. RESERVE								0		0
OP. BUDGET								0		0
<b>TOTAL</b>	<b>3,943</b>	<b>100</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,043</b>

**PROJECT COST BY PHASE**

Phase	Project Schedule	Cost By Phase
PLANNING	Completed as part of 102P	\$253
DESIGN	From 3/96 to 11/96 (9 Months)	\$290
CONSTRUCTION	From 7/97 to 3/99 (20 Months)	\$3,500
<b>TOTAL</b>		<b>\$4,043</b>

**CONTRACT 103:**

**SHORT TERM  
SOLIDS  
HANDLING  
IMPROVEMENTS**

**PROJECT DESCRIPTION**

This project implements a variety of improvements that are required to enable the NBC to continue to incinerate sludge at its Field's Point facility. The improvements will be constructed in two phases. The first phase will implement improvements to the dewatering facilities resulting in more reliable operations. This includes the construction of a new building attached to the existing incinerator building which will house new dewatering and conveying equipment. The existing filter building, interim solids handling building and abandoned incinerator will be demolished under the first phase of the contract. The second phase will implement improvements to the incinerator facilities to improve fine particulate and metal emissions.

**PROJECT FINANCING & EXPENDITURES**

(Cash Flow Basis in Thousand \$)

FUNDING SOURCE	BEFORE JULY '99	FY '00	FY '01	FY '02	FY '03	FY '04	FY '05	5 YEAR TOTAL	AFTER FY '05	TOTAL COSTS
GRANT								0		0
BVDC BONDS								0		0
BAY BONDS								0		0
SRF	1,267	2,603	3,495	4,694	3,566			11,755		15,625
REVENUE BONDS								0		0
REP. RESERVE								0		0
OP. BUDGET								0		0
<b>TOTAL</b>	<b>1,267</b>	<b>2,603</b>	<b>3,495</b>	<b>4,694</b>	<b>3,566</b>	<b>0</b>	<b>0</b>	<b>11,755</b>	<b>0</b>	<b>15,625</b>

**PROJECT COST BY PHASE**

Phase	Project Schedule	Cost By Phase
PLANNING	From 2/96 to 7/97 (18 Months)	\$239
DESIGN	From 10/97 to 9/99 (24 Months)	\$1,301
CONSTRUCTION	From 1/00 to 5/03 (41 Months)	\$14,085
<b>TOTAL</b>		<b>\$15,625</b>

**Project Description**

**CONTRACT 104:**

**SEPTAGE  
RECEIVING  
FACILITY**

The facilities planning study and marketing survey for septage receiving concluded that there are sufficient septage receiving facilities within the State of Rhode Island to handle the septage generated. However, certain aspects of the Lincoln Septage Receiving Facility need upgrading to address the operational inefficiencies. The identified areas of need are: more efficient method of grit removal; odor control to meet existing and additional needs resulting from the new grit removal system; construction of bathroom and sampling areas, and an evaluation of existing HVAC system and capacities. This project involves the design and construction of these facilities.

**PROJECT FINANCING & EXPENDITURES**  
(Cash Flow Basis in Thousand \$)

FUNDING SOURCE	BEFORE JULY '99	FY '00	FY '01	FY '02	FY '03	FY '04	FY '05	5 YEAR TOTAL	AFTER FY '05	TOTAL COSTS
GRANT								0		0
BVDC BONDS	144							0		144
BAY BONDS								0		0
SRF	69	300	970	30				1,000		1,369
REVENUE BONDS								0		0
REP. RESERVE								0		0
OPER. BUDGET								0		0
<b>TOTAL</b>	<b>213</b>	<b>300</b>	<b>970</b>	<b>30</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,000</b>		<b>1,513</b>

**PROJECT COST BY PHASE**

Phase	Project Schedule	Cost By Phase
PLANNING	From 3/95 through 2/97 (24 Months)	\$97
DESIGN	From 4/97 through 7/99 (27 Months)	\$116
CONSTRUCTION	From 11/99 through 11/00 (12 Months)	\$1,300
<b>TOTAL</b>		<b>\$1,513</b>

**PROJECT DESCRIPTION**

**CONTRACT 105:**

**FPWWTF STORAGE  
BUILDING AND  
MISCELLANEOUS CSO  
AND OTHER  
IMPROVEMENTS**

This design and construction project will meet the storage needs at the FPWWTF and make other necessary improvements. The facilities plan amendment recommends the construction of a new building to the southeast of the grit facilities. This building will provide one location to store archived files, maintenance equipment and supplies. Space within the building will also be allocated to provide indoor parking for the scum truck during the winter months. Other improvements to be made at the FPWWTF include replacement of return activated sludge pipe support brackets, filling in of subterranean channels north of aeration tanks and installation of security cameras and improvements to the CSO wet weather facilities.

**PROJECT FINANCING & EXPENDITURES**  
(Cash Flow Basis in Thousand \$)

FUNDING SOURCE	BEFORE JULY '99	FY '00	FY '01	FY '02	FY '03	FY '04	FY '05	5 YEAR TOTAL	AFTER FY '05	TOTAL COSTS
GRANT								0		0
BVDC BONDS								0		0
BAY BONDS								0		0
SRF	2,000	450	50					50		2,500
REVENUE BONDS								0		0
REP. RESERVE								0		0
OPER. BUDGET								0		0
<b>TOTAL</b>	<b>2,000</b>	<b>450</b>	<b>50</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>50</b>		<b>2,500</b>

**PROJECT COST BY PHASE**

Phase	Project Schedule	Cost By Phase
PLANNING	Completed as part of Contract 101D	
DESIGN	Completed as part of Contract 101C	
CONSTRUCTION	From 4/98 to 9/99 (17 Months)	\$2,500
<b>TOTAL</b>		<b>\$2,500</b>

**CONTRACT 108:**

**PROJECT DESCRIPTION**

**Y2K COMPLIANCE  
PROGRAM**

A survey is being conducted for all embedded computer systems at Fields Point and Bucklin Point Wastewater Treatment facilities and pump stations. This project will identify any non-compliant equipment and include replacement of the non-compliant Ernest Street Pump Station computer control system.

**PROJECT FINANCING & EXPENDITURES**  
(Cash Flow Basis in Thousand \$)

FUNDING SOURCE	BEFORE JULY '99	FY '00	FY '01	FY '02	FY '03	FY '04	FY '05	5 YEAR TOTAL	AFTER FY '05	TOTAL COSTS
GRANT								0		0
BVDC BONDS								0		0
BAY BONDS								0		0
SRF	20	215	15					15		250
REVENUE BONDS								0		0
REP. RESERVE								0		0
OPER. BUDGET								0		
<b>TOTAL</b>	<b>20</b>	<b>215</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>15</b>	<b>0</b>	<b>250</b>

**PROJECT COST BY PHASE**

Phase	Project Schedule	Cost By Phase
PLANNING		
DESIGN		
CONSTRUCTION	From 1/99 to 12/99 ( 12 Months)	\$250
<b>TOTAL</b>		<b>\$250</b>

**CONTRACT 109:**

**PROJECT DESCRIPTION**

**FIELD'S POINT WWTF  
FACILITIES PLAN  
AMENDMENT**

It is anticipated that future revisions to the Fields Point Wastewater Treatment facilities permit will require the attainment of new standards for nitrogen and possibly other parameters. This facilities plan amendment will determine how to achieve these standards and also addresses other miscellaneous improvements such as covers for the primary tanks and improvements to the grit collection facilities.

