

Stormwater Management 101

Regulatory Framework

Federal

Under the U.S. Clean Water Act of 1972, as amended in 1987, all point source discharges of pollution require a permit. This basic principle is the foundation of water pollution prevention in the U.S.

The Clean Water Act's primary point source permit program is the National Pollutant Discharge Elimination System (NPDES). This system rests on the definition of point source: "any discernible, confined, and discrete conveyance" of pollutants to a water body. The definition of discrete conveyance includes, but is not limited to, "any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged."

The Environmental Protection Agency (EPA) is a federal agency charged with protecting human health and the environment by implementing laws passed by the U.S. Congress. In 2009, the EPA transferred primacy and administrative authority for implementing NPDES stormwater permitting to the State of Alaska.

State

Alaska administers pollution discharges permitting in the state under an Alaska Pollutant Discharge Elimination System (APDES) permit program, administered by the Alaska Department of Environmental Conservation (ADEC). Permits issued under APDES include:

- **Municipal Separate Storm Sewer System (MS4)**, with 6 Minimum Control Measures (6MCM) are required for communities meeting population and other criteria;
- A **Construction General Permit (CGP)** applies to construction projects disturbing one or more acres, and requires preparation of a Storm Water Pollution Prevention Plan (SWPPP), filing a Notice of Intent (NOI), implementation of Best Management Practices (BMPs), inspections, reporting and recordkeeping; and
- A **Multi-Sector General Permit (MSGP)** is a stormwater permit that applies to facilities defined by the EPA as industrial that discharge to a water of the United States. This permit requires preparation of a SWPPP, filing an NOI, implementation of BMPs, inspections, storm water sampling and analysis, reporting and recordkeeping.

Regional/Municipal

MS4 permit programs meeting the 6 MCMs have been issued to Alaska's more populated communities (Anchorage and Fairbanks). In 2010 the Matanuska-Susitna Borough surpassed an MS4 population threshold of 50,000 residents, and population densities of 1,000 residents per square mile. It is anticipated that an MS4 will be required for a portion of the Borough following an analysis of the census data during the 3rd quarter of 2012.

Typical Minimum Control Measures (MCM)

MCM1	MCM2	MCM3	MCM4	MCM5	MCM6
<p>Public Education and Outreach</p> <ul style="list-style-type: none"> a. Implement public education program. b. Distribute stormwater educational materials. c. Prepare/distribute outreach materials. d. Convene and annual public meeting. e. Develop website. f. Document public education/outreach. 	<p>Public Involvement/ Participation</p> <ul style="list-style-type: none"> a. Comply with State/ local public notice requirements. b. Make the SMP and all annual reports available to the public. c. Host a community Stream Clean Up Day. d. Organize an ongoing volunteer monitoring program and an Adopt-A-Stream program. e. Develop/conduct a survey of public knowledge and attitudes related to stormwater management. f. Develop means to inform public and receive public input. g. Develop/ implement a storm drain stenciling program. h. Regularly convene a Stormwater Advisory Committee to coordinate/accomplish the goals of SMP. i. Document public involvement/ participation. 	<p>Illicit Discharge Detection and Elimination</p> <ul style="list-style-type: none"> a. Conduct a hydrologic study of all roadway drainage. b. Develop/implement a program to detect and eliminate illicit discharges. c. Adopt ordinance or regulatory mechanism to prohibit non-stormwater discharges into system. d. Document any existing local controls/conditions placed on non-stormwater discharges. e. Inform users of the system and the general public of hazards associated with illegal discharges/improper disposal of waste. f. Develop a comprehensive storm sewer system map that includes industrial facilities, snow disposal sites, and animal facilities. g. Begin dry weather field screening for non-stormwater flows from all outfalls. h. Document information related to illicit discharge detection/ elimination. i. Prevent and respond to spills to MS4. j. Facilitate disposal of used oil and toxic materials. 	<p>Construction Site Stormwater Runoff Control</p> <ul style="list-style-type: none"> a. Develop/implement/ and enforce a program to reduce pollutants from construction activities. b. Adopt Erosion and Sediment Control (ESC) ordinance or regulatory mechanism for construction site operators. c. Publish/distribute requirements for construction site operators. d. Develop review procedures for site plans. e. Develop/implement procedures for site inspection and enforcement of control measures. f. Develop/conduct training session for local construction, design, and engineering audience. g. Document information related to construction site runoff control. 	<p>Post Construction SWM in New Development and Redevelopment</p> <ul style="list-style-type: none"> a. Implement/develop/ enforce post construction program. b. Adopt ordinance or regulatory mechanism for post construction runoff. c. Publish/distribute a BMP design manual for post construction stormwater management. d. Ensure proper longterm operation and maintenance (O&M) of post-construction BMPs. e. Develop/conduct training session on manual and ordinances for post construction. f. Develop a green infrastructure/low impact development strategy. g. Document post construction information. 	<p>Pollution Prevention and Good Housekeeping</p> <ul style="list-style-type: none"> a. Develop/implement Municipal O&M program and standard operating procedures (SOPs). b. Study of effectiveness of cleaning operations/activities. c. Develop/ conduct training. d. Assess flood management projects for water quality impacts. e. Develop and implement SWPPPs for municipally-owned industrial facilities. f. Document efforts to prevent/reduce pollutant runoff.

Acronyms

ADEC.....	Alaska Department of Environmental Conservation
APDES.....	Alaska Pollutant Discharge Elimination System
BMP.....	Best Management Practice
CGP.....	Construction General Permit
MSGP.....	Multi-Sector General Permit
MS4.....	Municipal Separate Storm Sewer System
NOI.....	Notice of Intent
NOT.....	Notice of Termination
NPDES.....	National Pollutant Discharge Elimination System
6MCM.....	Six Minimum Control Measures
SMP.....	Stormwater Management Plan
SWPPP.....	Storm Water Pollution Prevention Plan

Additional Info:

<http://dec.alaska.gov/water/wwdp/index.htm>

<http://cfpub1.epa.gov/npdes/>

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