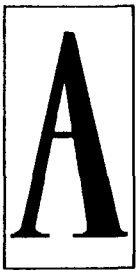




# Stormwater Management Ordinances for Local Governments

## Introduction



As development of land occurs, the importance of managing stormwater is becoming increasingly apparent. Stormwater discharges can be responsible for water quality degradation, flooding, and stream channel erosion. Approaches to the management of these problems

have been piecemeal at the State and local level, ranging from trying to prevent development to extrapolating stormwater management authority based on existing subdivision, zoning, flood control, and/or erosion control ordinances. These approaches have been largely inadequate for two reasons. First, ordinances for other purposes are not easily adapted, and second, enforcement has been difficult because the courts have been reluctant to rule in favor of ambiguous regulatory authority and against well-established private property rights. This strongly suggests the need for local stormwater management ordinances.

The components of stormwater management ordinances fall into four major categories:

1. legal authority and context,
2. technical basis,
3. administrative apparatus, and
4. enforcement provisions.



These ordinances also generally address both stormwater quantity and quality. However, there are differences in the way a stormwater management ordinance should be written to emphasize water quality. These differences are noted in the following descriptions of the major categories.

# Legal Authority and Context

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Although each of the four elements are essential, the local government must possess the legal authority (delegated by the State) and provide the proper context for the ordinance. In some States, such authority already exists without additional State action. In others, such as

Virginia, the State must grant local governments the authority.

Stormwater management authority may be embedded in prior enabling legislation and/or ordinances. These include ordinances for subdivisions, zoning, land development, flood control, erosion and sediment control, and water quality improvement. Stormwater management ordinances must be clear about where they derive their authority and should be compatible, or at least not in conflict with, other ordinances addressing stormwater issues.

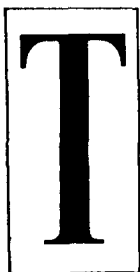
Once the legal authority has been established, the stormwater management ordinance should provide an overall context. This includes a finding of facts leading to the conclusion that a stormwater management ordinance is necessary; a statement of goals and objectives; a summary of previous legislation relevant to the stormwater ordinance;

and definitions of terms. For a stormwater ordinance emphasizing water quality, the finding of facts and objectives must be tailored toward the quality issue.

The ordinance must clearly define to whom and for what type of activities the ordinance is applicable, and when it becomes effective. A grandfather clause and a severability clause are important elements. The latter states that if any portion of the ordinance becomes invalid, the whole ordinance is not invalidated. The ordinance must also allow cooperation and coordination with neighboring local jurisdictions, State agencies, and Federal agencies. At the Federal level, the U.S. Environmental Protection Agency (EPA) is developing guidance for new permits for municipal separate storm sewers. These permits will be targeted to reduce pollutants in stormwater discharges to meet water quality standards. Although the EPA permits are intended to cover only discharges from storm sewers carried in improved drainage facilities, natural drainage channels frequently discharge into improved facilities. An effective stormwater management ordinance should consider the EPA permitting requirements for pollution control.

## Technical Basis

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The stormwater management ordinance must not require activities that extend beyond the state of technical, management, and engineering capabilities available to the local government itself, or to those who live and work in the area.

At a minimum, the following should be accessible:

- **analytical methods** for estimating the frequency and magnitude of appropriate events including the use of water quality, hydrologic, and hydraulic models;

- **structural and management approaches** for reducing stormwater-related problems including such structures as detention/retention ponds, infiltration trenches, and street sweeping;
- **sampling and measurement devices** for evaluating the effectiveness of the analytical methods and structural and management approaches in achieving the ordinance goals. This may include water quality sampling, rainfall measurement, and/or flow measurement.

The technical basis for a stormwater ordinance is often summarized in performance standards and design criteria. Performance standards specify evaluative benchmarks, while design criteria provide analysis and construction guidelines. For

water quality, the performance standards should be oriented towards reduction of nonpoint sources. In addition, the ordinance may allow substitution of off-site controls for on-site controls.

## Administrative Apparatus

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Administrative provisions must be made for the approval and review of stormwater management plans, construction and maintenance of stormwater control facilities, and inspection and monitoring of the stormwater management program.

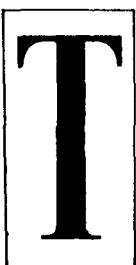
The ordinance should also allow establishment of a fee schedule. Adequate funding and staffing resources are required to bring an effective program to life. Staff functions, at a minimum, would include the approval and review of stormwater management plans and the inspection of facilities. Depending on the ordinance, staff functions may also include

construction, maintenance, and monitoring. These functions may be delegated to land owners and/or developers.

A variety of funding sources may be considered for implementation of the program ranging from complete local government funds to a self-sustaining program separate from local government budgets. Examples of the former include drawing from general funds, issuance of general obligation bonds, and/or issuance of revenue bonds. Examples of the latter include use of plan review fees, establishment of stormwater utilities, or the development of pro-rata share schedules.

## Enforcement

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The final critical element of a stormwater management ordinance is the provision of effective enforcement alternatives and legal remedies. Based on experience with flood control, water quality, and erosion and sediment control ordinances, several guidelines are appropriate.

First, civil versus criminal penalties must be specified. Although criminal penalties may appear to be the more intimidating sanction, the courts have traditionally been reluctant to convict an accused offender for a criminal stormwater violation. Experience has shown that significant civil penalties are more effectively applied.

Second, a violation of the ordinance must be clearly defined in order to effectively prosecute an offender or to bring an offender in compliance. For example, a stormwater ordinance may state that phosphorus concentrations in excess of pre-development conditions represent a violation each day excess concentrations occur.

Finally, the ordinance should provide for the suspension of development activities until a violation is corrected. Oftentimes, civil financial penalties are viewed by developers as a cost of doing business. Halting construction activities places a more severe incentive on the developer to comply and is, at times, the only way to achieve compliance.

# Virginia Stormwater Management Legislation

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Recently, the State of Virginia adopted a stormwater management ordinance that is summarized here as a sample of state-enabling legislation (Code of the Commonwealth of Virginia; Title 10, Chapter 6, Article 6). Municipal ordinances can be established by reference to the State law or can be

tailored to local needs. Specifically, the components of the State legislation are:

- statement of purpose;
- definition of various terms;
- authorization for local programs;
- guidelines for developing technical criteria and administrative procedures;
- statement of the status of State projects and lands;
- specification of the oversight responsibilities of the state;
- authorization for establishment of more stringent local requirements;
- procedures for plan submission and approval and exempted land uses;

- authorization for collecting performance sureties, recovering administrative costs, and assessment of service charges;
- description of the appeals process;
- specification of the civil penalties and enforcement options;
- authorization for cooperation with Federal and State agencies; and
- statement that this legislation does not limit the authority of other agencies.

The Virginia legislation includes all of the minimum critical elements and provides the legal authority for local governments to adopt their own stormwater management ordinances. The Virginia law primarily places the burden on new development by defining existing runoff levels, and the corresponding level of water quality effects, erosion, and flooding, as a point of reference. It allows local government to require performance bonds or escrow accounts for development so that if proper stormwater controls are not installed, the resources will be available to complete required activities without burdening taxpayers. Perhaps cognizant of the municipal stormwater requirements of EPA, the Virginia law also authorizes local government to cooperate with Federal agencies.

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