**PROJECT FINANCING & EXPENDITURES**  
(Cash Flow Basis in Thousand \$)

FUNDING SOURCE	BEFORE JULY '99	FY '00	FY '01	FY '02	FY '03	FY '04	FY '05	5 YEAR TOTAL	AFTER FY '05	TOTAL COSTS
GRANT								0		0
BVDC BONDS								0		0
BAY BONDS								0		0
SRF		125	125					125		250
REVENUE BONDS								0		0
REP. RESERVE								0		0
OPER. BUDGET								0		0
<b>TOTAL</b>	<b>0</b>	<b>125</b>	<b>125</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>125</b>	<b>0</b>	<b>250</b>

**PROJECT COST BY PHASE**

Phase	Project Schedule	Cost By Phase
PLANNING	From 1/00 to 12/00 ( 12 Months)	\$250
DESIGN		
CONSTRUCTION		
<b>TOTAL</b>		<b>\$250</b>

**CONTRACT 807:**

**BPWWTF CSO  
FACILITIES AND  
OTHER  
IMPROVEMENTS**

**PROJECT DESCRIPTION**

A Facilities Plan Amendment (FPA) has been prepared to evaluate improvements needed at the Bucklin Point WWTF to provide wet weather primary capacity of 116 MGD during storms and secondary capacity of 46 MGD over sustained periods of time. Improvements currently proposed in design are: new influent pumping station, new screening and grit handling facilities, new dry weather primary settling tanks, conversion of the existing primary tanks to wet weather treatment, conversion to a fine bubble aeration system, new UV disinfection facilities, new effluent pumping station for dry weather flows, new plant instrumentation and control system.

**PROJECT FINANCING & EXPENDITURES**  
(Cash Flow Basis in Thousand \$)

FUNDING SOURCE	BEFORE							5 YEAR TOTAL	AFTER FY '05	TOTAL COSTS
	JULY '99	FY '00	FY '01	FY '02	FY '03	FY '04	FY '05			
GRANT								0		0
BVDC BONDS								0		0
BAY BONDS	1,079							0		1,079
SRF	767	1,984	13,614	13,614	13,614	3,404		44,246		46,997
REVENUE BONDS								0		0
REP. RESERVE								0		0
OPER. BUDGET								0		0
<b>TOTAL</b>	<b>1,846</b>	<b>1,984</b>	<b>13,614</b>	<b>13,614</b>	<b>13,614</b>	<b>3,404</b>	<b>0</b>	<b>44,246</b>	<b>0</b>	<b>48,076</b>

**PROJECT COST BY PHASE**

Phase	Project Schedule	Cost By Phase
PLANNING	From 12/95 to 10/98 (34 Months)	\$485
DESIGN	From 2/98 to 7/00 (29 Months)	\$3,345
CONSTRUCTION	From 7/00 to 11/03 (39 Months)	\$44,246
<b>TOTAL</b>		<b>\$48,076</b>



**CONTRACT 807CD:**

**BPWWTF  
IMPROVEMENTS  
DECHLORINATION  
FACILITY**

**PROJECT DESCRIPTION**

The dechlorination facility provided by this project was part of the overall Bucklin Point Improvements, but has been placed into a separate project for construction to expedite the completion in accordance with Compliance Order RIO-052, which requires that the chlorine residual be removed from the Bucklin Point WWTF effluent within one year of RIDEM approval of the dechlorination design plans and specifications (estimated completion of construction - July 1999). The cost projections below are for the construction phase only as the planning and design phases of this project are included in the Bucklin Point Improvement project.

**PROJECT FINANCING & EXPENDITURES**  
(Cash Flow Basis in Thousand \$)

FUNDING SOURCE	BEFORE JULY '99	FY '00	FY '01	FY '02	FY '03	FY '04	FY '05	5 YEAR TOTAL	AFTER FY '05	TOTAL COSTS
GRANT								0		0
BVDC BONDS								0		0
BAY BONDS	380	505	15					15		900
SRF								0		0
REVENUE BONDS								0		0
REP. RESERVE								0		0
OPER. BUDGET								0		0
<b>TOTAL</b>	<b>380</b>	<b>505</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>15</b>		<b>900</b>

**PROJECT COST BY PHASE**

Phase	Project Schedule	Cost By Phase
PLANNING	From 12/95 to 11/97 (24 Months)	
DESIGN	From 11/97 to 7/98 (7 Months)	
CONSTRUCTION	From 7/98 to 7/99 (12 Months)	\$900
<b>TOTAL</b>		<b>\$900</b>

# CONTRACT 809:

## BPWWTF NORTH LANDFILL CLOSURE

### PROJECT DESCRIPTION

In response to capacity limitations and federal regulations, the NBC ceased landfilling sludge at the Bucklin Point North Landfill in February 1996. This project involves the activities required to permanently close the landfill. Regrading and seeding the site, as required by the landfill closure plan prepared by NBC and approved by RIDEM, was completed in FY 97. A fence surrounding the site and repair of the plant access road from the north gate to the parking lot was completed in FY99. The remaining work to be done involves adding remote controls to the landfill gate on Nassau Street.

### PROJECT FINANCING & EXPENDITURES

(Cash Flow Basis in Thousand \$)

FUNDING SOURCE	BEFORE		5 YEAR						AFTER FY '05	TOTAL COSTS
	JULY '99	FY '00	FY '01	FY '02	FY '03	FY '04	FY '05	TOTAL		
GRANT								0		0
BVDC BONDS								0		0
BAY BONDS								0		0
SRF								0		0
REVENUE BONDS								0		0
REP. RESERVE								0		0
OP. BUDGET	505	50						0		555
TOTAL	505	50	0	0	0	0	0	0		555

### PROJECT COST BY PHASE

Phase	Project Schedule	Cost By Phase
PLANNING	From 2/96 to 7/97 (Performed by NBC staff)	
DESIGN	From 5/95 to 11/95 (7 Months)	\$50
CONSTRUCTION	From 2/96 to 10/98 (32 Months) and 7/99 to 10/99 (3 months)	\$505
TOTAL		\$555

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

**PROJECT DESCRIPTION**

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 December 15, 1992 RIPDES consent agreement between RIDEM and NBC.

**PROJECT FINANCING & EXPENDITURES**  
(Cash Flow Basis in Thousand \$)

FUNDING SOURCE	BEFORE JULY '99	FY '00	FY '01	FY '02	FY '03	FY '04	FY '05	5 YEAR TOTAL	AFTER FY '05	TOTAL COSTS
GRANT								0		0
BVDC BONDS								0		0
BAY BONDS								0		0
SRF		100	200					200		300
REVENUE BONDS								0		0
REP. RESERVE								0		0
OP. BUDGET								0		0
<b>TOTAL</b>	<b>0</b>	<b>100</b>	<b>200</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>200</b>		<b>300</b>

**PROJECT COST BY PHASE**

Phase	Project Schedule	Cost By Phase
STUDY	From 9/99 through 8/00 (12 Months)	\$300
<b>TOTAL</b>		<b>\$300</b>

# FIELD'S POINT WWTF

## PROJECT DESCRIPTION

### ROYCE SLUDGE ANALYZERS FOR 9 CLARIFIERS.

Royce Sludge Analyzer meters have been installed and tested on 2 clarifier tanks at Field's Point. They are used to monitor sludge blankets in tanks and have transmitted accurate information.

