
TAKE

ACTION

SUSTAINABLE ACTION PLAN

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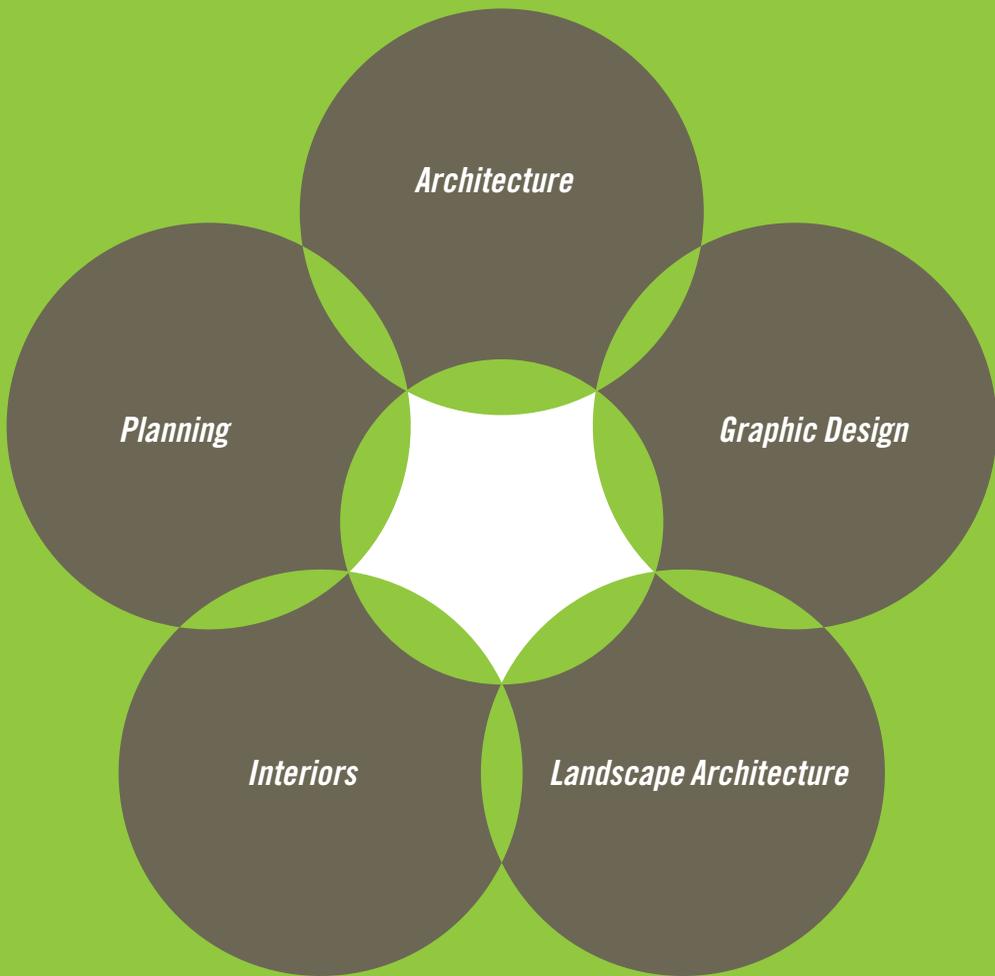
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*“Our practice is built
on an interweaving of
design disciplines.”*



FIRM PROFILE

Ayers Saint Gross Office Locations

BALTIMORE

1040 Hull Street
Suite 100
Baltimore, MD 21230

TEMPE

60 E. Rio Salado Parkway
Suite 701
Tempe, AZ 85281

WASHINGTON

800 Eye Street NW
Suite 600
Washington, DC 20001

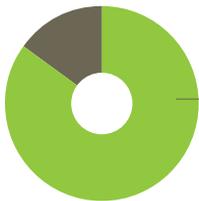
Ayers Saint Gross is an internationally recognized design firm with expertise in building design, planning, landscape architecture and graphic design. Our passion for sustainable design is expressed through our work with clients to create high performance environments that promote the dissemination of knowledge and culture. Our mission is to engage people and places to create designs that enrich our world.

At 130 professionals, our firm is organized into a series of cross-disciplinary studios specializing in the design of buildings for arts and sciences, student life and cultural facilities, as well as studios focused on planning, landscape architecture and graphic design. More than 75 percent of the firm's professionals are LEED-accredited to offer a high level of expertise in environmentally friendly design. Several of our most recent projects have earned LEED Platinum and Gold ratings.

