



GREEN TECHNOLOGIES POSITION PAPER

I. Green Technologies – This paper is intended to serve as a basis for WWEMA’s position and any statements made on behalf of WWEMA regarding “green technologies”

II. Issue Statement

A. Overview – There is a rapidly growing demand for green technologies within the water and wastewater treatment industry due to the ever increasing importance of water use efficiency, energy efficiency and sustainable design. Although green products and processes are being used for a variety of building and infrastructure projects, the definition as to what qualifies as a green technology is still inexact and industrywide standards for compliance with green criteria are still in the process of being developed.

B. Legislation, regulations, guidelines and/or actions affecting the issue:

1. **Congress, EPA and the Federal Government**

a. EPA has established a Green Project Reserve which mandates that not less than 20% of the funds made available by EPA to the states in FY '10 for their Clean Water SRF and Drinking Water SRF programs “shall be used for projects to address green infrastructure, water or energy efficiency improvements or other environmentally innovative activities.” Their April 21, 2010 document titled “Guidance for Determining Project Eligibility” provides a detailed description of the type of work that is eligible for the 20% Green Project Reserve.

b. Several bills were introduced in the 111th Congress (2009-2010) with set-asides or incentives to promote green infrastructure projects that promote water and energy efficiency. They include the following:

S. 1005 – Water Infrastructure Financing Act of 2009

H.R. 1262 – Water Quality Investment Act of 2009

H.R. 2996 – Department of the Interior, Environment, and Related Agencies Appropriations Act of 2010

c. The Green Infrastructure for Clean Water Act of 2009 (H.R. 4202 and S. 3561) would establish 3 to 5 centers of excellence to conduct research on green infrastructure; develop manuals and set industry standards on best management practices; create a national clearinghouse; develop green infrastructure curricula and provide training. It would also establish a green infrastructure program with EPA’s Office of Water. NACWA issued a press release applauding the introduction of this legislation.

Note: All of the above water-related programs and legislation deal primarily with green infrastructure projects. They do not deal specifically with green products or technologies except to the extent that those products help to meet the green project eligibility criteria.

d. EPA has also implemented a WaterSense program which identifies products that meet water efficiency and performance criteria. Products that carry the WaterSense label must meet certification criteria established by manufacturers, retailers, distributors and utilities who are partners in the program. The WaterSense label, however, is issued to products marketed primarily to consumers or irrigation professionals rather than municipal or industrial customers.

2. **U.S. Green Building Council** – www.usgbc.org

The organization that has established itself as the most prominent player in the green design and construction movement is the U.S. Green Building Council (USGBC). Their LEED (Leadership in Energy and Environmental Design) certification system is a voluntary program providing third-part verification that buildings are designed and built according to measurable criteria for sustainability, water & energy efficiency and other environmental metrics.

The Green Building Certification Institute (GBCI) was established by the USGBC to administer an accreditation program for LEED Professional Credentials which allows individuals to attain the LEED Accredited Professional (LEED AP) or LEED Green Associates (LEED GA) designation. GBCI also provides third-part certification of projects pursuing LEED.

It is important to keep in mind that the LEED certification applies to buildings; USGBC does not certify, endorse or promote any products or technologies. The certification process is based on compliance with environmental performance standards set forth in the LEED Green Building Rating System. Credits are not awarded for the use of any particular products, although the use of green products or materials may contribute favorably to a building's certification.

3. **Green Building Initiative** – www.thegbi.org

The Green Building Initiative (GBI) is a not-for-profit organization that was established to promote green building practices for residential construction. Their Green Globes environmental assessment and rating tool, originally developed in Canada, was brought into the U.S. market by GBI in 2004. New and existing commercial buildings can be certified for their environmental performance and sustainability through the Green Globes program which assigns a rating of one to four globes. A total of eleven states have passed legislation that recognizes Green Globes as an equal option to LEED. GBI also has a Green Globes Personnel Certification program.

4. **International Green Construction Code (IGCC)** – www.iccsafe.org

The International Code Council (ICC), the American Society of Heating, Refrigerating & Air Conditioning Engineers (ASHRAE), the Illuminating Engineering Society of North America (IES) and the USGBC – all members of the American National Standards Institute (ANSI) – have announced the launch of a new set of codes and standards for the design and performance of green buildings. The International Green Construction Code (IGCC), Version 1.0, was released in draft form in March 2010 and on August 14-22 there will be a public comment hearing in Rosemont, IL. Version 2.0 will be posted on the ICC website in November 2010 after which proposals for code changes will be due by January 3, 2011.