## PROJECT FINANCING & EXPENDITURES (Cash Flow Basis in Thousand \$)

FUNDING SOURCE	BEFORE JULY '99	FY '00	FY '01	FY '02	FY '03	FY '04	FY '05	5 YEAR TOTAL	AFTER FY '05	TOTAL COSTS
GRANT								0		0
BVDC BONDS								0		0
BAY BONDS								0		0
SRF								0		0
REVENUE BONDS								0		0
REP. RESERVE								0		0
OPER. BUDGET		45						0		45
TOTAL	0	45	0	0	0	0	0	0	0	45

## PROJECT COST BY PHASE

Phase	Project Schedule	Cost By Phase
PLANNING	From 9/ 99 to 10/99 (1 Months)	\$2
DESIGN	From 11/99 to 12/99 (1 Months)	\$2
CONSTRUCTION	From 1/00 to 6/00 (6 Months)	\$41
TOTAL		\$45

**FIELD'S POINT WWTF**

**PROJECT DESCRIPTION**

**REPLACEMENT OF  
GRAVITY THICKENER  
CATWALKS.**

Replace 4 catwalks in Gravity Thickeners at Fields Point WWTF. Old catwalks are rusting and falling apart.

**PROJECT FINANCING & EXPENDITURES**  
(Cash Flow Basis in Thousand \$)

FUNDING SOURCE	BEFORE JULY '99	FY '00	FY '01	FY '02	FY '03	FY '04	FY '05	5 YEAR TOTAL	AFTER FY '05	TOTAL COSTS
GRANT								0		0
BVDC BONDS								0		0
BAY BONDS								0		0
SRF								0		0
REVENUE BONDS								0		0
REP. RESERVE		56						0		56
OPER. BUDGET								0		0
<b>TOTAL</b>	<b>0</b>	<b>56</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>56</b>

**PROJECT COST BY PHASE**

Phase	Project Schedule	Cost By Phase
PLANNING	From 8/99 to 10/99 ( 2 Months)	\$2
DESIGN	From 11/99 to 12/99 (1 Months)	\$2
CONSTRUCTION	From 1/00 to 6/00 (6 Months)	\$52
<b>TOTAL</b>		<b>\$56</b>

## FIELD'S POINT WWTF

## PROJECT DESCRIPTION

PAINTING AND  
REPLACEMENT  
BUCKET FOR ASH  
CRANE.

Painting is needed to protect metal from rusting.  
Replacement bucket needed as back-up for when original  
bucket is down for repairs so the ash lagoon can be  
emptied at Field's Point WWTF.

## PROJECT FINANCING & EXPENDITURES (Cash Flow Basis in Thousand \$)

FUNDING SOURCE	BEFORE JULY '99	FY '00	FY '01	FY '02	FY '03	FY '04	FY '05	5 YEAR TOTAL	AFTER FY '05	TOTAL COSTS
GRANT								0		0
BVDC BONDS								0		0
BAY BONDS								0		0
SRF								0		0
REVENUE BONDS								0		0
REP. RESERVE								0		0
OPER. BUDGET			50					50		50
TOTAL	0	0	50	0	0	0	0	50	0	50

## PROJECT COST BY PHASE

Phase	Project Schedule	Cost By Phase
PLANNING	From 8/00 to 12/00 (4 Months)	\$2
DESIGN	From 1/01 to 5/01 ( 5 Months)	\$2
CONSTRUCTION	From 5/01 to 6/01 (2 Months)	\$46
TOTAL		\$50

**FIELD'S POINT WWTF**

**PROJECT DESCRIPTION**

REPLACEMENT OF  
DUMPSTERS AT  
ERNEST ST. PUMP  
STATION OR  
CONVEYOR EXTENDED  
INTO CONTAINER

Dumpsters at Field's Point WWTF are getting worn. This project would investigate an alternate plan to replace dumpsters with an enclosed container and extending conveyor.

**PROJECT FINANCING & EXPENDITURES**  
(Cash Flow Basis in Thousand \$)

FUNDING SOURCE	BEFORE JULY '99	FY '00	FY '01	FY '02	FY '03	FY '04	FY '05	5 YEAR TOTAL	AFTER FY '05	TOTAL COSTS
GRANT								0		0
BVDC BONDS								0		0
BAY BONDS								0		0
SRF								0		0
REVENUE BONDS								0		0
REP. RESERVE					50			50		50
OPER. BUDGET								0		0
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>50</b>	<b>0</b>	<b>0</b>	<b>50</b>	<b>0</b>	<b>50</b>

**PROJECT COST BY PHASE**

Phase	Project Schedule	Cost By Phase
PLANNING	From 1/02 to 7/02 ( 6 Months)	\$3
DESIGN	From 7/02 to 12/02 ( 6 Months)	\$3
CONSTRUCTION	From 1/03 to 6/03 ( 6 Months)	\$44
<b>TOTAL</b>		<b>\$50</b>

**LABORATORY  
EQUIPMENT:**

**PURCHASE OF  
INDUCTIVELY  
COUPLED PLASMA/MASS  
SPECTROPHOTOMETER  
(ICP/MS)**

**PROJECT DESCRIPTION**

The continual lowering of metal detection limits by EPA requires the use of highly sensitive instruments. The EPA recommends the use of an ICP/MS for the metal analyses. This instrument has the detection power, sensitivity and elemental coverage to comply with the more stringent EPA regulations.

**PROJECT FINANCING & EXPENDITURES**  
(Cash Flow Basis in Thousand \$)

FUNDING SOURCE	BEFORE JULY '99	FY '00	FY '01	FY '02	FY '03	FY '04	FY '05	5 YEAR TOTAL	AFTER FY '05	TOTAL COSTS
GRANT								0		0
BVDC BONDS								0		0
BAY BONDS								0		0
SRF								0		0
REVENUE BONDS								0		0
REP. RESERVE				200				200		200
OP. BUDGET								0		0
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>200</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>200</b>		<b>200</b>

**PROJECT COST BY PHASE**

Phase	Project Schedule	Cost By Phase
PURCHASE	Fiscal Year 2001	\$200
<b>TOTAL</b>		<b>\$200</b>



**PROJECT DESCRIPTION**

**LABORATORY:**

A replacement unit which provides increased sensitivity for the determination of mercury. It will produce and meet EPA's new proposed detection limits.

**MERCURY  
ANALYZER**

**PROJECT FINANCING & EXPENDITURES**  
(Cash Flow Basis in Thousand \$)

FUNDING SOURCE	BEFORE JULY '99	FY '00	FY '01	FY '02	FY '03	FY '04	FY '05	5 YEAR TOTAL	AFTER FY '05	TOTAL COSTS
GRANT								0		0
BVDC BONDS								0		0
BAY BONDS								0		0
SRF								0		0
REVENUE BONDS								0		0
REP. RESERVE		27						0		0
OPER. BUDGET								0		0
<b>TOTAL</b>	<b>0</b>	<b>27</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**PROJECT COST BY PHASE**

Phase

Project Schedule

Cost By Phase

PURCHASE	FISCAL YEAR 2000	\$27
TOTAL		\$27

# **Sewer System Improvements**

# SEWER SYSTEM IMPROVEMENTS & MAINTENANCE PROJECTS ...A LISTING

The following is a listing of the 11 Sewer System & Maintenance Projects which  
have been included in the 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 five year period is  
\$133,264,000

<b>PROPOSED PROJECT</b>	<b>2001-2005</b>	
CONTRACT 302.2: CSO REASSESSMENT	\$ -	*
CONTRACT 302.03: PHASE I COMBINED SEWER OVERFLOW (CSO) FACILITIES	\$ 132,400,000	
CONTRACT 304: EVALUATION AND CLEANING OF CSO INTERCEPTORS	\$ 250,000	
CONTRACT 304.2C: BRANCH AVENUE INTERCEPTOR REHABILITATION	\$ 59,000	
CONTRACT 304.03: SAYLESVILLE PS FORCE MAIN	\$ 337,000	
CONTRACT 305: CSO 2B HEADWALL IMPROVEMENTS	\$ -	*
CONTRACT 504: IMPROVEMENTS TO NBC-OWNED INTERCEPTORS IN JOHNSTON	\$ -	*
CONTRACT 701: REPLACEMENT OF THE SAYLESVILLE PUMPING STATION	\$ -	*
CONTRACT 702: INFILTRATION/INFLOW STUDY: LOUISQUISSET PIKE AREA	\$ -	*
CONTRACT 704P: INVESTIGATION AND REHAB. OF WASHINGTON HWY AND OMEGA PUMP STS	\$ 25,000	
CONTRACT 903: GEOGRAPHIC INFORMATION SYSTEM IMPLEMENTATION	\$ 193,000	
	<b>SUBTOTAL</b>	<b>\$ 133,264,000</b>

\*project costs through FY 2000 only.

