

MARYLAND GREEN BUILDING COUNCIL ANNUAL REPORT

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The Maryland Green Building Council provides current and thoroughly-researched information and advice on state green building issues to the Maryland Governor and General Assembly. This is its annual report.



University System of Maryland A. James Clark Bioengineering Building Ballinger Architects and Clark Construction LEED Silver

Message from the Secretary

The Maryland Green Building Council and Department of General Services appreciate this opportunity to submit this 2018 Annual Report to the Governor, General Assembly and citizens of Maryland. This report represents the collective efforts and hard work of multiple State of Maryland agency participants and representatives of environmental, business and citizen interests who serve on the Maryland Green Building Council.

The council promotes creation of state buildings that strive for increasing efficiency in their use of energy, use of the sites on which they are placed, in their use and protection of natural resources and in their construction and operation.

The council evaluates high performance building technologies and provides recommendations on those that are most cost-effective for use in design and construction of state facilities. The council provides recommendations on evaluation criteria for state facilities and means of expanding green building in the state.

These efforts align with efforts of other State of Maryland agencies to conserve the state's financial, natural and human resources.

In 2018, the Maryland Green Building Council made progress in *Changing Maryland for the Better* by positively influencing the creation of hundreds of thousands of square feet of new, energy-efficient facilities used for research, kindergarten through high school and higher education, and offices.

Through the council's efforts, buildings constructed by the state, directly contribute to the health of the state's citizens, create positive impacts on the state's economy and the environment.

Sincerely,

Ellington E. Churchill, J.

Ellington E. Churchill, Jr., Secretary Maryland Department of General Services

Message from the Chair

I began my tenure as chair by stepping in to fill the remainder of Ms. Fulya Kolcak's term. I am grateful for guidance she provided during the transition. Starting the year with a new chair and a new DGS representative gave the Council a chance to reevaluate our priorities and operations. This year has been fruitful both externally, with the connections the Council reestablished with other agencies, and internally, with the new operational procedures the Council has put in place.

HIGHLIGHTS

We have sought more interconnection between agencies as we began working with the Interagency Commission (IAC) on the 21st Century School Facilities initiative.

We have moved to achieve greater alignment with the administration through ongoing dialogue with Secretary Churchill.

The Council implemented use of Roberts Rules of Order and began using a written 'Resolution' format to track decisions.

To leverage Council member's time and increase the Council's impact subcommittees were created:

- Energy Efficiency Education/Existing Buildings
- Outreach
- Legislation
- Financial Incentives

An Operations Guide was created for the Council to serve as a living document for current and future Council members.

ACHIEVEMENTS

We passed a resolution recommending the equivalence of Green Building Initiative's Three Globes in the Green Globes system with LEED Gold for purposes of the Maryland Department of Planning and Maryland Historical Trust's Competitive Commercial Tax Credit.



We passed a resolution

recommending that State-owned and operated building operators provide energy consumption information to Maryland DGS to update the building database for the Office of Energy Performance and Conservation.

We passed a resolution recommending improvements to the waiver process for the High Performance Green Building Program (HPGBP).

LOOKING AHEAD

I was reappointed in June of this year and am excited to serve as the chair while we continue to work to get more initiatives off the ground. As we go into 2019, the Council will continue to discuss ways to incorporate existing buildings into the energy efficiency conversation while fulfilling the mission of our statue. I am honored to serve Maryland and my fellow citizens. I invite you to join us at one of our future meetings.

Sincerely,

Mrs. Nakita Reed, Chair, Maryland Green Building Council

Summary

HOW GREEN BUILDING FITS WITH MARYLAND

The State of Maryland has long-sought to protect and conserve our state's resources. This mission has been a focus of nearly every agency in the state. With the Maryland Department of General Services Green Building Council's efforts to promote the delivery of efficiently built and operated facilities, the department performs its role in advancing the state-wide conservation mission. The efforts dovetail with other state agency programs such as the Maryland Department of Agriculture's conservation practices and programs to balance crop and livestock production with protection of natural resources, the Department of Planning's Water and Sewerage Plan Facilities to assure adequate water and sewerage facilities will be provided to support planned redevelopment and growth as outlined in the Comprehensive Land Use Plan, the numerous programs of the Maryland Department of Natural Resources to conserve and enhance open space and Maryland Department of the Environment's efforts to clean and protect the state's surface waters, air and indoor environments.