By bringing a broad range of design disciplines together in a single organization, we ensure comprehensive, coordinated, efficient and cost-effective service. More than 85 percent of our work is for colleges, universities and cultural facilities. We have completed over 500 projects for more than 140 institutions.

With our main office located in Baltimore, Maryland and other offices in Washington, D.C., and Tempe, Arizona, Ayers Saint Gross pursues work nationwide and around the world.

Ayers Saint Gross Clientele



85%

of our work is for higher
education facilities

EXECUTIVE SUMMARY

Ayers Saint Gross believes that sustainability requires carefully balancing the unique needs of people and ecological systems with the economic realities inherent in each project. The opportunities and challenges presented by this balancing act lead to creative and effective design solutions. Our firm has adopted a four-pronged approach to sustainability as follows:

Projects

Ayers Saint Gross strives to improve our project performance on an annual basis with a long-term goal of designing regenerative buildings. At minimum, all of our projects are designed to meet the Silver rating requirements of the United States Green Building Council's Leadership in Energy and Environmental Design (LEED) program, regardless of whether the project is submitted for certification.

People

We strive to educate our staff in all aspects of sustainable design, following our belief that sustainability melds time-tested best practices and cutting-edge technologies. Ayers Saint Gross encourages staff to share resources and pursue continuing education so that each member of the firm can evolve with their professions.

Practice

Ayers Saint Gross applies the same principles of sustainability for projects to the operation of our offices. By using our offices for test cases, we aim to pioneer new strategies for use in our clients' projects.

Research & Resources

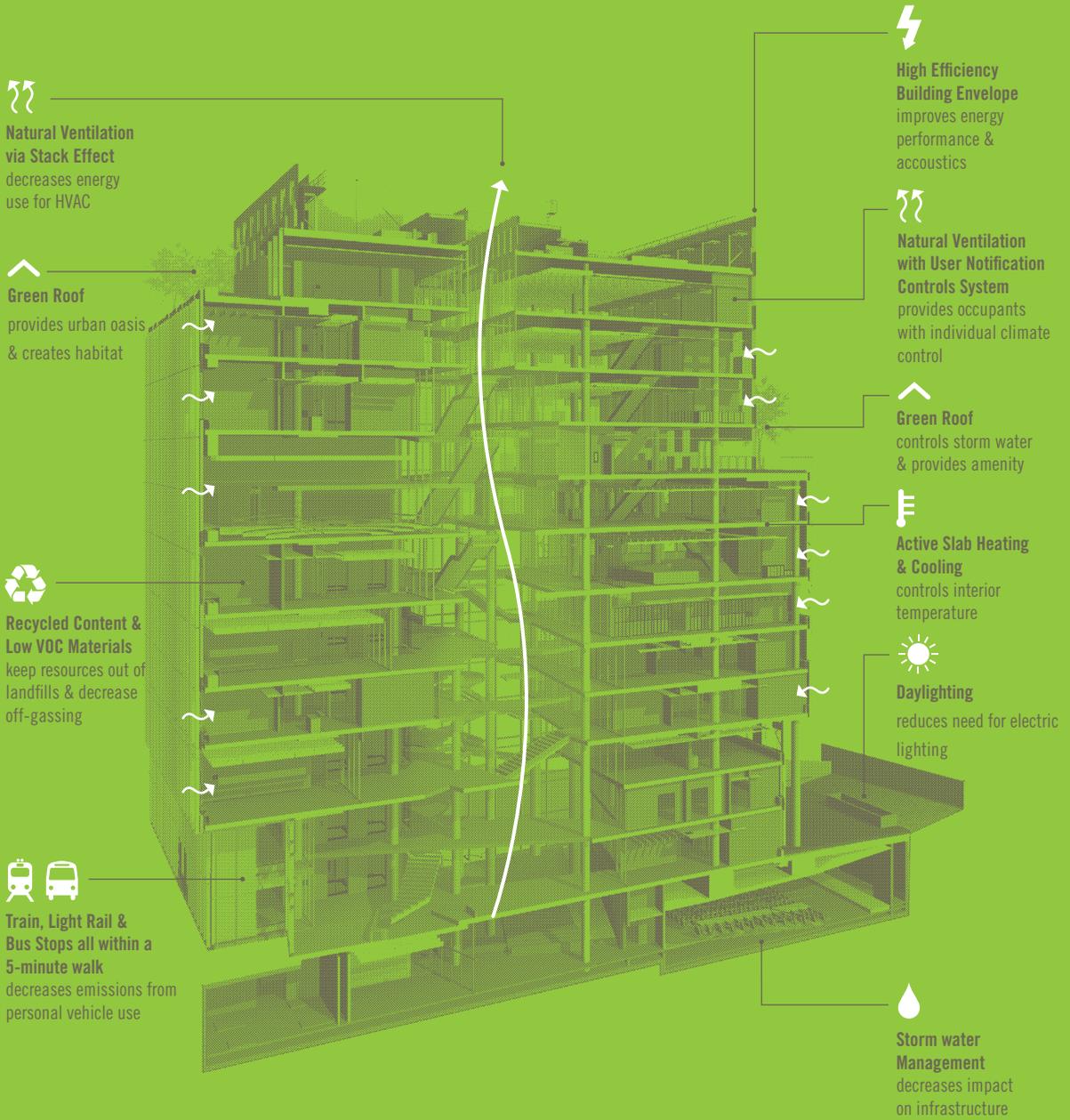
We are advancing sustainable design by developing educational programs and research tools that increase our internal knowledge of sustainability, improve the caliber of our design process, and track the post-occupancy performance of our projects. These resources help us stay up-to-date on the latest technologies and strategies, while allowing us to identify and improve the most effective design methods and systems for use in future work.