**CONTRACT 302.2:**

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

**REASSESSMENT**

**PROJECT DESCRIPTION**

Because of the rate impact that the CSO program will have on NBC users and changes that have occurred in the national CSO policy since the 1994 approval of the CSO Abatement Plan, the Commission convened a stakeholders group in early 1996 to review the proposed plan. This reassessment has resulted in a modified CSO control plan that is approximately \$170 million less than the originally proposed plan. The stakeholders' group also recommended that the Commission investigate revising its rate structure to include a stormwater user fee and investigate alternatives to prevent stormwater runoff from reaching the combined sewers. These are the only tasks that remain to be completed under this contract.

**PROJECT FINANCING & EXPENDITURES**

(Cash Flow Basis in Thousand \$)

FUNDING SOURCE	BEFORE JULY '99	FY '00	FY '01	FY '02	FY '03	FY '04	FY '05	5 YEAR TOTAL	AFTER FY '05	TOTAL COSTS
GRANT								0		0
BVDC BONDS								0		0
BAY BONDS	1,600	60						0		1,660
SRF								0		0
REVENUE BONDS								0		0
REP. RESERVE								0		0
OP. BUDGET								0		0
<b>TOTAL</b>	<b>1,600</b>	<b>60</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,660</b>

**PROJECT COST BY PHASE**

Phase	Project Schedule	Cost By Phase
PLANNING	From 1/96 to 12/99 (48 months)	\$1,660
<b>TOTAL</b>		<b>\$1,660</b>

**CONTRACT 302.03:  
PHASE I  
COMBINED  
SEWER  
OVERFLOW (CSO)  
FACILITIES**

**PROJECT DESCRIPTION**

Providence, Pawtucket and Central Falls all have combined sewers which overflow at approximately 84 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. A reassessment of the CSO control program that was approved by DEM in 1994 was completed in August 1997 after a series of 21 meetings in 20 months with a 40 member stakeholder's group. This reassessment has resulted in a proposed modification of the original control program. The new proposed program consists of two tunnels, the main spine (13,500 ft. long) and the Pawtucket tunnel (13,000 ft. long), two tunnel pump stations, five CSO interceptors and twelve sewer separation projects at a projected cost of \$389 million (1997 dollars). Contract 302.03 includes design and construction of the Phase I facilities (the main spine tunnel and pump station estimated at \$165 million) and is expected to be completed in about seven years. Upon completion of construction of Phase I, the proposed Phase II facilities will be reassessed to determine if any changes should be made to the plan. Cost estimate for Phase II facilities is \$72 million; for Phase III facilities is \$152 million. Also included in this project is the CSO flow monitoring which was listed as a separate project in the CIP in previous years. [The \$11 million cost to upgrade the Bucklin Point WWTF to handle CSO flows to the plant is included under contract 807.

**PROJECT FINANCING & EXPENDITURES  
(Cash Flow Basis in Thousand \$)**

FUNDING SOURCE	BEFORE JULY '99	FY '00	FY '01	FY '02	FY '03	FY '04	FY '05	5 YEAR TOTAL	AFTER FY '05	TOTAL COSTS
GRANT								0		0
BVDC BONDS								0		0
BAY BONDS	8,500	4,370	10,000	9,161				19,161		32,031
SRF	11,000	2,630		21,439	30,600	30,600	30,600	113,239	11,100	137,969
REVENUE BONDS								0		0
REP. RESERVE								0		0
OP. BUDGET								0		0
<b>TOTAL</b>	<b>19,500</b>	<b>7,000</b>	<b>10,000</b>	<b>30,600</b>	<b>30,600</b>	<b>30,600</b>	<b>30,600</b>	<b>132,400</b>	<b>11,100</b>	<b>170,000</b>

**PROJECT COST BY PHASE**

Phase

PLANNING
DESIGN
CONSTRUCTION
<b>TOTAL</b>

Project Schedule

From 1/92 to 7/98 (78 months)
From 7/93 to 10/00 (88 months)
From 7/01 to 12/05 (60 months)

Cost By Phase

\$6,600
\$19,900
\$143,500
<b>\$170,000</b>

\* Costs are in 1997 dollars

\*\* CSO related costs associated with Bucklin Point WWTF have been carried separately under Contract 807

**CONTRACT 304:**

**EVALUATION AND  
CLEANING OF CSO  
INTERCEPTORS**

**PROJECT DESCRIPTION**

This project involves the long term ongoing evaluation of interceptor sewers in the Commission's service area to determine their condition, develop solutions and to correct any problems that may be identified such as cleaning or repair. Interceptors currently identified as in need of evaluation are: Moshassuck Valley Interceptor; Blackstone Valley Interceptor; and Allens Avenue Interceptor. Interceptors identified as needing to be cleaned are: Southerly portion of the Seekonk River Interceptor; Elmwood/South Providence Interceptor; and Kinsley Avenue Interceptor. This project also includes conducting Infiltration/Inflow evaluations of the system as needed. The Branch Avenue interceptor in the vicinity of Silver Spring Street has been identified as in need of repair and is listed as a separate project under 304.2. [The Saylesville Pump Station force main is also in need of repair or replacement and has been identified as a separate project under 304.03]

**PROJECT FINANCING & EXPENDITURES**

(Cash Flow Basis in Thousand \$)

FUNDING SOURCE	BEFORE JULY '99	FY '00	FY '01	FY '02	FY '03	FY '04	FY '05	5 YEAR TOTAL	AFTER FY '05	TOTAL COSTS
GRANT	90							0		90
BVDC BONDS								0		0
BAY BONDS	20							0		20
SRF		250	250					250		500
REVENUE BONDS								0		0
REP. RESERVE								0		0
OP. BUDGET								0		0
<b>TOTAL</b>	<b>110</b>	<b>250</b>	<b>250</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>250</b>		<b>610</b>

**PROJECT COST BY PHASE**

Phase	Project Schedule	Cost By Phase
IMPLEMENTATION	From 7/97 to 6/01 (47 Months)	\$610
<b>TOTAL</b>		<b>\$610</b>

CONTRACT: 304.2C

**BRANCH AVENUE  
INTERCEPTOR  
REHABILITATION**

**PROJECT DESCRIPTION**

During a July 1997 inspection program, it was discovered that a partial failure of our 48 inch brick interceptor in the vicinity of Silver Spring Street on Branch Avenue had occurred. This contract will rehabilitate the interceptor as well as line approximately 2700 feet of the 48 inch interceptor in the same area.