The Maryland Green Building Council was established in 2007 with *House Bill 942 – Section 4-809* of the State Finance and Procurement Article. The council is within the Maryland Department of General Services (DGS). Its membership consists of private-sector representatives appointed by the Governor, representatives from key state agencies and staff support from DGS. The council meets monthly and reports to the Governor and General Assembly annually.

Maryland *State Finance and Procurement Article Code Ann. § 3-602.1* (2014) requires that the State employ green building technologies when constructing or renovating State-owned buildings that meet specific criteria. To promote the technologies, the council established the *High Performance Green Building Program*.

The *High Performance Green Building Program* applies to all State of Maryland agencies and local educational agencies (LEAs) that program, design and build facilities.

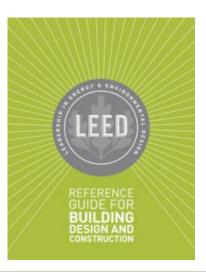
The *High Performance Green Building Program* also pertains to capital projects funded solely with State of Maryland funds, state-funded new and replacement school construction and community college capital projects receiving state funds.

The *High Performance Green Building Program* requires use of one of three green building certification or rating programs in the design, construction and operation of facilities:

- 1. Leadership in Energy and Environmental Design (LEED), a program of the U.S. Green Building Council
- 2. *International Green Construction Code* (IgCC), one of the many codes of the International Code Council
- 3. The Green Globes protocol of the Green Building Initiative.







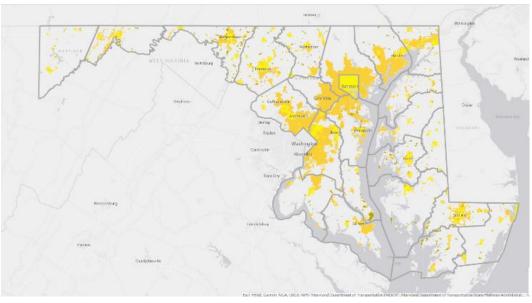
SUMMARY

MARYLAND GREEN BUILDING COUNCIL GOALS

Council goals include the promotion and creation of energy efficient buildings throughout the State of Maryland. For state facilities, this includes achieving compliance with the *High Performance Green Building Program*, promoting new green building technologies and developing criteria for high-performance buildings. At the beginning of 2018, the council set out the following goals:

1. Existing Building Education

- a. Upgrade existing buildings for energy conservation
- b. Focus on how to improve performance of existing buildings
- Develop recommendations to improve efficiency of state leased facilities



Coordinating with Other State Agencies
Maryland Priority Funding Areas
Maryland Department of Planning
https://mdpgis.mdp.state.md.us/PFA/publicinfotemplate/index.

2. Conduct Outreach

- a. Correlate Maryland Green Building Council initiatives with the governor's agenda
- b. Engage with other, related state agencies
- c. Perform outreach at conferences and conduct seminars
- d. Assess effectiveness of the council through surveys and year over year High Performance Green Building Program use

3. Energy Efficiency Education

- Develop recommendations to measure energy and water use in existing buildings in order to guide upgrades and future facilities.
- b. Highlight demonstration projects
- c. Assist in the establishment of state energy reduction goals

4. Financial Incentives

- a. Promote use of green building standards for private sector
- Recommend financial incentives for renovation of existing facilities

Sub-Committee Activities

OUTREACH

Outreach and education are integral to the Maryland Green Building Council's mission. The MDGBC's Outreach Committee is tasked with boosting demand for green building principles among facility designers, builders, owners, investors, and managers. These stakeholders' acceptance of green building features only begins with the demonstration of green features. It is equally important for the Outreach Committee to communicate these features' coincident impacts on facility comfort, productivity, return on investment, and containment of operating expense and risk. Ultimately, the Outreach Committee can be used to foster two-way communication with stakeholder groups, thus providing insight on the potential to refine the MDGBC's communication content. Similarly, the Outreach Committee is well-positioned to advise and assist the State with the adoption of green criteria in its own facilities construction and maintenance.