The IGCC also includes ASHRAE Standard 189.1 – *Standard for the Design of High Performance Green Buildings*, which defines the minimum requirements for green building site sustainability, water use efficiency, energy efficiency, indoor environmental quality and other environmental impacts.

5. **Sustainable Attributes Verification & Evaluation (SAVE)** – saveprogram.icc-es.org
The Sustainable Attributes Verification and Evaluation Program was created by the International Code Council (ICC) Evaluation Service to provide independent verification of manufacturers' claims about the sustainable attributes of their products. Successful evaluation under the ICC-ES SAVE program results in the issuance of a Verification of Attributes Report (VAR) and an ICC-ES SAVE Mark that can be displayed by the manufacturer on its products. The SAVE VAR's provide information that can be helpful to those seeking to qualify for points under major green rating systems (such as LEED, the Green Building Initiative's Green Globes, or the proposed National Green Building Standard). The reports are available online at no cost and they follow the Construction Specification Institute (CSI) Master Format for numbering and categorizing of products. The basic application fee for a new Verification of Attributes Report is \$5,000 and there is an additional fee for annual renewals.

6. **CSI Green Format** – www.greenformat.com
Green Format was developed by the Construction Specification Institute to provide web-based access to information about a product's sustainability properties. Manufacturers report the attributes of their products through a comprehensive online questionnaire. The data is then made available through the Green Format website where designers and construction professionals can access the information they need to help meet their "green" requirements. The first product listing costs \$995 and each additional listing is \$100.

C. Pros and cons from a macro (industry) and micro (business opportunity) perspective

PROS:

1. From a marketing standpoint, the green movement has created a unique opportunity for water and wastewater equipment suppliers to rebrand their products by featuring the green aspects of their technologies. Manufacturers who embrace the trend toward greenness and engage in the various initiatives within the industry will distinguish themselves from their competition by highlighting the green benefits of their equipment.
2. Design professionals will be more receptive to working with manufacturers whose products will earn points toward certification under the green rating systems. As a result, those manufacturers who incur the added expense of utilizing sustainable materials and processes and whose products perform most efficiently will more likely be specified for projects seeking to attain green status.

CONS:

1. Green certification of products or technologies does not yet exist; certification applies only to buildings that comply with green standards or incorporate products that meet certain green criteria.
2. There has been a tendency on the part of some suppliers to make unfounded claims or provide misleading information about the environmental characteristics or benefits of their products. This practice of "greenwashing" tends to make design professionals skeptical of product related information that has not been independently verified.
3. The process of having the green attributes of a manufacturer's product or technology independently evaluated and verified can be time consuming and costly.

III. Position

A. Recommended position and call to action:

1. WWEMA should give consideration to registering its support for the Green Infrastructure for Clean Water Act of 2009 (H.R. 4202 and S. 3561).
2. WWEMA members should review the draft of the International Green Construction Code (IGCC) to familiarize themselves with the standards being proposed for the design, construction, operation and maintenance of green buildings, and to ensure that the proposed standards will not exclude or limit the use of any member's products or technologies. IGCC Public Version 1.0 and ASHRAE Standard 189 are available for review on the ICC website at www.iccsafe.org.
3. Every WWEMA manufacturer and their representatives should be able to clearly articulate how their products or technologies will help engineers and design professionals qualify for credits under the green rating systems. In order to do so, manufacturers might consider having at least one member of their staff go through the training required for green building professional accreditation, such as the LEED AP designation which is the most widely recognized credential. Having an in-house person trained in the principles of sustainable design would be less expensive than hiring an outside specialist and it would lend greater credibility to a manufacturer's claims about the green aspects of their products.
4. WWEMA should invite a representative of one or more of the green building NGO's to speak at the upcoming Annual Meeting in St. Pete Beach, Florida, preferably the International Code Council (ICC) which is the lead organization in charge of both the International Green Construction Code and the Sustainable Attributes Verification and Evaluation (SAVE) program.

B. Rationale for WWEMA involvement

The process of defining green technologies and establishing standards for green construction is still in the development stages. Therefore, now is the ideal time for WWEMA to become a stakeholder in the process and be in a position to influence its outcome.

IV. Enforcement authority

A. Identify where the power lies (Federal, State or Local level)

1. EPA has stipulated that a portion of the funds for Clean Water SRF and Drinking Water SRF projects shall be used for green infrastructure, water or energy efficiency improvements or other environmentally innovative activities. The EPA document titled "Guidance for Determining Project Eligibility" describes in detail what type of work is eligible for the 20% Green Project Reserve.
2. Participation in green building certification and/or verification programs is voluntary, and as such, is not subject to government regulation or oversight. Enforcement is done through the non-governmental organizations responsible for third-party verification of compliance with green building standards or design criteria.