Our teams of planners, architects, interior designers, landscape architects and graphic designers engage in a collaborative design process that consistently considers the fundamental values of sustainable thinking during each stage of our projects. These steps include thinking about the long-term effects of our decisions today; valuing a thorough and inclusive process as much as the product; using finite resources wisely by building in a thoughtful manner; determining the responsible carrying capacity of the land; and specifying ecologically and environmentally responsible design elements and materials.

Projected Non-Renewable Energy Use



University of Baltimore John and Frances Angelos Law Center



Project Efficiency

58%
Energy Use Reduction
from baseline

56%
Water Use Reduction
from baseline

Design Architect: Behnisch Architekten
Executive Architect: Ayers Saint Gross
Mechanical/Plumbing Engineering: Mueller Associates

PROJECTS

Ayers Saint Gross strives to improve our project performance on an annual basis with a long-term goal of designing regenerative buildings. At minimum all of our projects are designed to meet LEED Silver requirements, regardless of whether the project is submitted for certification.

With strong employee expertise and a firm foundation in sustainability, Ayers Saint Gross is able to create designs for the built environment that address the social, environmental and economic realities inherent in each project.

We seek to advance our clients' traditions, values and cultures through the built environment. Buildings, landscapes and master plans require a significant investment of time, resources and money, and Ayers Saint Gross is sensitive to our clients' budgets for constructing, operating and maintaining these environments.

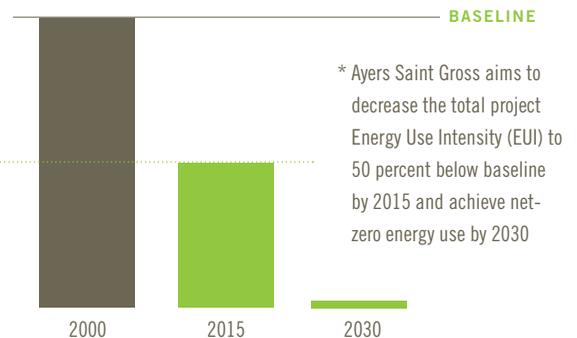
At present, we are actively pursuing LEED certification for 70 percent of our projects. At minimum we design all of our buildings to LEED Silver standards, regardless of whether the project is submitted for certification. Ayers Saint Gross aims to decrease our projects' energy use intensity to 50 percent below baseline (as defined by the AIA 2030 commitment) by 2015 and achieve net-zero energy use by 2030.

In order to meet our goals, we have developed and implemented an annual review of our project performance. The results are used to identify new strategies to reduce the environmental impact of our designs. Targeted strategies are evaluated internally and approved strategies are pushed out to the offices for implementation. Understanding the impact of our efforts will help us to continuously refine our work. This assessment cycle keeps our design process fresh and innovative, and our projects continually striving for

excellence. Setting advanced goals for our projects will guide the creation of internal resources and lead our efforts.

