



EPA Region 10 Seattle is the first EPA office in the continental United States to receive a LEED Gold Commercial Interiors certification. Renovations made to achieve this certification serve as a model for other EPA offices across the country. Open floor plans let in more daylight and encourage communication between employees. Reused and environmentally friendly materials have fewer environmental impacts. A new server room design cuts the amount of energy needed to cool servers.

a model for sustainability



At a Glance

Building Name: Park Place

Location: Downtown Seattle, WA

Primary Tenant: United States Environmental Protection Agency, Region 10 Office

Project Consultants:

Commissioning Agent: Transwestern Sustainability Services

Architects: Gensler and Metropolitan Architects and Planners

Construction Management: GSA Northwest/Arctic Region, Jacobs, and Sustainable Design Consulting, LLC

Primary Use: Office space

Building Owner: Washington Park Place LLC

EPA Occupants: 682 employees

EPA Net Square Footage: 155,407 Sq. Ft.

Building Awards:

LEED Platinum: Existing Buildings (2009)

LEED Platinum Existing Buildings: Operation and Management (2014)

LEED Gold: Commercial Interiors (2015)

ENERGY STAR® Rating: 85

Protecting Health and the Environment

EPA undertook a project to make its building a more sustainable facility, reducing the environmental impacts of operations while providing a healthy office setting that encourages high performance. New floor plans, products, and practices reduce the building's energy, water, and materials use, and support EPA's mission to protect human health and the environment.

In 2009, the Park Place Building received LEED Platinum, the highest possible certification for existing buildings from the U.S. Green Building Council. In 2014, the building received a LEED Platinum rating for Existing Buildings: Operations and Maintenance. In 2015, the EPA Region 10 Seattle office received a LEED Gold rating for Commercial Interiors. As a result, EPA Region 10 now occupies three LEED-certified buildings in Seattle, Washington; Lacey, Washington; and Boise, Idaho.

Employee Contributions

EPA employees provided input into the design of the space at several all-staff meetings. They also voted on the final floor finishes for their program offices. Employee volunteers participated on various Move Action Teams, such as the Space Allocation and Standards Team, Furniture Team, and the Health and Safety Team.

Employees contributed artwork. An employee photo contest for the new office space resulted in more than 500 submissions; 100 were selected to hang in the new space. Several photos were also selected for wayfinding graphics.

Below: EPA Administrator Gina McCarthy addresses the Region 10 Seattle Office in May 2014. The conference room features collapsible walls for flexible space configuration, shown in more detail on page 7.



Before moving into the renovated space, employees began recycling old materials to divert waste from the landfill, including 51,255 pounds of paper, 3,035 pounds of techno-trash, and 541 pounds of metal, plastics, and glass. Almost 42,000 pounds of office supplies were reused and 934 pounds of personal items were donated to charities. Only 12,518 pounds of trash — 12% of the total — were sent to a landfill.

