WE 5: REDUCE USE OF DRINKING WATER TO CLEAN SIDEWALKS

Administrative Code of the City of New York
Proposal developed by the Water Efficiency & Building Stormwater Committee

Summary

Issue:
Clean drinking water is frequently used in New York City to wash sidewalks, parking lots, and streets.

Recommendation:
Require the use of either water-conserving equipment, such as water brooms, or recycled water for cleaning sidewalks, parking lots, and streets.

Proposed Legislation, Rule or Study

Amendments to the Administrative Code of the City of New York:

1. Amend Section 24-332 as follows:

§ 24–332 Use of water through hose. It shall be unlawful for any person to wash any street, parking area, sidewalk, areaway, steps, building or other place in the city by means of a hose or piping, or to use water through a hose or sprinkler for watering lawns or gardens, or to operate any outside shower where the water runs upon a street, sidewalk, or other public place between the first day of November and the last day of March following. Any person washing, by means of a hose or piping, any street, parking area, sidewalk, areaway, steps, or building, shall utilize one of the following:

   a. Water conserving equipment, as such term is defined by the department; or
   b. Recycled water for any such washing.

Supporting Information

Issue – Expanded
Sidewalk cleaning is necessary to maintain a clean and healthy urban space. Sidewalk cleaning removes animal feces, garbage, liquid residue, and other residue from the sidewalk. Buildings typically undertake this cleaning by spraying drinking water on the sidewalk through a hose with no control nozzle.

A primary strategy for resource conservation is to use all resources for their maximum benefit. For water, this implies matching water quality to the appropriate use. It is not necessary to use drinking-quality water to clean sidewalks given this water does not come in contact with humans and immediately flows into the storm sewer.

This proposal would require buildings to minimize the use of drinking water for sidewalk cleaning by requiring the use of water efficient pavement cleaning equipment, such as a “water broom” or other products. This type of equipment is already used by some buildings in the city, but is not a common practice. Alternatively, building could use recycled water, such as rainwater collected on a roof, for sidewalk cleaning.

Utilizing water efficient pavement cleaning strategies is important due to the public nature of the act. The sight of building staff washing down the sidewalk with drinking water sends a message to the public that water conservation is unimportant; water brooms would send the opposite message. Signage noting that a hose bib is for non-potable uses further communicates to the public the conservation measures of its citizens.

During periods of drought, these strategies will allow buildings to maintain clean streets and a healthy environment by removing unpleasant refuse from the sidewalk, without negatively impacting the available water resources.

Environmental & Health Benefits
This proposal would reduce the consumption of drinking water in New York City. If the proposal leads some buildings...
to add on-site capacity for rainwater storage, it will shift the discharge of some water to post-storm event periods, reducing combined sewer overflows (CSOs). Reduction of CSOs reduces the risk of exposure to disease-causing viruses and bacteria. (See Stormwater proposals for more information on CSOs.)

This proposal was found to have a low, positive environmental impact per building and to impact a small number of buildings. It was thus given an environmental score of 1.

This proposal was found to have no significant health impact.

Cost & Savings
As described in the Executive Summary, Bovis Lend Lease prepared cost estimates for each Task Force proposal in the context of well-defined construction projects in specific buildings. Where possible, members of the Technical Committees prepared savings estimates for some of these projects and buildings. These cost and savings estimates are presented in the February 1st draft version of Appendix A. The innate uncertainty in how construction and operation will vary from one building to another, the complexity of the Task Force proposals, and the wide range of applications in which the proposals may be realized mean these figures are truly estimates.

This proposal is not expected to have any significant impact on capital costs. This proposal was also estimated to generate financial savings that will pay for any capital costs in less than three years.

Precedents
Many municipalities in California forbid wash-water from entering the sewer system in order to prevent water contamination with hazardous materials. A few municipalities restrict surface cleaning as a means of water conservation. For example, under the City of Los Angeles’ Water Conservation Plan - Phase I, all residents are prohibited from using a “water hose to wash any hard or paved surfaces including, but not limited to, sidewalks, walkways, driveways, and parking areas,” unless using a “Department-approved water conserving spray cleaning devices.” (Chapter XII: The Water Conservation Plan of the City of Los Angeles, § 121.08(A)(1).) Waterbrooms are currently the only approved sidewalk cleaning device.1

LEED
Utilizing non-potable water for sidewalk cleaning is a strategy to reduce water consumption for all buildings and, in conjunction with other conservation strategies such as HET plumbing fixtures, drip irrigation, and/or water-efficient mechanical systems, meeting both water conservation points is possible.

Also, when utilizing stormwater for sidewalk cleaning, additional credits may be achieved as well. The development of a stormwater management plan includes mitigating runoff from the site. This can be accomplished by the capture of rainwater for reuse or other measures. LEED also addresses the use of treated stormwater. Therefore, this proposal will facilitate achieving LEED points under the following credits:
• NC SS 6.1 Stormwater Design: Quantity Control Option 1B
• LEED for Schools SS cr.6.1 Stormwater Design: Quantity Control
• LEED ND-GCT cr.9 Stormwater Management
• LEED CI-SS cr.1B, Stormwater Management: Rate & Quantity
• LEED for Homes SS cr. 4 Surface Water Management.
• LEED EB-SS cr. 5 Stormwater Management

Additionally, LEED for New Development (pilot program) will address diverting wastewater generated by the project in: LEED ND-GCT cr.16, Wastewater Management.

Implementation & Market Availability
Water efficient pavement cleaning equipment is readily available.

ENDNOTES: