7.0 FISCAL ANALYSIS

7.1 REGULATORY REQUIREMENTS

The Part 2 NPDES stormwater regulations require inclusion of the following programs in the permit application [CFR 122.26 (d)(2)(vi)]:

> *"For each fiscal year to be covered by the permit, a fiscal analysis of the necessary capital and operation and maintenance expenditures necessary to accomplish the activities of the programs under paragraphs (d)(2)(iii) and (iv) of this section. Such analysis shall include a description of the source of funds that are proposed to meet the necessary expenditures, including legal restrictions on the use of such funds."*

The objective of this section is to describe the budget requirements of the City's current and proposed stormwater programs and to describe the financing mechanisms necessary to support these programs. Section 7.2 addresses the estimated capital, operation, and maintenance costs for current City programs as well as for new programs proposed under the NPDES stormwater permit. Section 7.3 describes financing options needed to fund the management programs.

7.2 FISCAL ANALYSIS

A comprehensive cost analysis for the stormwater permit program is presented in Table 7-1. This table presents estimated costs for existing stormwater management programs as well as for costs which are proposed under the new NPDES management program. The analysis includes estimated costs for:

- Salaries,
- Vehicles and equipment,

Table 7-1

City of Knoxville NPDES Stormwater Management Program
Preliminary Estimate 5-Year Program Summary

	Existing 1992-1993	Fiscal Year 1993-1994	Fiscal Year 1994-1995	Fiscal Year 1995-1996	Fiscal Year 1996-1997	Fiscal Year 1997-998
Salaries [1]						
Engineering Department						
Civil Engineering	$175,000	$180,250	$185,658	$191,227	$196,964	$202,873
Planning and Technical Services	$105,000	$108,150	$111,395	$114,736	$118,178	$121,724
NPDES Stormwater Management	$0	$120,000	$123,600	$127,308	$131,127	$135,061
Service Department						
Existing Drainage Maintenance	$979,000	$1,008,370	$1,038,621	$1,069,780	$1,101,873	$1,134,929
Water Quality Maintenance	$0	$0	$111,240	$114,577	$118,015	$121,555
Subtotal	$1,259,000	$1,416,770	$1,570,513	$1,617,628	$1,666,157	$1,716,142
Equipment						
Engineering Department						
Samplers/Flowmeters	$12,000	$54,000	$18,000	$12,000	$12,000	$12,000
Accessories/Computer/Software	$4,000	$15,000	$15,000	$15,000	$15,000	$15,000
Service Department						
Drainage Maintenance	$366,000	$366,000	$366,000	$366,000	$366,000	$366,000
Water Quality	$0	$0	$50,000	$50,000	$50,000	$50,000
Subtotal	$382,000	$435,000	$449,000	$443,000	$443,000	$443,000
Contract Services [2]						
NPDES Permit Assistance	$232,000	$25,000	$25,000	$25,000	$25,000	$25,000
Stormwater Utility Rate Study	$0	$300,000	$0	$0	$0	$0
Laboratory Services	$0	$15,000	$15,000	$15,000	$15,000	$15,000
USGS Services	$52,000	$12,860	$13,503	$14,178	$14,887	$15,631
Subtotal	$284,000	$352,860	$53,503	$54,178	$54,887	$55,631
Capital Improvements Budget[3]						
Drainage CIP for FY91-92						
Tiffany Lane/Aubrey Lane	$215,000	$0	$0	$0	$0	$0
Drainage CIP Assumed for FY 94-95	$0	$0	$500,000	$0	$0	$0
Drainage CIP Assumed for FY 95-98	$0	$0	$0	$1,000,000	$1,000,000	$1,000,000
Water Quality Improvements [4]	$0	$0	$250,000	$500,000	$500,000	$500,000
Subtotal	$215,000	$0	$750,000	$1,500,000	$1,500,000	$1,500,000
Total	$2,140,000	$2,204,630	$2,823,016	$3,614,807	$3,664,044	$3,714,773
NPDES Mandatory	$300,000	$541,860	$621,343	$873,063	$881,029	$889,247
% NPDES Requirement of Total	14%	25%	22%	24%	24%	24%

Notes:

[1] Assumes a 3.0% annual increase

[2] Previous year contract services for preparation of NPDES Permit application prior to FY 92-93 = $325.000 (CDM) + $105,000 (USGS) = $430,000

[3] CIP Budgets may be more or less in any given year and may be prorated over the permit term

[4] Assumes water quality contol features can be piggybacked on Drainage/Flooding CIP projects and that a Stormwater Utility has been created with a fee structure adequate to fund the projects

- Contract services, and
- Capital improvements.