ENERGY EFFICIENCY, EDUCATION AND EXISTING BUILDINGS

The Energy Efficiency and Existing Buildings Committee seeks to work with the Department of General Services to encourage State agencies to provide information on building use, square footage and energy consumption so that an inventory could be compiled of State buildings. While green building in new construction is important, the bulk of the State's buildings are already existing. Understanding the full complement of existing buildings can help State agencies prioritize green building upgrades in order to direct scarce and competing resources.

FINANCIAL INCENTIVES

The council has discussed means of incentivizing use of energy efficient and green building technologies in construction of state and private-owned facilities through means such as streamlining the green building certification process, adjusted scoring of leases and tax incentives. Such alternatives may be complex to implement and will require input from legislators, other agencies and senior administrators.



John Shaw House, State Circle, Annapolis National Register of Historic Places and one of the State of Maryland's oldest facility assets

Legislative Review

Each year, bills with potential impacts to building energy efficiency or sustainability are brought forth in Maryland General Assembly. With the assistance of Ellen Robertson, the Maryland Department of General Services Legislative Liaison, the Maryland Green Building Council tracks the bills and provides input on them in the form of resolutions to the Secretary of the Department of General Services and Governor, testimony at hearings or through informal correspondence. During the 2018 session, the council reviewed several bills and provided informal recommendations.

Legislation passed this year with the most significant impact on the Maryland Green Building Council is the *21st Century Schools Facilities Act* (Senate Bill 1243 and House Bill 1783). The Act requires that the "Maryland Green Building Council develop guidelines for achieving the equivalent of LEED Silver standards without requiring LEED certification of new school buildings, including some independent certification that school systems have achieved the required standards."

The council has set upon this task and anticipates having an alternate evaluation system in place by late 2019.



LEGISLATIVE REVIEW

2018	MAR'	YLAND LEGISLATIVI	E ACTIVITIES	RELATED	TO THE MARYLA	AND GREEN	BUILDII	NG COUNCIL
Main Bill	Cross Filed Bill	Name	Sponsor	Committee	Status	Position	Fiscal Impact	Bill Description
<u>HB</u> 138		Assembly Areas - State-Funded Construction or Renovation - Assistive Listening System Requirements	Knotts (D) 26 - Prince George's	APP	UNFAVORABLE, WITHDRAWN	MONITOR	YES	Requires assistive listening devices in public gathering spaces.
HB 141		State Finance and Procurement - Public Buildings - Diaper Changing Facilities in Restrooms	Knotts (D) 26 - Prince George's	HGO	UNFAVORABLE, WITHDRAWN	MONITOR	YES	Requires diaper changing stations in State public restrooms when new or renovated.
<u>SB</u> <u>177</u>		Electric Vehicle Recharging Equipment Rebate Program and Tax Credit	Manno (D) 19 - Montgomery	В&Т	3rd reading passed 46-0, no House action	NO POSITION		
<u>SB</u> 1006	<u>HB</u> 1350	Sea Level Rise Inundation & Coastal Flooding, Construction, Adaptation, Mitigation & Disclosure	Pinsky, Stein	EHEA E&T	Passed Enrolled			