V. Resource links

Appendix A – ANSI / International Green Construction Code (IGCC) announcement
Appendix B – NACWA / Green Infrastructure for Clean Water Act endorsement

Appendix A

ICC, ASHRAE, USGBC and IES Announce Nation's First Set of Model Codes and Standards for Green Building in the U.S.

Reprinted from an ICC / ASHRAE / USGBC / IES press release

New York March 12, 2010

The International Code Council (ICC), the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE), the U.S. Green Building Council (USGBC), and the Illuminating Engineering Society of North America (IES) – all members of the American National Standards Institute (ANSI) – have announced the launch of the International Green Construction Code (IGCC).

The IGCC represents the merger of two national efforts to develop adoptable and enforceable green building codes. It will provide the building industry with language that both broadens and strengthens building codes in a way that will accelerate the construction of high performance green buildings across the U.S.

For decades, ICC and ASHRAE have worked to develop codes and standards that become the industry standard of care for the design, construction, operations and maintenance of residential and commercial buildings in the U.S. and internationally. In coordination with the efforts of ICC and ASHRAE, USGBC has been leading a nationwide green building movement centered on the LEED Green Building Rating System since LEED was launched in 2000. The convergence of these efforts in the IGCC is perhaps the most significant development in the buildings industry in the past 10 years.

Leveraging ICC's unrivaled delivery infrastructure to reach all 50 states and more than 22,000 local jurisdictions and ASHRAE, USGBC and IES's technical strengths, this partnership will accelerate the proliferation of green building codes and standards developed jointly by ICC, ASHRAE and USGBC and IES, across the country and around the globe. The newly launched IGCC establishes a previously unimaginable regulatory framework for the construction of high performance commercial buildings that are safe, sustainable and by the book.

A landmark addition to the technical content of the IGCC is the inclusion of ANSI/ASHRAE/USGBC/IES Standard 189.1, *Standard for the Design of High Performance, Green Buildings Except Low-Rise Residential Buildings*, as an alternate path of compliance. Standard 189.1 is a set of technically rigorous requirements, which like the IGCC, covers criteria including water use efficiency, indoor environmental quality, energy efficiency, materials and resource use, and the building's impact on its site and its community. Standard 189.1 was written by experts representing all areas of the building industry, who contributed tens of thousands of man hours. Developed in a little over three years, the standard underwent four public reviews in which some 2,500 comments were received.

For more information on the launch of the IGCC, see the full press release issued by ICC, ASHRAE, USGBC, and IES.

Appendix B

NACWA Applauds Introduction Of Green Infrastructure Legislation In Senate

July 14, 2010

The National Association of Clean Water Agencies (NACWA) applauds Senators Tom Udall (D-N.M.) and Sheldon Whitehouse (D-R.I.) for their leadership and vision in introducing the Green Infrastructure for Clean Water Act (S.3561) in the U.S. Senate. The legislation seeks to increase green infrastructure (GI) in stormwater management by creating a program within EPA to provide resources for the planning and construction of GI projects.

NACWA has long advocated that GI should be integrated and accepted as a core program within EPA. In 2007, NACWA signed the Statement of Intent on Green Infrastructure, which called for a greater collaborative effort to promote GI. Since that time, increasing numbers of NACWA members have implemented GI projects demonstrating their ability to improve water quality and livability at an affordable cost. This needed legislation is a key step toward ensuring that communities are provided regulatory credit for implementing GI solutions that benefit the environment and public health while increasing community livability.

The legislation also seeks to authorize a dedicated source of federal assistance for the planning and implementation of GI projects to help meet challenges posed by stormwater flows, one of the largest and growing sources of pollution entering our nation's waters. The recently released 2008 Clean Water Needs Survey, which reflects only a portion of the total need, shows the nation has \$42.3B in stormwater management needs over the next twenty years. This need will increase dramatically with the finalization of upcoming stormwater regulations. The assistance provided by this legislation will help put worthwhile projects in place that will mitigate pollution from stormwater runoff by retaining that runoff, and its pollutants, at the source and allowing natural processes to remove harmful contaminants.

Kevin Shafer, NACWA President and Executive Director of the Milwaukee Metropolitan Sewerage District, applauded the introduction of the Senate bill, stating "I have seen first-hand the water quality benefits of Green Infrastructure projects. NACWA strongly supports the work of Senators Udall and Whitehouse in raising the profile of these important projects and we look forward to helping garner additional support for this effort."

NACWA applauds Senator Udall for his leadership on this important issue. We look forward to working with him to advance this bill swiftly in the 111th Congress given the benefits it will provide to water quality.

SOURCE: National Association of Clean Water Agencies

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