



4.5 Operations and Maintenance Plan

4.5.1 Background

Proper maintenance of stormwater facilities and best management practices is one of the most important factors in the long-term performance and effectiveness of a stormwater management plan. Knox County requires property owners or homeowners associations to properly maintain the stormwater system and BMPs located on private property. In an effort to reduce maintenance requirements for each development, a developer or site designer should consider the maintenance requirements for each stormwater structural or non-structural BMP when designing a development. To this end, Knox County strongly encourages site designers to utilize non-structural BMPs and better site design practices to the maximum degree possible, thereby reducing the degree of stormwater maintenance that will be required for the property after construction. Non-structural controls, which are discussed in detail in Volume 2, Chapter 5, generally require very little (and often no) maintenance and can reduce the size of any structural BMPs needed to treat stormwater runoff quality. The developer and site designer should then choose structural BMPs that have the lowest relative long-term maintenance requirements based upon the site constraints.

Knox County oversees the long-term maintenance of stormwater facilities and best management practices in a three-phased approach, as follows:

- 1) A preliminary Operations and Maintenance (O&M) Plan is submitted and approved as part of the Stormwater Management Plan. The preliminary O&M Plan must include all of the maintenance and inspection information for the stormwater system as designed. The purpose of the preliminary O&M Plan is to ensure that long-term maintenance issues have been considered in the design of the development.
- 2) A final O&M Plan is submitted and approved with the As-Built Certification and must accurately reflect the stormwater system and BMP locations after construction of the site has been completed. The goals of the final O&M Plan are to establish a legal record of the stormwater management system that is located on the property and the property owner's responsibilities with regards to the system; and to provide guidance to the current and any subsequent property owner on the requirements for BMP inspection and maintenance. The final O&M Plan is considered permanent and must be recorded with the deed.
- 3) Knox County Engineering will perform periodic inspections of the stormwater system shown in the final O&M Plan in order to determine if the system is being maintained in proper operating condition. Knox County will order corrective actions for components of the system that are determined to be improperly constructed or not maintained. More information about maintenance requirements after construction is presented in Volume 1, Chapter 5 of this manual.

4.5.2 Requirements

A preliminary O&M Plan shall consist of:

- 1) a map that accurately identifies the stormwater system location and components (e.g., stormwater pond, micropool extended detention pond, pipes, ditches, water quality buffers, etc.) that are located on the property. This map also must show the locations of drainage and access easements. The language used to identify each BMP shall be consistent with the BMP names used in this manual and on any inspection checklists included in the O&M Plan.
- 2) "Inspection Checklist and Maintenance Guidance" sheet(s) for each type of BMP that is located on the property. These sheets are presented in Volume 2, Chapter 4. The sheets provide a general guideline of inspection and maintenance elements. At a minimum, the Inspection Checklist and Maintenance Guidance provided in Volume 2, Chapter 4 must be utilized for the



O&M Plan as appropriate for the BMPs located on a site development. However, site designers may modify the templates to include inspections and maintenance elements as needed and appropriate for the BMPs.

The final O&M Plan includes the components of the preliminary O&M Plan stated above, updated to reflect the stormwater facilities and BMPs as they have been constructed in the field, as well as a completed “Covenants for Permanent Maintenance of Stormwater Facilities and Best Management Practices” (also called the “Maintenance Covenants”). A blank copy of the Maintenance Covenants is presented in Volume 1, Appendix F of this manual.

Schematics of an example final O&M plan for a residential subdivision is presented in Figure 4-4.

Figure 4-4. Operations and Maintenance Plan Contents