**PROJECT FINANCING & EXPENDITURES**

(Cash Flow Basis in Thousand \$)

FUNDING SOURCE	BEFORE JULY '99	FY '00	FY '01	FY '02	FY '03	FY '04	FY '05	5 YEAR TOTAL	AFTER FY '05	TOTAL COSTS
GRANT										0
BVDC BONDS										0
BAY BONDS	3,141									3,141
SRF		600	59						59	659
REVENUE BONDS										0
REP. RESERVE										0
OP. BUDGET										0
<b>TOTAL</b>	<b>3,141</b>	<b>600</b>	<b>59</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>59</b>		<b>3,800</b>

**PROJECT COST BY PHASE**

Phase	Project Schedule	Cost By Phase
DESIGN	From 11/97 to 7/98 (8 Months)	\$240
CONSTRUCTION	From 9/98 to 9/99 (13 Months)	\$3,560
<b>TOTAL</b>		<b>\$3,800</b>

CONTRACT 304.03:

PROJECT DESCRIPTION

SAYLESVILLE PS  
FORCE MAIN

The facilities plan completed for the Saylesville Pump Station concluded that the force main for the station would need to be addressed during the useful life of the improved station. A leak was discovered in this force main in October 1998, which was subsequently repaired. Following this repair a study was initiated to determine the condition of the force main. The extent of improvements required will be determined from this study.

PROJECT FINANCING & EXPENDITURES  
(Cash Flow Basis in Thousand \$)

FUNDING SOURCE	BEFORE JULY '99	FY '00	FY '01	FY '02	FY '03	FY '04	FY '05	5 YEAR TOTAL	AFTER FY '05	TOTAL COSTS
GRANT								0		0
BVDC BONDS								0		0
BAY BONDS								0		0
SRF		163	337					337		500
REVENUE BONDS								0		0
REP. RESERVE								0		0
OPER. BUDGET								0		
TOTAL	0	163	337	0	0	0	0	337	0	500

PROJECT COST BY PHASE

Phase	Project Schedule	Cost By Phase
PLANNING	From 6/99 to 11/99 ( 5 Months)	\$70
DESIGN	From 12/99 to 2/00 ( 3 Months)	\$50
CONSTRUCTION	From 6/00 to 2/01 ( 8 Months)	\$380
TOTAL		\$500



**CONTRACT 305:**

**CSO 2B  
HEADWALL  
IMPROVEMENTS**

**PROJECT DESCRIPTION**

This project includes rebuilding the headwalls for seven (7) outfall pipes along the Woonasquatucket River. Although design was completed five years ago, construction could not start until fiscal year 1998 when the Rhode Island Department of Transportation (RIDOT) moratorium on road cuts on Promenade St. expired. This project was declared substantially complete on May 6, 1999.

**PROJECT FINANCING & EXPENDITURES**  
(Cash Flow Basis in Thousand \$)

FUNDING SOURCE	BEFORE		5 YEAR					AFTER FY '05	TOTAL COSTS
	JULY '99	FY '00	FY '01	FY '02	FY '03	FY '04	FY '05		
GRANT							0		0
BVDC BONDS							0		0
BAY BONDS	1,123	227					0		1,350
SRF							0		0
REVENUE BONDS							0		0
REP. RESERVE							0		0
OP. BUDGET							0		0
<b>TOTAL</b>	<b>1,123</b>	<b>227</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>		<b>1,350</b>

**PROJECT COST BY PHASE**

Phase	Project Schedule	Cost By Phase
<b>CONSTRUCTION</b>	From 4/98 to 5/99 (14 Months)	<b>\$1,350</b>
<b>TOTAL</b>		<b>\$1,350</b>

**CONTRACT 504:**

**IMPROVEMENTS TO  
NBC OWNED  
INTERCEPTORS  
IN JOHNSTON**

**NORTH END**

**PROJECT DESCRIPTION**

In order to correct capacity problems in the northern portion of the Town of Johnston, the NBC is currently constructing improvements to the interceptor system. These improvements will provide sufficient capacity in NBC pipes for future growth in this portion of the Town. This project was declared substantially complete in May 1999.

**PROJECT FINANCING & EXPENDITURES**  
(Cash Flow Basis in Thousand \$)

FUNDING SOURCE	BEFORE JULY '99	FY '00	FY '01	FY '02	FY '03	FY '04	FY '05	5 YEAR TOTAL	AFTER FY '05	TOTAL COSTS
GRANT								0		0
BVDC BONDS								0		0
BAY BONDS	120							0		120
SRF	5,395	75						0		5,470
REVENUE BONDS								0		0
REP. RESERVE								0		0
OP. BUDGET								0		0
<b>TOTAL</b>	<b>5,515</b>	<b>75</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5,590</b>

**PROJECT COST BY PHASE**

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 4/97 to 5/99 (25 Months)	\$4,725
<b>TOTAL</b>		<b>\$5,590</b>

**CONTRACT 701:**

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

**PROJECT DESCRIPTION**

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

**PROJECT FINANCING & EXPENDITURES**  
(Cash Flow Basis in Thousand \$)

FUNDING SOURCE	BEFORE JULY '99	FY '00	FY '01	FY '02	FY '03	FY '04	FY '05	5 YEAR TOTAL	AFTER FY '05	TOTAL COSTS
GRANT								0		0
BVDC BONDS	151							0		151
BAY BONDS								0		0
SRF	1,635	40						0		1,675
REVENUE BONDS								0		0
REP. RESERVE								0		0
OP. BUDGET								0		0
<b>TOTAL</b>	<b>1,786</b>	<b>40</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,826</b>

**PROJECT COST BY PHASE**

Phase	Project Schedule	Cost By Phase
PLANNING	Prior to 7/95	\$151
DESIGN	From 11/94 to 9/95 (11 Months)	\$195
CONSTRUCTION	From 11/96 to 7/98 (20 Months)	\$1,480
<b>TOTAL</b>		<b>\$1,826</b>

CONTRACT: 702

INFILTRATION/INFLOW  
STUDY

LOUISQUISSETT  
PIKE AREA

**PROJECT DESCRIPTION**

NBC's Interceptor, Construction and Maintenance section has reported high flow levels and root problems in the Louisquissett Pike area of Lincoln. This project is comprised of an infiltration/inflow study and an evaluation of the sewer repair or rehabilitation.

**PROJECT FINANCING & EXPENDITURES**

(Cash Flow Basis in Thousand \$)

FUNDING SOURCE	BEFORE JULY '99	FY '00	FY '01	FY '02	FY '03	FY '04	FY '05	5 YEAR TOTAL	AFTER FY '05	TOTAL COSTS
GRANT								0		0
BVDC BONDS								0		0
BAY BONDS								0		0
SRF	25	25						0		50
REVENUE BONDS								0		0
REP. RESERVE								0		0
OP. BUDGET								0		0
<b>TOTAL</b>	<b>25</b>	<b>25</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>		<b>50</b>

**PROJECT COST BY PHASE**

Phase	Project Schedule	Cost By Phase
PLANNING	From 8/97 to 4/00 (32 Months)	\$50
<b>TOTAL</b>		<b>\$50</b>

**CONTRACT 704P:**

**INVESTIGATION AND  
REHABILITATION OF  
WASHINGTON HIGHWAY AND  
OMEGA PUMP STATIONS**

**PROJECT DESCRIPTION**

The Washington Highway and Omega Pump Stations in the Bucklin Point Service area are both older pump stations nearing the end of their design life. This project involves a study of the stations to determine if any rehabilitation or improvements need to be made at this time. Depending on the outcome of this investigation, design and construction phases may follow.