7.2.1 SALARIES

Detailed summaries of the staffing requirements and estimated salary costs of each new management program proposed under the City's NPDES Part 2 permit application are presented in the report describing the specific program. These estimated costs are based on current employee base salary rates plus fringe benefits. Annual salary projections assume phased implementation of the stormwater management program and a 3% annual increase over the 5-year permit term. The new positions include a Stormwater Management Engineer, three level II Engineering Technicians, and a five-person Service Department field crew.

7.2.2 EQUIPMENT

The proposed Stormwater Management Program will involve expenditures for purchasing new equipment required as part of certain program elements. Major equipment expenditures include: stream restoration heavy equipment and truck(s); two vehicles for site inspections; samplers and flowmeters for water quality monitoring; and computer hardware, software, and accessories.

Based on detailed data compiled by the Service Department for FY91-92, equipment costs related to existing drainage maintenance programs are $366,000 per year. These equipment costs are projected to remain constant during the 5-year permit term. Specific <u>additional</u> heavy equipment that will be required for the proposed stream restoration field crew has <u>not</u> been identified. Discussions with the Service Department indicate that these equipment costs are likely to be on the order of $50,000 per year. This cost would include operation and maintenance (O&M) and assumes capital costs for one-time purchase of heavy equipment is allocated over the 5-year permit term. The types of equipment required and costs will be further defined during the first year of the permit term.

The cost for vehicles for site inspections is estimated to be approximately $5,000 annually over the permit term. The cost for water quality monitoring equipment is estimated to be $54,000 during FY93-94, $18,000 during FY94-95, and $12,000 annually for the remaining three years of the permit. Annual costs for computer hardware, software, and accessories are estimated to be $15,000 over the 5-year permit term.

7.2.3 CONTRACT SERVICES

For some aspects of the proposed management programs, it may be more efficient for the City to engage contract services. These services have been categorized as follows:

- Laboratory services for analysis of samples collected as part of the ongoing monitoring program and the illicit connection and improper disposal program;
- NPDES permit assistance for assistance with database management, establishing monitoring stations, conducting BMP pilot studies, etc.;
- USGS services for assistance with water quality monitoring; and
- A stormwater utility rate study.

The estimated cost for laboratory services is projected to be approximately $15,000 annually. NPDES permit assistance is projected to be approximately $25,000 per year. Continued flow monitoring by the USGS is projected to be $12,000 per year. The State Stormwater Legislation provides sufficient authority for the City to implement a stormwater utility. The cost for preparing a stormwater utility rate study is projected to be $300,000 during FY93-94.

7.2.4 CAPITAL IMPROVEMENTS

Estimated costs for capital improvements were determined from budget projections of projects targeted by the Knoxville Engineering Department. Additional costs for NPDES water quality improvements assume that water quality control features can be "piggybacked" on the targeted drainage/flooding CIP projects. Capital improvements for water quality improvements include construction of regional BMP facilities as described in the management plan for residential and commercial areas. The City will consider committing funds for capital improvements once a stormwater utility is approved and implemented.

7.3 FUNDING SOURCES

Sources of funding within the City of Knoxville include the General and Sales Tax funds which are tax-based and Enterprise funds which are revenue-based. Enterprise funds are established by City ordinance and the General Fund must pay for all items not paid for under Enterprise funds. Enterprise funds must be used only for functions and activities specified by ordinance and this generally applies to activities falling with the jurisdiction of the individual utilities/department associated with the fund. Under the proposed FY92-93 budget, all new stormwater activities within the City will be paid for by Enterprise funds.

The Tennessee State Legislature recently passed Stormwater Management Legislation (Senate Bill No. 68 and House Bill No. 56) which provides the City of Knoxville with sufficient enabling authority to implement the required NPDES stormwater management programs. This legislation also provides the City with the option to finance the stormwater management program with a stormwater utility. The City is currently considering a stormwater utility study which would determine billing rates for property owners who discharge stormwater to the municipal storm sewer system. Typically, stormwater utility rates are based on the percentage of impervious area on a property. The City has considered applying the Stormwater Utility Fee through the Knoxville Utility Board (KUB) existing billing system. If the City chooses to implement a Stormwater Utility, the fee system would be devised to provide sufficient funding for all of the proposed NPDES stormwater management programs.