Designing sustainably is a core principle at Ayers Saint Gross. Our projects represent the largest impact we can make on creating a sustainable future and our firm is dedicated to making a positive impact.

Energy Use Intensity Goals



Percent of our Projects Pursuing LEED Certification

70%

Where We Live



44%

of our employees live within the city limits in which we work



Getting to Work



36%

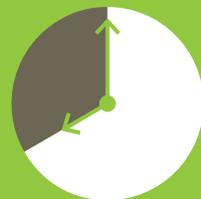
of our employees walk, bike or ride public transportation to work



Continuing Education



16 hours



the number of continuing education hours that Ayers Saint Gross encourages and pays each employee for annually

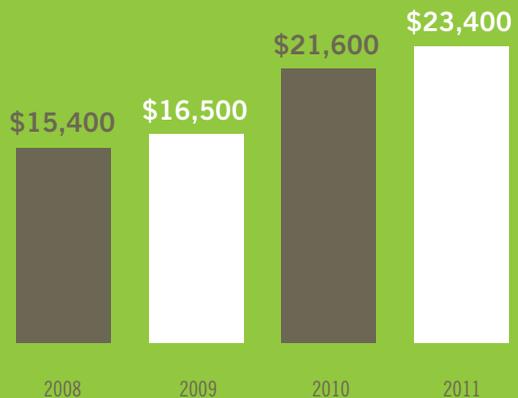
LEED Accredited Professional Staff

75%

Community Involvement

\$23,400

was raised for United Way in 2011 by our employees. Each year our firm hosts various events and fund-raisers supporting the organization.



the number of families impacted by the employee-organized Thanksgiving food drive and holiday gift drive in 2011

PEOPLE

At Ayers Saint Gross, sustainability starts with our people. Through education and corporate culture, we maintain a community of excellence in sustainability that allows us to create the highest quality built environment. Ayers Saint Gross' sustainability goals for employees include both learning and lifestyle initiatives.

Accreditation

More than 75 percent of our professional staff is LEED-accredited and we continue to encourage employees to pursue these credentials. We make cutting-edge information readily available to our staff through many avenues, including an internal program structured to provide continuing education opportunities for credential upgrading and maintenance. This program consists of a variety of educational and volunteer opportunities, and its completion results in meeting continuing education requirements set by the United States Green Building Council (USGBC) for LEED credentials.

Education

ASG Academy is an in-house forum for the exchange of ideas where professionals from allied disciplines are invited to share their work and ideas. We also use this time to review our sustainability resources and share ideas about how we can push design forward. These hour-long lunch meetings cover a variety of environmentally related topics throughout the year.

Ayers Saint Gross also helps to keep staff educated by participating in a variety of off-site continuing education opportunities. Attendance at conferences is encouraged and supported. Sustainability team leaders attend workshops introducing them to new techniques. Volunteer opportunities are also encouraged and supported with local organizations.

Community Involvement

Ayers Saint Gross is heavily involved with various community organizations sharing a common mission of sustainable social action. Ayers Saint Gross' involvement varies from staff serving on the board of the local USGBC and United Way chapters; contributing to healthy food drives for less fortunate members of the community; and educating neighborhoods about land planning and resource management issues.

Communication

Information on sustainability is constantly evolving. Ayers Saint Gross has developed a sustainability blog on our intranet site to allow employees to participate in the education process. The blog is a clearinghouse for information on everything from new green products to the latest opportunities for credential maintenance. The intranet site also hosts our sustainability resources database, a searchable catalog of information that allows our studios and offices to cross-pollinate by sharing the best sustainability resources they find or create.