**PROJECT FINANCING & EXPENDITURES**

(Cash Flow Basis in Thousand \$)

FUNDING SOURCE	BEFORE JULY '99	FY '00	FY '01	FY '02	FY '03	FY '04	FY '05	5 YEAR TOTAL	AFTER FY '05	TOTAL COSTS
GRANT										0
BVDC BONDS										0
BAY BONDS								0		0
SRF		125	25					25		150
REVENUE BONDS								0		0
REP. RESERVE								0		0
OP. BUDGET								0		0
<b>TOTAL</b>	<b>0</b>	<b>125</b>	<b>25</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>25</b>		<b>150</b>

**PROJECT COST BY PHASE**

Phase	Project Schedule	Cost By Phase
PLANNING	From 8/99 to 8/00 (12 Months)	\$150
DESIGN	From 7/99 to 6/00 ( 12 Months)	
CONSTRUCTION	From 7/00 to 12/01 (18 Months)	
<b>TOTAL</b>		<b>\$150</b>

# CONTRACT 903:

## GEOGRAPHIC INFORMATION SYSTEM (GIS) IMPLEMENTATION

## PROJECT DESCRIPTION

The NBC has completed a study to implement a Geographic Information System (GIS) program. This GIS would allow the NBC to geographically relate and maintain databases on its sewer system and pretreatment programs. The project includes data conversion, data development and acquisition of additional hardware and software. This would be a long term project requiring annual updating subsequent to the initial data acquisition.

## PROJECT FINANCING & EXPENDITURES

(Cash Flow Basis in Thousand \$)

FUNDING SOURCE	BEFORE JULY '99	FY '00	FY '01	FY '02	FY '03	FY '04	FY '05	5 YEAR TOTAL	AFTER FY '05	TOTAL COSTS
GRANT								0		0
BVDC BONDS								0		0
BAY BONDS								0		0
SRF	321	64	193					193		578
REVENUE BONDS								0		0
REP. RESERVE								0		0
OP. BUDGET								0		0
TOTAL	321	64	193	0	0	0	0	193		578

## PROJECT COST BY PHASE

Phase	Project Schedule	Cost By Phase
PLANNING	From 10/95 to 5/96 (8 Months)	\$89
IMPLEMENTATION	From 3/00 to 3/01 (61 Months)	\$489
TOTAL		\$578

# **Buildings & Grounds Improvements**

**BUILDINGS  
AND GROUNDS PROJECTS  
...A LISTING**

The following is a listing of the 2 Buildings and Grounds Projects which  
have been included in the 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 five year period is  
\$4,165,000

<b><u>PROPOSED PROJECT</u></b>	<b><u>2001-2005</u></b>
PURCHASE AND MODIFICATIONS TO THE HUDSON BUILDING	\$ 3,575,000
VEHICLE REPLACEMENTS	<u>\$ 590,000</u>
SUBTOTAL	\$ 4,165,000



**THE PURCHASE AND  
MODIFICATIONS TO  
THE HUDSON  
BUILDING**

**PROJECT DESCRIPTION**

The purpose of this project is to centralize NBC's main Administration Functions, Laboratory Operation, ICM, Pretreatment, and Environmental Monitoring sections to one location. This project will establish a corporate headquarters for the Narragansett Bay Commission. The first phase of this project will involve occupying the existing rooms of the building without modifications to the existing building, and the future construction of a three story office addition, and a new maintenance building to accommodate NBC staff presently housed at various NBC locations.

**PROJECT FINANCING & EXPENDITURES**  
(Cash Flow Basis in Thousand \$)

FUNDING SOURCE	BEFORE JULY '99	FY '00	FY '01	FY '02	FY '03	FY '04	FY '05	5 YEAR TOTAL	AFTER FY '05	TOTAL COSTS
GRANT								0		0
BVDC BONDS								0		0
BAY BONDS								0		0
SRF		775	2,520	1,055				3,575		4,350
REVENUE BONDS								0		0
REP. RESERVE								0		0
OPER. BUDGET	1,800							0		1,800
<b>TOTAL</b>	<b>1,800</b>	<b>775</b>	<b>2,520</b>	<b>1,055</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,575</b>	<b>0</b>	<b>6,150</b>

**PROJECT COST BY PHASE**

Phase	Project Schedule	Cost By Phase
PLANNING	From 9/98 to 6/99 ( 9 Months)	\$1,800
DESIGN	From 8/99 to 8/00 ( 12 Months)	\$250
CONSTRUCTION	From 12/99 to 12/01 ( 28 Months)	\$4,100
<b>TOTAL</b>		<b>\$6,150</b>

## VEHICLE REPLACEMENT SCHEDULE\*

( In Thousand \$'s)

VEHICLE DESCRIPTION	FY '00	FY '01	FY '02	FY '03	FY '04	FY '05	5 YEAR TOTAL
1984 Sewer Bucket Cleaning Machine		60					60
1984 Digger Truck (Unit 12)	80						0
1980 Mack 6-year dump (Unit 7)					70		70
10 Wheeler (Unit 10)			80				80
1985 City Suburban (Unit 14)			30				30
1989 Vactor Truck (Unit 17)	154						0
1989 Chevy C-30 (Unit 6)		35					35
Video Inspection (TV) Utility Truck				150			150
1990 Station Wagon		30					30
1989 Van (Unit 30)		30					30
1991 Van (Unit 31)			30				30
1995 3 Yard Dump Truck (Unit 18)						40	40
1993 Utility (Unit 9)					35		35
<b>Total</b>	<b>\$234</b>	<b>\$155</b>	<b>\$140</b>	<b>\$150</b>	<b>\$105</b>	<b>\$40</b>	<b>\$590</b>

\* All Items are to be funded from Replacement Reserve

**Section III**  
*Appendix*

## ***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. Wet weather facilities provide primary treatment and disinfection for stormwater 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. Beginning in early 1999 dechlorination facilities were added. 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.

The Field's Point service area operates and maintains three outlying pump stations. The Washington Park and Reservoir Ave. pump stations located within the City of Providence have recently completed construction improvements. There is one additional pump station on Central Avenue in Johnston, which came on-line in 1987.

The Field's Point service area has several flow metering stations that are used to measure flows from the various service areas. Most of these units are telemetered to the IMC Office. Other meter locations are being converted to this technology

In addition, in the Field's Point service area, 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 NBC assumed ownership of the Bucklin Point Wastewater Treatment Facility (BPWWTF) in 1992 from the Blackstone Valley District Commission (BVDC) which 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 BPWWTF can provide maximum secondary treatment to 46 mgd and primary treatment for flows up to 60 mgd.

Wastewater treated at the Bucklin Point Facility first flows through mechanically cleaned screens, grit chambers, a pre-aeration channel, two primary settling tanks and then flows into aeration basins 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. In late 1999 dechlorination facilities will be on line.

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. In accordance with Federal Regulations, sludge disposal at the landfill has ceased and the landfill is closed. NETCO presently disposes of the sludge under contract to NBC.

NBC also owns and operates three pump stations within the 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**

In August 1999 the Draft CIP was distributed to the Board of Commissioners.

On August 11, 1999 the CIP was presented to the Citizen's Advisory Committee.

A display advertisement for a public hearing on the Capital Improvement Program (CIP) was published in the Providence Journal Bulletin on July 12, 1999 (see following page). The CIP Public Hearing was held on August 12, 1999 at the Narragansett Bay Commission Corporate Office, 235 Promenade Street, Suite 500. At the hearing it was noted that any comments could be heard following the presentation. One Comment was received at the August 12<sup>th</sup> Public Hearing. The Commission has prepared a written response to that comment and is included in the following pages.