LEGISLATIVE REVIEW

2018	2018 MARYLAND LEGISLATIVE ACTIVITIES RELATED TO THE MARYLAND GREEN BUILDING COUNCIL							
Main Bill	Cross Filed Bill	Name	Sponsor	Committee	Status	Position	Fiscal Impact	Bill Description
<u>НВ</u> 986	<u>SB</u> 1009	DGS, Bird-safe Building Standards (Maryland Bird-Safe Buildings Act of '18)	Lam, Guzzone	HGO EHEA	UNFAVORABLE, WITHDRAWN Hearing 3/6 EHEA	MONITOR	YES	HB 956 would require that DGS establish building standards to prevent bird strikes. To the extent practicable, these standards would apply to any newly constructed, substantially altered or newly acquired building. DGS would also have to develop and implement lighting standards (reduce lighting).
SB 1243	<u>НВ</u> 1783	21st Century School Facilities Act	DeGrange, Jones	B&T App	Hearing 3/15 B&T Gubernatorial veto override Chapter 14	NO POSITION	YES operational	Eliminates DGS review of change orders, allows DGS to create a process to exempt certain school systems from DGS review if they meet certain criteria; The GBC must develop guidelines that enable new public school buildings to meet the equivalent of current "green building" standards without requiring certification under the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) program.

Building Green in Maryland

PROJECTS REQUIRED TO COMPLY WITH THE HIGH-PERFORMANCE BUILDING ACT

These are projects that receive all their funding from the State of Maryland and therefore must meet the minimum requirements defined in the Maryland High Performance Green Building Program; of either USGBCs LEED Silver, 2 Green Globes or compliance with the *International Green Construction Code*.

Notable projects that have been initiated or completed during the past year are included here. These facilities join a long, cumulative list from the inception of the program in 2007.

			Now in
Torugon University	LEED	316,000 GSF	construction,
Towson University,	Silver	and	anticipated
New Science Facility	(Minimum)	\$187,819,000	complete by
			2020

This project will align all departments and programs of the Fisher College of Science and Mathematics into two adjacent buildings. The facility will be the largest academic building on campus. It will include;

- 50 teaching and 30 research laboratories, 50 classrooms, 10 collaborative student spaces, 8 lecture halls, 1 outdoor classroom leading into the Glen Arboretum
- planetarium, observatory, rooftop greenhouse, museum and vivarium
- water-efficient landscaping, and a rain garden for storm water control
- Bicycle storage and changing rooms
- Low-impact materials



Towson University, New Science Facility
LEED Silver

			Planning has
Coppin State			begun this
University College of			year.
Business and Graduate	LEED	64,390 GSF	Construction
Studies, Percy Julian	Silver	and	is
Building Renovation	(Minimum)	\$43,231,000	anticipated
building Kenovation			to be
			complete by
			2022

Functions include classrooms, laboratories, office space, and clinical and community outreach spaces.

BUILDING GREEN IN MARYLAND

GREEN BUILDINGS INDEPENDENT OF THE HIGH PERFROMANCE BUILDING ACT

Although not required to do so, these facilities meet the minimum requirements defined in the Maryland High Performance Green Building Program of achieving either USGBCs LEED Silver, 2 Green Globes or compliance with the *International Green Construction Code*. Although most, but not all funding for these facilities may be from State of Maryland sources, they are exempt from the program requirements.

Notable projects that have either been initiated or completed during the past year are included here.

University of Maryland			
Baltimore County	LEED	172,000 GSF	Construction
•	Silver	and	
Event Center	(Minimum)	\$85,000,000	complete

The project is a multi-purpose facility to host revenue and non-revenue producing events such as commencement, concerts, speakers, NCAA athletic games and practices for men's and women's basketball and women's volleyball. It accommodates 5,000 to 6,000 spectators. Features include:

- low-impact materials
- advanced controls

A. James Clark Biognaphing Silver	184,715 GSF and 155,430,000 Construction comple	
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The facility is a new Bioengineering Building to house the Robert E. Fischell Department of Bioengineering and the Robert E. Fischell Institute for Biomedical Devices.





University System of Maryland A. James Clark Bioengineering Building Ballinger Architects and Clark Construction LEED Silver

BUILDING GREEN IN MARYLAND



Baltimore City's First Net Zero Schools Graceland Park/O'Donnell Heights & Holabird Elementary/Middle School Grimm and Parker Architecture, Inc.