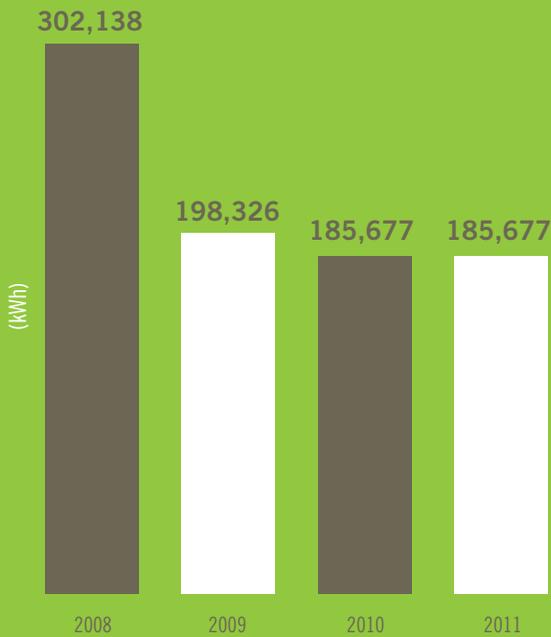
Company Culture

Ayers Saint Gross works to inspire sustainable lifestyles for our employees. Creating a firm culture rooted in sustainability is synergistic with the goals we set for ourselves about developing the practice of design in our firm. Forty-four percent of our employees live within the cities in which we work; 36 percent walk, bike, or take public transportation to work. Minimizing vehicular commuting helps our employees maintain health and decreases our practice's carbon footprint. Sharing green blogs, films and books also inspires a firm culture that values community gatherings around common interests.

Office Energy Use Reduction

⚡ 39%

Reduction of energy use in Baltimore headquarters over recent years



Energy use in Ayers Saint Gross' Baltimore headquarters throughout recent years

Waste Reduction



A single stream recycling program has been implemented in the Baltimore office as well as a composting program for waste.

Purchasing

50%

post-consumer waste paper is used throughout the office for everyday printing, while Forest Stewardship Council (FSC)-certified, mixed-source paper is used for in-house specialty and proposal printing



UV Inks with low VOC emissions as well as FSC-certified paper made from recycled material were used by our local offset printer to create our corporate brochures.



Our firm sources sustainable local printers for all printed projects both in-house and for our clients.

Transportation



Ayers Saint Gross encourages the use of public transportation and hybrid or electric vehicles for business travel whenever possible.

PRACTICE

Ayers Saint Gross applies the same principles of sustainability for projects to the operation of our offices. By using our offices for test cases, we aim to pioneer new strategies for use in our clients' projects.

Our headquarters in Baltimore's historic Tide Point redevelopment is an example of adaptive reuse; the office occupies space in a former Proctor and Gamble soap factory. Reusing this existing structure helped us preserve history and save building resources.

In keeping with the goals of the AIA 2030 Commitment, Ayers Saint Gross has implemented a host of operational action items. We see these actions as just the first steps toward greening our practice.

Ayers Saint Gross believes running a sustainable practice involves four categories of resource conservation: office energy use, purchasing, waste reduction and transportation. We have established a revolving audit process to assist in goal-setting in these areas. Initial audits set the baseline in each category and yearly updates will be undertaken to review progress toward increasingly ambitious goals.

Energy Use

Ayers Saint Gross is implementing changes in the way we light, heat and cool our offices to save energy and money.

Purchasing

We track office, kitchen and catering supplies, as well as equipment use, specifically looking to reduce new paper consumption.

Waste Reduction

We track garbage, recycling and compost practices in the office. Goals include increased recycling and reuse of products by all staff, limiting printing and encouraging vendors to retrieve samples for reuse.

Transportation

We limit out-of-town travel when possible, group trips to minimize travel, use public transportation whenever possible and purchase carbon offsets when travel is unavoidable.

Each of our three offices will independently track data within the four categories. Future goals for sustainable practices will be made at both a firm-wide and office level. Adopting sustainable practices into the way we perform our work not only reduces our carbon footprint but will also allow us to save time, energy and money that can be used in creating resources and supporting research in sustainable design.