On August 12, 1999 the Citizen's Advisory Committee commented on the Draft CIP.

On October 18, 1999 the Final Draft CIP was adopted by the Board of Commissioners.

# Public Hearing

## **The Narragansett Bay Commission**

invites the public to attend a Public Hearing on its

### **Capital Improvement Program for Fiscal Years 2001 - 2005**

on  
Thursday, August 12, 1999 • 7:00 p.m.

at  
The Narragansett Bay Commission Office\*  
235 Promenade Street, Suite 500, Providence, RI

At the hearing, the NBC will give the public an overview of its Capital Improvement Program (CIP) for fiscal years 2001-2005. The CIP is a planning document identifying over \$195 million in projects, repairs and purchases anticipated over the next five years. Testimony will be taken from the public following the presentation. For more information, contact Jackie Saul at (401) 222-6680/TDD (401) 222-6680.

\*The meeting site is accessible. Individuals requesting interpreter services must notify the NBC at 222-6680/TDD 222-6680 72 hours in advance of the meeting date.

Vincent Mestella, Chairman

Paul Pinault, P.E., Executive Director



**CITIZEN'S ADVISORY COMMITTEE  
TO THE  
NARRAGANSETT BAY COMMISSION**

August 12, 1999

Mr. Paul Pinault, Executive Director  
Narragansett Bay Commission  
459 Promenade Street  
Providence, RI 02908

**RE: CAPITAL IMPROVEMENT PROGRAM (CIP) FY 2001-2005 FOR THE NARRAGANSETT BAY  
COMMISSION**

The Citizen's Advisory Committee (CAC) to the Narragansett Bay Commission has authorized submitting a Statement commending the NBC Staff on their draft of the Capital Improvement Program for the FY-2001-2005 for the Narragansett Bay Commission.

The Citizens Advisory Committee did have draft copies to study and a comprehensive presentation of the Draft by Ms. Jacqueline Saul of the NBC Staff that enabled us to draw our positive conclusions. In so doing, we agreed that the CIP draft, was not only an extremely thorough presentation that covered every projected capital project, but also, was set forth with clarity and the kind of logical organization so needed for this type of documentation on behalf of NBC Sewer users and the general public.

We approve of the Capital Improvement Program as submitted with an added commitment to strenuously seek State and Federal financial support of the CSO project. Realizing that the CSO project is Federally mandated and that it now represents 68% of the total cost of the CIP every effort must be made in this area to mitigate the rate impact on users.

We are confident that the NBC Board of Commissions agree with our assessment of this Draft and forward their approval.

Respectfully Submitted  
On behalf of the  
**CITIZEN'S ADVISORY COMMITTEE**

  
**HAROLD GADON  
CHAIRMAN**

  
**Howard Schachter  
Secretary**

cc: Jacqueline Saul



Paul Pinault, P.E.  
Executive Director

# NARRAGANSETT BAY COMMISSION

## EXISTING DEBT SERVICE FOR CAPITAL PROJECTS (BASED ON ACTUAL PAYMENT SCHEDULES)

			FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
\$3M 1988 Bonds -Ref. \$270K	State/G.O.'s	Principal	15,000	15,000	15,000	0	
		Interest	3,150	2,115	1,065	0	
		Subtotal	18,150	17,115	16,065	0	
\$14M - Ref. \$967,781	State/G.O.'s	Principal	145,973	163,916	163,916	100,916	100,916
		Interest	41,010	32,398	22,563	12,564	6,307
		Subtotal	186,983	196,313	186,479	113,480	107,223
\$14M - 1997 Refunding \$134,500	State/G.O.'s	Principal	0	0	1,300	66,500	66,700
		Interest	6,728	6,728	6,694	4,998	1,668
		Subtotal	6,728	6,728	7,994	71,498	68,368
1986 Bonds City of Providence		Principal	357,812	0	0	0	
		Interest	24,689	0	0	0	
		Subtotal	382,501	0	0	0	
BKB - Mortgage - Promenade St.		Principal	107,326	118,564	0	0	
		Interest	12,207	4,202	0	0	
		Subtotal	119,532	122,766	0	0	
\$6M GOB Refunded \$2.805M	State/G.O.'s	Principal	47,594	259,092	259,092	160,092	160,092
		Interest	111,226	108,418	92,873	77,068	67,142
		Subtotal	158,820	367,510	351,965	237,160	227,234
\$6M GOB 1997 Ref. \$802K	State/G.O.'s	Principal	0	0	2,100	104,600	104,600
		Interest	40,366	40,366	40,319	37,526	32,165
		Subtotal	40,366	40,366	42,419	142,126	136,765
\$21.55 M GOB 1991B - Ref. \$4.9M Series E	State/G.O.'s	Principal	270,000	0	0	0	0
		Interest	16,200	0	0	0	0
		Subtotal	286,200	0	0	0	0
\$21.55 M GOB 1991B - 1997 Ref. \$560K	State/G.O.'s	Principal	0	339,400	4,200	3,200	1,900
		Interest	29,684	20,351	10,923	10,744	10,613
		Subtotal	29,684	359,751	15,123	13,944	12,513

# NARRAGANSETT BAY COMMISSION

			FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
\$21.55 M GOB 1991B - 1996 Ref. \$2.040M	State/G.O.'s	Principal	8,660	10,085	287,659	286,688	288,285
		Interest	111,300	110,832	104,467	89,753	72,504
		Subtotal	119,960	120,917	392,126	376,441	360,789
\$5.5M GOB - Ref. \$3.5M 1980 Series	State/G.O.'s	Principal	175,000	175,000	175,000	175,000	175,000
		Interest	104,300	91,700	78,925	65,975	52,850
		Subtotal	279,300	279,300	266,700	253,925	240,975
CEDE \$1,270,364.15 (1992 BVDC)	State/G.O.'s	Principal	0	0	0	0	
		Interest	0	0	0	0	
		Subtotal	0	0	0	0	
CEDE \$7.731M (1992A BVDC)	State/G.O.'s	Principal	131,155	713,975	713,975	440,975	440,975
		Interest	306,463	298,725	255,886	212,334	184,993
		Subtotal	437,618	1,012,700	969,861	653,309	625,968
CEDE \$7.731M Ref. 1997 \$2.211M (1992A BVDC)	State/G.O.'s	Principal	0	0	5,700	288,600	288,600
		Interest	111,278	111,278	111,150	103,446	88,655
		Subtotal	111,278	111,278	116,850	392,046	377,255
CEDE \$4.770M (BVDC \$1.770M)) Ref. \$3M (\$4.85M) (BVDC 1986)	State/G.O.'s	Principal	0	0	0	0	0
		Interest	0	0	0	0	0
		Subtotal	0	0	0	0	0
\$3.080M BVDC 1993 Ref. (\$4.85M)	State/G.O.'s	Principal	415,000	435,000	430,000	280,000	270,000
		Interest	94,075	74,570	53,690	32,620	18,900
		Subtotal	509,075	509,570	483,690	312,620	288,900
Citizens Trust \$200K (BVDC)	State/G.O.'s	Principal	0	0	0	0	0
		Interest	0	0	0	0	0
		Subtotal	0	0	0	0	0
\$900,000 Part A Ref. (1986 Series C) (BVDC)	State/G.O.'s	Principal	50,000				
		Interest	3,000				
		Subtotal	53,000				