"Utilizing the sites as teaching tools, the schools will be equipped with student gardens, outdoor classrooms, rooftop solar labs, and vegetative roofs that further push innovation while intertwining sustainable concepts in education – staying true to their mission to nurture, engage, and empower the whole child for life-long excellence." G+P

MARYLAND GREEN SCHOOLS

Collectively, the Maryland public schools program implements the greatest number of high performance facilities in the state. In 2018, notable projects initiated or completed in the state will seek or have achieved LEED Silver and Gold certifications. A few, will achieve net zero status. A net zero-energy building, is a building with zero net energy consumption. This means

the total amount of energy used by the building on an annual basis is roughly equal to the amount of renewable energy created within the facility and on the site. Efficiencies are being achieved through implementation of efficient plumbing systems, smart monitoring and controls, photovoltaic solar systems, geothermal heating and cooling, green roofs and stormwater bioretention on site.

In some circumstances, the systems used to conserve resources are made visible for incorporation into educational programs at the schools.

GREEN SCHOOLS		
PROJECT	RATING	LOCATION
Allegany County High School (HS)	Silver	Allegany County
Crofton High School	Silver	Anne Arundel County
Baltimore City has started or completed 24 new facilities and major additions for high schools, elementary and middle schools (ES/MS).	Silver and Gold	Baltimore City
Baltimore County has started or completed 16 new facilities and major additions for high schools, elementary and middle schools.	Silver and Gold	Baltimore County
Northern HS	Silver	Calvert County
Beach ES	Silver	Calvert County
Career and Technology Center	Silver	Carroll County
Greensboro ES	Silver	Caroline County
Gilpin Manor	Silver	Cecil County
New Chesapeake City ES	Silver	Cecil County
Charles County has started or completed 4 new facilities and major additions for high	Silver	Charles County

BUILDING GREEN IN MARYLAND

schools,	elementary	and	middle	
schools.				

schools.		
North Dorchester HS	Silver	Dorchester County
Frederick County has started or completed 6 new facilities and major additions for high schools, elementary and middle schools.	Silver	Frederick County
Youth Benefit ES	Silver	Harford County
Havre de Grace MS/HS	Silver	Harford County
Joppatowne ES	Silver	Harford County
Howard County has started or completed 5 new facilities and major additions for high schools, elementary and middle schools.	Silver (4) Platinum (1)	Howard County
Montgomery County has started or completed 13 new facilities and major additions for high schools, elementary and middle schools.	Silver	Montgomery County
Prince George's County has started or completed 6 new facilities and major additions for high schools, elementary and middle schools.	Silver	Prince George's County
J. M. Tawes Center	Silver	Somerset County
Easton ES	Silver	Talbot County
Urban Educational Campus - BOE component	*	Washington County
Sharpsburg ES	Silver	Washington County
West Salisbury ES	Silver	Wicomico County
Beaver Run ES	Silver	Wicomico County
Showell ES	Silver	Worcester County



Sharpsburg Elementary School Washington County LEED Silver SEI Architects



Wilde Lake Middle School Howard County Net Zero, LEED Platinum TCA Architects

Maryland Green Building Council Membership

The council includes members with an array of exceptional talents, skills and technical knowledge necessary to advance the state's mission of promoting efficient and responsible facility development and operation. The members are passionate about conservation of our state's and global resources and translate that passion to actions that benefit the state. Composition of the council membership is mandated by statute. It consists of secretaries of select State of Maryland agencies or their designees. Agencies represented include:

General Services,
Budget and Management,
Department of the Environment,
Housing and Community Development,
Natural Resources,
Planning,
Transportation,
Maryland Energy Administration,
Interagency Committee on Public School Construction,
Chancellor of the University System of Maryland

Additionally, six members of the council are appointed by the Governor to represent environmental, business, and citizen interests, one of whom has expertise in energy conservation or green building design standards. Terms of the governor-appointed members are two years and are staggered, with half of the terms up for renewal every other year.

In addition to council members, several individuals regularly attend meetings and provide essential, meaningful contributions.

The start of 2018 brought a few changes in membership to the council. One of the remaining, founding members of the Green Building Council, Stephen Gilliss, retired from the Maryland Department of General Services and thereby relinquished his role as manager and staff support for the council. Steve's efforts helped guide the council at its inception and through many years and changes in leadership and members. He oversaw the establishment of policies and operational procedures that will continue to guide the council. In appreciation for his many years of service to the state, Steve was presented with a gubernatorial citation.