4 Categories of Resource Conservation



Energy Use



Purchasing



Waste Reduction

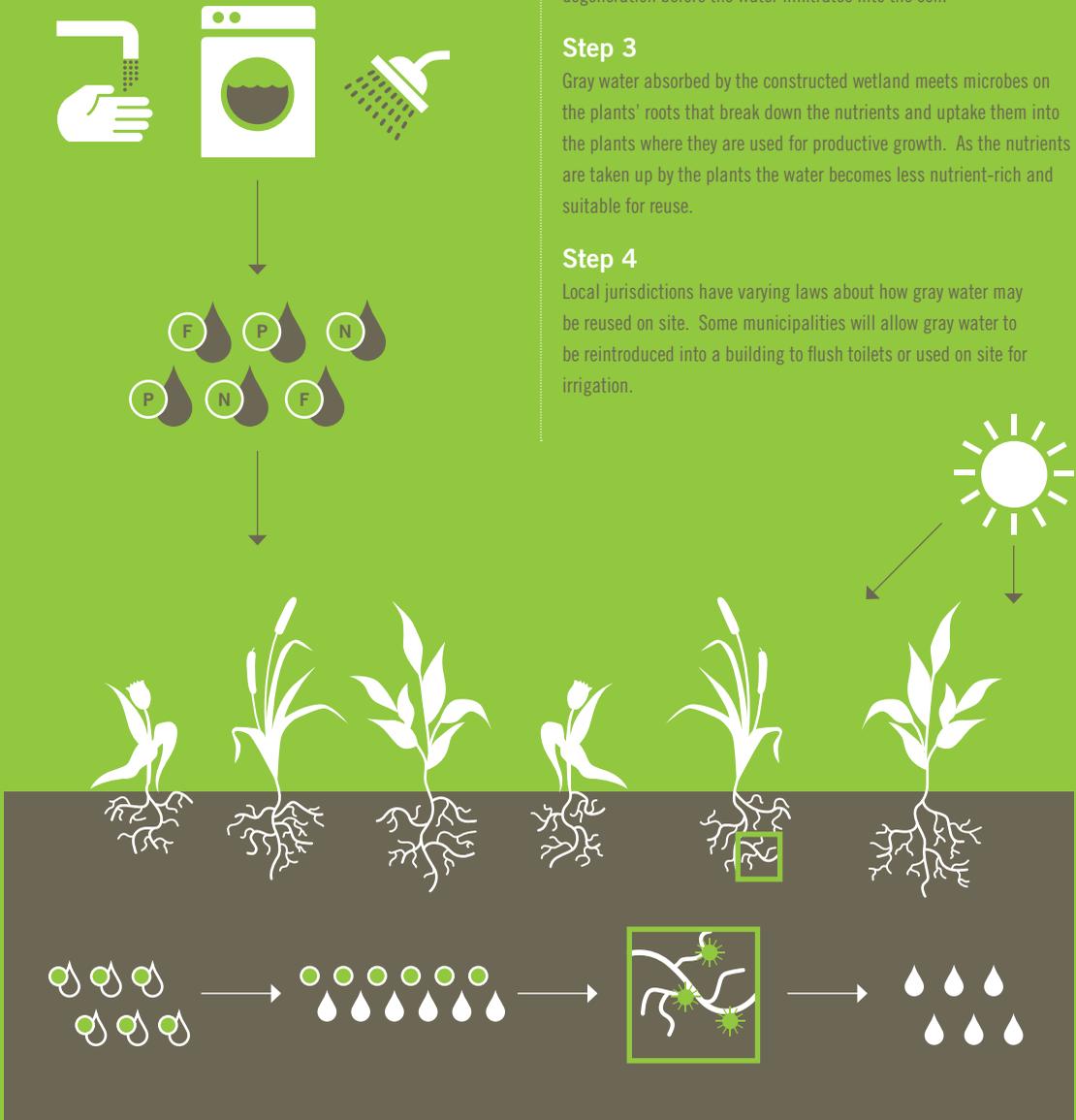


Transportation

Constructed Wetlands

Natural processes allow a constructed wetland to remove pollutants from wastewater on site, diverting flow from municipal treatments facilities and decreasing a building's dependence on off-site infrastructure. Water treated by a constructed wetland is appropriate for reuse in toilets and irrigation.

Ayers Saint Gross designed a constructed wetland at our LEED Gold certified project, Few & Evans residence hall at Emory University.



Step 1

Activity at bathroom sinks, showers, and washing machines creates gray water that has a limited amount of contamination. In typical buildings, gray water is combined with black water (sewage) from toilets and directed to municipal facilities where it is treated with harsh chemicals. Constructed wetland systems separate gray water from black water and treat it on site.

Step 2

Gray water is saturated with elements such as Nitrogen, Phosphorous, and Fluorine that can be removed without harsh chemicals. The sun's light begins to break down gray water's nutrients through photo degeneration before the water infiltrates into the soil.

