



Table of Contents

CHAPTER 1 — ADDRESSING STORMWATER MANAGEMENT NEEDS

1.1	Impacts of Development and Stormwater Runoff	1-1
1.1.1	Development Changes Land and Runoff	1-1
1.1.2	Changes to Stream Flow	1-2
1.1.3	Changes to Stream Geometry	1-3
1.1.4	Impacts to Aquatic Habitat	1-3
1.1.5	Water Quality Impacts	1-4
1.1.6	Stormwater Hotspots	1-6
1.1.7	Effects on Ponds, Lakes and Reservoirs	1-6
1.2	Addressing Stormwater Impacts	1-6
1.3	Comprehensive Stormwater Management Planning	1-7
1.4	Minimum Stormwater Management Standards	1-8
1.5	Stormwater Quality Treatment Rationale	1-11
1.5.1	Regulatory Overview	1-11
1.5.2	Attaining the Water Quality Standard	1-12
	References	1-15
	Suggested Reading	1-15



Chapter 1 – List of Figures

<u>FIGURE#</u>	<u>TITLE</u>	<u>Page#</u>
Figure 1-1	Runoff Hydrograph under Pre- and Post-Development Conditions.....	1-2
Figure 1-2	Physical Stream Changes Due to Watershed Development	1-3
Figure 1-3	Stormwater Management Planning Process	1-8
Figure 1-4	Knox County 85 th Percentile Rainfall Analysis.....	1-14

Chapter 1 – List of Tables

<u>TABLE#</u>	<u>TITLE</u>	<u>Page#</u>
Table 1-1	Major Stormwater Pollutants and Their Potential Effects	1-5