LEED accredited Architect and Landscape architect Steve Lauria, replaced Steve Gilliss upon his departure. He assumed the Department of General Service's management and support role on the council.

As a result of a new professional position and increased demands on her time, Fulya Kocak, LEED Fellow, stepped down as chair and left the council. Fulya is a skilled facilitator who very capably led the council through review and adoption of the Green Globes construction certification program as an alternative to LEED for project certification.

Longtime member and past chair, Tom Liebel came off the council. Tom provided leadership and shared extensive technical knowledge with the council. He served as chair for three years, most recently in 2013.

Gubernatorial Appointees



Nakita Reed, AIA, APT, NOMA, NCARB, LEED AP BD+C, GGP, Chair

Principal, Encore Sustainable Design, LLC

Nakita co-founded Encore Sustainable Design, LLC to focus on good design, preservation, and making buildings sustainable. Her focus is restoration and adaptive reuse projects and incorporates sustainable features into new and existing buildings. She has experience with governmental agencies; counties to GSA, the Navy and Veteran Affairs Administration.

She holds a Bachelor of Science in Architecture from the University of Virginia. She completed her graduate studies at the University of Pennsylvania where she earned her Master's of Architecture, Master's of Science in Historic Preservation, and certificate in Ecological Architecture. Nakita serves on numerous boards including Preservation Maryland and the Alice Ferguson Foundation.



Michael Li, Senior Policy Advisor

Office of Energy Efficiency and Renewable Energy, U.S. Department of Energy

Michael focuses on supporting states to help them achieve their energy goals. Michael also leads the State Energy Advisory Board.

Prior to joining DOE, Michael worked at the British Embassy and various state agencies in Maryland, including as the chief of staff for the Maryland Energy Administration. He has an undergraduate degree from Rutgers University and graduate degrees from John Hopkins University and Fuller Theological Seminary.



Cherise Y. Seals, Senior Business Development Manager

WGL Holdings, Inc.

Cherise develops and negotiates renewable energy and efficiency agreements with government, institutional, and industrial clients.

Her prior roles include terms at Constellation Energy and Merck & Co. She was the first African American Technology Coordinator for the Maryland DBED. At BGE, she was a design engineer for utility systems and an Integration and Test Engineer for NASA. She has served as panelist for many governmental and institutional organizations.

Cherise holds a BS in Electrical Engineering with Mathematics Minor from Virginia Tech, an MBA from Loyola University and has a Certified Energy Manager designation. A wife and mother of two, Cherise is a youth advisor and avid singer, plays tennis, writes plays, and serves as a mentor.

Gubernatorial Appointees



Ryan Schwabenbauer, MBA, LEED AP, Director of Sustainability

St. John Properties

Ryan leads Saint John Properties mission to implement sustainable business initiatives that positively impact 30+ ongoing new construction projects and 18 million square feet of existing commercial real estate under management. He oversees strategies resulting in operational cost reductions and assures all future projects are LEED Certified. Advocating for the health and wellness of our 2,000 clients, St. John Properties is the regional leader with over 40 LEED certified buildings.

Ryan holds a BS in Finance from Penn State University, an MBA from University of Baltimore and is a LEED Accredited Professional.



Stuart Kaplow, Esquire Stuart D. Kaplow, P.A. Sustainability & Green Real Estate Attorneys

Stuart represents a breadth of business interests in a varied law practice, concentrating in real estate and environmental law with focused experience in green building and sustainability.

Stuart is a frequent speaker and lecturer on innovative solutions to the environmental issues of the day, including speaking to a wide variety of audiences on green building and sustainability. He has authored more than 700 articles centered on his philosophy of creating value.

Stuart is a graduate of the University of Baltimore School of Law. He graduated with honors from the University of Maryland, Division of Behavioral & Social Sciences, with a Bachelor of Arts degree in land use planning.