Step 3

Gray water absorbed by the constructed wetland meets microbes on the plants' roots that break down the nutrients and uptake them into the plants where they are used for productive growth. As the nutrients are taken up by the plants the water becomes less nutrient-rich and suitable for reuse.

Step 4

Local jurisdictions have varying laws about how gray water may be reused on site. Some municipalities will allow gray water to be reintroduced into a building to flush toilets or used on site for irrigation.

RESEARCH & RESOURCES

Developing research and resources allows us to increase our internal knowledge, improve our design process, and track the post-occupancy performance of our buildings. Research and resources help us stay current on the latest technologies and strategies while allowing us to identify and improve the most effective design methods and solutions.

Research

Educating our staff, greening our business and improving the caliber of our projects requires significant support. Our research and resources team develops print, web and presentation media to support on-going sustainability initiatives in addition to investigating the larger sustainability questions faced by our firm and others in the design professions.

Research at Ayers Saint Gross in part means supporting our staff to become scholar-practitioners who bridge the gap between academia and the profession. As scholars, our professionals study, teach and acquire new information while simultaneously applying that knowledge as practitioners. Our buildings will become case studies of applied research, capable of being published as the results of academic inquiry.

Resources

Ayers Saint Gross is developing a post-occupancy survey to be shared with owners and tenants of buildings we have designed. It is not enough to predict what a building will do before construction – designers must go back after the building is in use and understand what works as designed, what does not and what unexpected synergies may have occurred. When this information is known, it can be used to inform future design work and lead to higher-performing buildings.

Concept pages describe verbally and represent graphically the basic premises, advantages and disadvantages of sustainable strategies, technologies, and products. This resource allows us to share information in-house and acts as a tool to educate our clients. We continue to develop case studies of our work to highlight sustainable features and track progress toward meeting our goals.

Our website (www.asg-architects.com) continues to host information about our firm, its projects and the ideas behind our work. We are working to enrich the content of our online presence to include resources on sustainable design that will be useful for our clients, the design professions and the public.

Ayers Saint Gross is committed to achieving our goals in people, practice and projects by providing adequate resources and research time to our employees to do so.

Future Goals

| | Short Term | Mid Term | Long Term |
|-----------|--|--|---|
| PROJECTS | Reduce energy use by 50% and water use by 40% across design portfolio. | Reduce energy use by 75% and water use by 50% across design portfolio. | Design regenerative buildings and environments. |
| PEOPLE | Develop in-house training programs for LEED GA and AP credential maintenance requirements. | Develop training for dissemination in local community and become a local educational resource. | Become a national leader in Ayers Saint Gross focus areas. |
| PRACTICE | Assess and document office energy use, waste stream, purchasing, and transportation. | Reduce office energy use, waste stream, purchasing, and transportation. | Operate a regenerative practice. |
| RESOURCES | Generate resources for use in-house and with clients. | Advance research for public education at a profession-wide focus. | Launch research arm doing national research for building and construction industry. |

LOOKING AHEAD

Ayers Saint Gross is vigilant in creating new goals and benchmarks for success. We celebrate our achievements, but also look forward to reaching higher standards of excellence.

Ayers Saint Gross recognizes that we must continue looking forward and setting new goals in order to make a positive impact. Our foundation in sustainability focuses on projects, people, practice, resources and research. We hope that as our practice becomes more sustainable, Ayers Saint Gross will be looked to as a model and be able to provide reliable research to our colleagues and clients.

Our Sustainable Action Plan is a living document that will grow with our firm. The intent of the plan is to assess annually the performance of our projects and respond appropriately to reach our goals. As the needs of our clients change and our industry grows greener, we will be able to adapt the current plan to meet future needs.

Design Credit

Ayers Saint Gross

Icon Credits

Bicycle (p. 8) – The Noun Project

Building (p. 14) – Benoit Champy

Energy (p. 6, 10, 11) – The Noun Project

Hand Wash (page 12) – Simon Child, The Noun Project

Idea (p. 14) – The Noun Project

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People (p. 14) – Umbra2 Design, The Noun Project

Printer (p. 10) – John Caserta, The Noun Project

Shovel (p. 10) – Scott Lewis, The Noun Project

Shower (p. 12) – Sergio Calcara, The Noun Project

Turkey (p. 8) – The Noun Project

Water (p. 6, 12) – The Noun Project