Letting Nature Do the Work

A New Server/Network Room

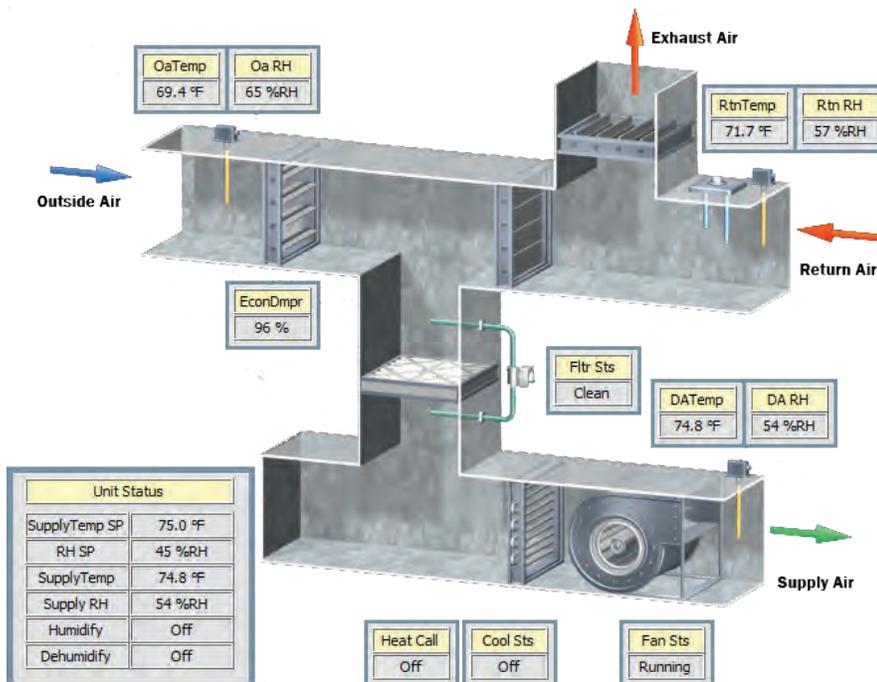
The 13th floor houses EPA’s servers. They operate 24 hours a day, generating large quantities of heat while consuming considerable energy. In the old space, the servers were cooled with costly air conditioning units to prevent overheating and located on the interior core of the floor. The network/server room is now located along the building’s perimeter. A new cooling system takes air from the outside and filters it into the server/network room rather than using conditioned air. This new design, which takes advantage of the Pacific Northwest’s mild climate, saves energy by letting nature do the work.

EPA compared current HVAC energy consumption from May 29 to June 15, 2015 with energy consumption during the same period in 2008, 2009, and 2010. Over the course of the 10-year lease, the new system is expected to cut energy use to cool the server/network room by 47%, saving at least 915,782 kWh and approximately \$89,747 (using 9.8 cents per kWh for Seattle, WA). Seeing the success in the Seattle office, other regional EPA office buildings with similar climates, such as EPA’s San Francisco office, are now using this technology.

Walking the Talk

“The path to LEED certification has required much research as well as out-of-the-box thinking. Because we took this path, we found ways to reduce our impact on the environment that we might not have otherwise. It is a tremendous achievement, and one that has already helped inform other EPA offices seeking to become more sustainable. This important work is helping demonstrate that EPA is truly ‘walking the talk’ of conservation and sustainability in our workplaces. I am very proud of what we have accomplished.”

Dennis McLerran
Regional Administrator
EPA Region 10



Above: The new cooling system takes air from the outside and filters it into the server/network room at much lower cost than the previous air conditioning units.

Left: By using outside air to cool the network/server room, EPA’s new cooling system uses less energy than the traditional cooling system it replaced.



Open Floor Plans

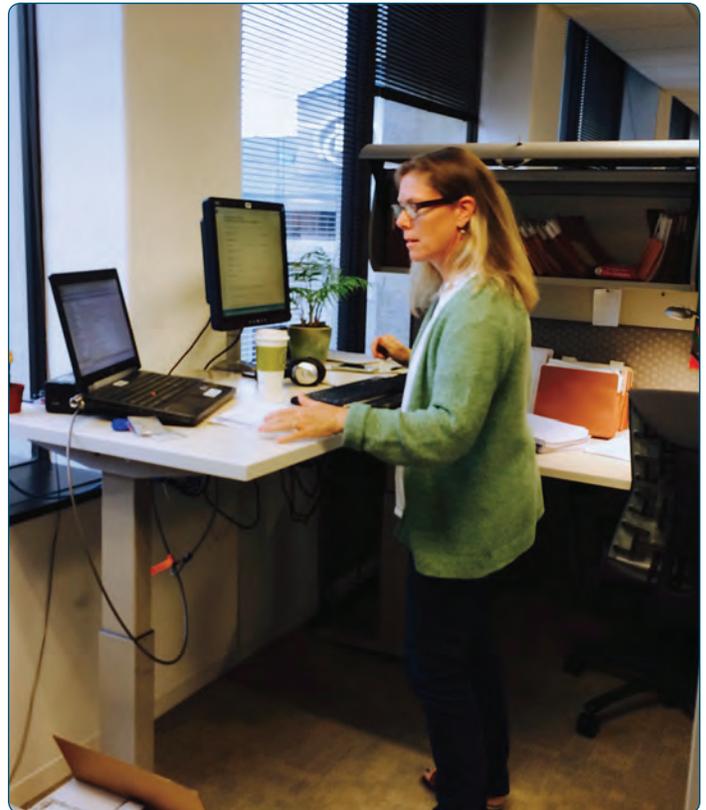
The redesign for the floor plans includes more open space among the offices to make maximum use of natural daylight rather than relying on electric lights. Enclosed offices are primarily located on the interior core of each floor, allowing more daylight to reach open workstations. Workspace cubicles are furnished with glass panels and located near the windows. The revised layout provides greater exposure to daylight for the majority of employees. Studies have shown that natural light helps maintain good health, reduces stress levels, and increases productivity. (U.S. DOE, *A Literature Review of the Effects of Natural Lights on Building Occupants*, 2002.) With these open floor plans, employees are also more accessible to each other, which encourages a team-oriented, high-performance work environment.