Agency Representatives



Arabia Davis, Manager

Interagency Committee on Public School Construction

Arabia manages the Funding Programs at the Maryland Public School Construction Program. Her work at PSCP involves the evaluation and monitoring of project submissions for compliance and eligibility as well as reporting on project funding recommendations. With over 20 years of experience in State government service, Ms. Davis has provided assistance in project implementation by way of planning, researching and participating in community development activities. She attended Morgan State University.



Mark Beck, Director of Capital Planning and Sustainability

University System of Maryland

Mark coordinates capital budget, facilities and sustainability efforts of the System's twelve institutions.

Previously, Mark planned campus venues for the 2002 Winter Olympics at the University of Utah, and developed a capital facilities rebuilding program at Yale University. He has a master's degree in urban planning and was an adjunct professor of geography and urban economics.



Anne B. Raines, Deputy Director / Deputy State Historic Preservation Officer

Maryland Historical Trust (MHT), part of the Maryland Department of Planning

After earning her Bachelor of Architecture at North Carolina State University, she worked for several years as an architect in Baltimore and in the UK. She earned her MSc in Architectural Conservation with distinction from Edinburgh College of Art (University of Edinburgh) in 2009; returning to the US, she worked as Capital Grants and Loans Administrator at MHT until assuming her current position in 2017.

Agency Representatives



Donald VanHassent, Associate Director Maryland Department of Natural Resources, Maryland State Forester

In addition to his role on the Maryland Green Building Council, Don serves as the DNR staff for the Maryland Sustainable Forestry Council.

That Council advises the Department of Natural Resources on sustainable forestry management in Maryland and on expenditures from the Woodland Incentives Fund. Also, the Council may provide advice on regulatory and statutory policies that may be a hindrance to a viable forest products industry; new markets to enhance forest health; innovative strategies to keep private forest lands whole and undeveloped; and ways to measure how forested acres benefit nutrient efficiency.



Laura Rogers, Program Manager Office of Environment

Maryland Department of Transportation

Laura leads the environmental stewardship, sustainability, performance and energy policies and programs across all MDOT transportation business units and the Maryland Transportation Authority. She oversees and coordinates environmental management activities in transportation planning, design, construction, operations and maintenance.

Prior to MDOT, Laura worked in federal and private sectors on environmental management and sustainability issues. She spent terms at the Department of the Army at Arlington National Cemetery where she developed environmental programs and, with a private consulting firm working on multi-media environmental compliance and management programs around the U.S. and Europe. Her experience also includes two years as an Air Quality Enforcement Officer in Arizona.



Christopher Russell, Program Manager, State Buildings & Energy Codes

Maryland Energy Administration

Chris brings over 25 years of energy industry experience to the Maryland Energy Administration, where he is the program manager for State Buildings and Energy Codes. He holds an M.B.A. and a Master of Arts degree from the University of Maryland and a B.A. from McGill University.

Publications that Chris has authored include "Managing Energy from the Top Down" and "North American Energy Audit Program Best Practices."

Agency Representatives



Laura Armstrong, LEED AP O+M Director, Sustainability Program

Maryland Department of the Environment

Laura promotes sustainable business practices through technical assistance programs, demonstration projects and recognition programs. Technical services include on-site energy, water and waste reduction assessments and Environmental Management System implementation. She also manages the Maryland Green Registry, a voluntary program of more than 500 organizations across the state, which encourages members to share their environmental best practices through online profiles that highlight their successes and inspire others.



Susan Gore, Budget Analyst Lead, Office of Capital Budgeting

Department of Budget and Management

Susan has been with the State of Maryland's Department of Budget and Management since September of 2013. Her current portfolio includes Maryland Departments of the Environment, Agriculture, Environmental Services, and Natural Resources. Susan received her Bachelor's degree in Environmental Science and Policy at the University of Maryland and her Master's degree in Public Policy from the University of Maryland.

Agency Representatives



Norman Wang, RA, Director of Maryland Codes Administration

Department of Labor, Licensing and Regulation

Norman leads the Maryland Building Codes
Administration to fulfill several Maryland statutes
mandated responsibilities, including (i) adoption of
State building codes, (ii) administration of
Maryland Industrialized Building Program,
Maryland Accessibility Code, Minimum Livability
Code, and (iii) providing training on building codes
for local government employees.