# NARRAGANSETT BAY COMMISSION

			FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
\$900,000 Part A 1997 Ref. (\$103K) (BVDC)	State/G.O.'s	Principal	0	62,900	800	600	400
		Interest	5,502	3,772	2,043	1,991	1,965
		Subtotal	5,502	66,672	2,843	2,591	2,365
\$900,000 Part B 1996 Ref. (\$377K) (BVDC)	State/G.O.'s	Principal	1,600	1,864	53,156	52,977	53,272
		Interest	20,603	20,517	19,341	16,622	13,434
		Subtotal	22,203	22,381	72,497	69,599	66,706
Fleet \$100,000 (BVDC)	State/G.O.'s	Principal	5,000	5,000	5,000	5,000	5,000
		Interest	1,655	1,405	1,152	895	633
		Subtotal	6,655	6,405	6,152	5,895	5,633
Fleet \$100,000 (BVDC) Ref. (1971 Series D 9/98 Ref)	State/G.O.'s	Principal	0	0	0	0	0
		Interest	1,519	1,519	1,519	1,519	1,519
		Subtotal	1,519	1,519	1,519	1,519	1,519
Fleet \$3,315,000 (BVDC 1986 Series F)	State/G.O.'s	Principal	135,000	140,000	150,000	160,000	170,000
		Interest	62,605	55,730	48,405	40,420	31,755
		Subtotal	197,605	195,730	198,405	200,420	201,755
Fleet \$3,315,000 Ref. 9/98 (\$1.3M) (BVDC 1986 Series F)	State/G.O.'s	Principal	5,000	5,000	5,000	5,000	5,000
		Interest	49,503	49,316	49,128	48,935	48,738
		Subtotal	54,503	54,316	54,128	53,935	53,738
Fleet \$3,315,000 Ref. 9/98 (\$305K) (BVDC 1986 Series F)	State/G.O.'s	Principal	0	0	0	0	0
		Interest	12,288	12,288	12,288	12,288	12,288
		Subtotal	12,288	12,288	12,288	12,288	12,288
Contract 601-North Prov. \$2.647M	SRF	Principal	122,587	127,153	131,890	136,803	141,899
		Interest	65,258	60,606	55,782	50,777	45,586
		Subtotal	187,845	187,760	187,671	187,580	187,485
Contract 201-Wash. Park \$3.694M	SRF	Principal	160,349	166,017	171,886	177,961	184,252
		Interest	97,109	91,370	85,427	79,275	72,905
		Subtotal	257,458	257,387	257,313	257,236	257,157

# NARRAGANSETT BAY COMMISSION

			FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
Contract 401-Butler \$1.662M	SRF	Principal	74,076	76,865	79,758	82,761	85,876
		Interest	44,289	41,447	38,500	35,441	32,266
		Subtotal	118,365	118,312	118,258	118,201	118,143
Pool Financing I - \$14.781M	SRF	Principal	592,500	614,500	637,000	660,500	685,000
		Interest	451,959	429,816	406,856	383,052	358,368
		Subtotal	1,044,459	1,044,316	1,043,856	1,043,552	1,043,368
Pool Financing II - \$17.279M	SRF	Principal	697,465	721,955	747,306	773,546	800,708
		Interest	499,300	474,504	448,838	422,270	394,769
		Subtotal	1,196,765	1,196,459	1,196,144	1,195,816	1,195,477
Pool Loan Financing III - \$8.150M	SRF	Principal	283,397	283,778	304,539	315,695	327,250
		Interest	291,881	281,363	270,459	260,156	248,439
		Subtotal	575,278	565,141	574,998	575,851	575,689
Pool Loan Financing IV- \$23.955M	SRF	Principal	0	0	1,000	1,000	1,000
		Interest	0	598,693	846,073	846,038	846,002
		Subtotal	0	598,693	847,073	847,038	847,002
		TOTALS					
		Principal	3,800,494	4,435,064	4,345,277	4,278,414	4,356,725
		Interest	2,619,146	3,024,027	3,064,362	2,846,705	2,644,465
		Grand Total Existing	6,419,640	7,459,091	7,409,639	7,125,118	7,001,189

# NARRAGANSETT BAY COMMISSION

## NEW BAY BOND FINANCING FOR CAPITAL PROJECTS

ASSUMPTIONS:      7.00%

		FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
FY 2001 NEW BAY BONDS	\$0 Principal	0	0	0	0	0
	Interest	0	0	0	0	0
	Subtotal	0	0	0	0	0
FY 2002 NEW BAY BONDS	\$0 Principal	0	0	0	0	0
	Interest	0	0	0	0	0
	Subtotal	0	0	0	0	0
FY 2003 NEW BAY BONDS	\$0 Principal	0	0	0	0	0
	Interest	0	0	0	0	0
	Subtotal	0	0	0	0	0
FY 2004 NEW BAY BONDS	\$0 Principal	0	0	0	0	0
	Interest	0	0	0	0	0
	Subtotal	0	0	0	0	0
FY 2005 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	0	0	0
	Interest	0	0	0	0	0
	Total Bay Bonds	0	0	0	0	0

# NARRAGANSETT BAY COMMISSION

## NEW SRF BOND FINANCING FOR CAPITAL PROJECTS

ASSUMPTIONS: 4.0%

		FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
FY 2001 NEW SRF	\$17,572,000 Principal	878,600	693,850	693,850	693,850	693,850
	Interest	702,880	667,736	639,982	612,228	584,474
	Subtotal	1,581,480	1,361,586	1,333,832	1,306,078	1,278,324
FY 2002 NEW SRF	\$35,396,000 Principal	0	1,769,800	2,762,900	2,762,900	2,762,900
	Interest	0	1,415,840	1,345,048	1,234,532	1,124,016
	Subtotal	0	3,185,640	4,107,948	3,997,432	3,886,916
FY 2003 NEW SRF	\$50,026,000 Principal	0	0	2,501,300	2,106,450	2,106,450
	Interest	0	0	2,001,040	1,900,988	1,816,730
	Subtotal	0	0	4,502,340	4,007,438	3,923,180
FY 2004 NEW SRF	\$35,602,000 Principal	0	0	0	1,780,100	1,780,100
	Interest	0	0	0	1,424,080	1,352,876
	Subtotal	0	0	0	3,204,180	3,132,976
FY 2005 NEW SRF	\$32,038,000 Principal	0	0	0	0	1,601,900
	Interest	0	0	0	0	1,281,520
	Subtotal	0	0	0	0	2,883,420
Totals						
	Principal	920,300	2,505,350	5,999,750	7,385,000	8,986,900
	Interest	765,428	2,144,456	4,045,282	5,229,372	6,215,492
	Total New SRF	1,685,728	4,649,806	10,045,032	12,614,372	15,202,392

# NARRAGANSETT BAY COMMISSION

## SUMMARY OF ALL DEBT SERVICE SCHEDULES

		FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
EXISTING DEBT SERVICE	Principal	3,800,494	4,435,064	4,345,277	4,278,414	4,356,725
	Interest	2,619,146	3,024,027	3,064,362	2,846,705	2,644,465
		6,419,640	7,459,091	7,409,639	7,125,118	7,001,189
NEW BAY BONDS	Principal	0	0	0	0	0
	Interest	0	0	0	0	0
		0	0	0	0	0
NEW SRF BONDS	Principal	920,300	2,505,350	5,999,750	7,385,000	8,986,900
	Interest	765,428	2,144,456	4,045,282	5,229,372	6,215,492
		1,685,728	4,649,806	10,045,032	12,614,372	15,202,392
TOTAL	Principal	4,720,794	6,940,414	10,345,027	11,663,414	13,343,625
	Interest	3,384,574	5,168,483	7,109,644	8,076,077	8,859,957
	Grand Total	8,105,368	12,108,897	17,454,671	19,739,490	22,203,581