Norman also represents the Department in several state-wide councils/committees, including Green Building Council, Maryland Building Rehabilitation Council, Maryland Resiliency Partnership, and Maryland Building Officials Association.

Norman is a registered architect in several states including Maryland. He holds a Masters of Architecture Degree from the Ohio State University.



Stephen Lauria, Architect & Landscape Architect, LEEDap, Capital Projects Manager

Department of General Services

Steve is responsible for organizing and providing Green Building Council Staff Support for DGS. Steve integrates facilities and infrastructure with their sites and communities through environmentally sensitive and sustainable solutions. For over thirty years, he has led facility and land-use projects for mixed-use, higher education, water and wastewater, power generation, biomedical and pharmaceutical research, military facilities and healthcare.

Steve's non-profit board service began with a role on the Alexandria, Virginia Environmental Policy Commission and continued as president of a National Trust historic district community in Baltimore and as chair of the advisory committee of the Baltimore Regional Transportation Board.

Key Participants



Martha Shrader, LEED AP-BD&C, Sustainability Manager

University System of Maryland Facilities Management-P&C-Support

Martha is a graduate of the University of Maryland College Park (UMD) with a BS in Natural Resource Management. She is currently the Sustainability Manager for the Facilities Management Planning and Construction Department at UMD where she provides technical support in the area of green design and construction. She has worked on multiple LEED certified projects in the University System of Maryland.

When not involved in green design and construction activities, Martha enjoys reading, walking, biking, yoga, and practicing and performing with Tagé on Steel, a steel drum band based in Hyattsville, MD.



Ellen Robertson, Legislative Liaison

Maryland Department of General Services, Office of the Secretary

Ellen assists in identifying and reviewing legislation that may impact the work of the Maryland Green Building Council. She provides guidance and recommendations on implementation of relevant policies. Her guidance for content of the council comments on legislation or action the council should consider is invaluable.

Information

State of Maryland

Lawrence J. Hogan Jr., Governor

Boyd K. Rutherford, Lieutenant Governor

Thomas V. Mike Miller, Jr., Senate President

Michael E. Busch, House Speaker

100 State Circle Annapolis, Maryland 21401 https://www.maryland.gov

Maryland Department of General Services

Ellington E. Churchill, Jr., Secretary

Nelson E. Reichart, Deputy Secretary

Ulysses (Jack) Howard, Assistant Secretary, Administration

Luis A. Luna, Assistant Secretary, Facilities Operations & Maintenance

Lauren T. Buckler, P.E., CEM, LEED, AP, BD+C Assistant Secretary, Facilities Planning, Design, Construction and Energy

Eric T. Lomboy, Assistant Secretary, Procurement & Logistics Division

Wendy Scott-Napier, Assistant Secretary, Real Estate Division

Colonel Michael Wilson, Chief, DGS Maryland Capitol Police

Lauri McGuire, Principal Counsel

301 West Preston Street, Suite 1400
Baltimore, Maryland 21201-2388
https://dgs.maryland.gov/Pages/AboutDGS.aspx

Maryland Green Building Council

Nakita Reed, AIA, APT, NOMA, NCARB, LEED AP BD+C, GGP, Chair Principal, Encore Sustainable Design, LLC

111 South Washington Street Easton, Maryland 21601 https://www.encoresdesign.com/

Steve Lauria, Architect, Landscape Architect, LEEDap, Capital Projects Manager, and Maryland Green Building Council Support Staff (Annual report preparation)

Maryland Department of General Services 301 West Preston Street, Suite 1400 Baltimore, Maryland 21201-2388 https://dgs.maryland.gov/Pages/GreenBuilding/index.aspx

Credits

Mark Beck, Jody Latimer, and Martha Shrader for providing updated University of Maryland green building project lists.

Clarence Felder and Arabia Davis for providing updated schools and community college green building project lists.

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