High-Functioning Workplace

Employee workstations are equipped with work surfaces that can be lowered or elevated, which gives employees the option to sit or stand while they work. The work surfaces, in combination with ergonomic chairs and adjustable-height monitors, make the workspace comfortable and help employees avoid work-related injuries. Other products, including LED task lights and occupancy monitor strips designed to turn off energy consumption when space is unoccupied, make the workspace more effective and energy efficient.

Below: Work surfaces can be quickly lowered or elevated, allowing employees to sit or stand while working.



Water Efficiency

Low-flow water fixtures and faucet aerators have cut the Seattle office's water consumption by 22%. EPA also purchased Water Restoration Certificates to offset two years' worth of the Seattle office's water use, further reducing our environmental footprint. By purchasing certificates, EPA is contributing to restoration of the Middle Deschutes River in Oregon, protecting habitats, and conserving water for crops.

Sustainability Begins with Reuse

Making New with the Old

The renovated library on the first floor is one of the biggest reuse accomplishments of the renovation. Seventy-five percent of the furniture, fixtures, and equipment installed in the new EPA library was reused, including all the original stacks, carrels, and seating. Seating was reupholstered with environmentally-friendly fabric certified by GreenGuard, which measures emissions and human health factors.

To reduce the environmental impact and save money, EPA reused existing office equipment when possible. New and replacement equipment is Energy Star® qualified. All light fixtures removed during the renovations were reused in new areas, and also updated to allow for daylight dimming and/or multi-level lighting. These features, combined with more natural light from large windows and an open floor plan, allow occupants to use the amount of artificial light they prefer. With these updates to the lighting system, the Park Place building meets current Seattle Energy Code, which is one of the most demanding in the nation.

Water Restoration Certificates

EPA Region 10 purchased a Water Restoration Certificate from the Bonneville Environmental Foundation in 2014. The purchase funds projects in the Bonneville area that restore water flows to areas where water has become scarce. The certificate offsets the water used in building operations for the past two years, equivalent to more than 2.2 million gallons of water.



Above: EPA's Water Restoration Certificates help to protect water quality in the Deschutes River, home to the American Dipper Bird.

Left: The new EPA library includes most of the furniture, fixtures, and equipment from the old library. All the original stacks, carrels, and seating were reused.



Above: The new EPA library includes most of the furniture, fixtures, and equipment from the old library. All the original stacks, carrels, and seating were reused.

Above Right: All light fixtures removed during the renovations were reused in new areas, and also updated to allow daylight dimming or multi-level lighting.



Lighting – Fixture Reuse & Energy Savings

EPA's new offices used approximately 1,800 salvaged 2x4 and 2x2 T8 fluorescent light fixtures. The building added daylight-dimming ballasts and daylight controls to at least half of the connected lighting load. A Building Automation System (BAS) automatically shuts off lights after business hours to help with energy management, and occupancy sensors turn off lights when spaces are unoccupied. EPA's lighting design meets current City of Seattle Energy Code for a Lighting Power Density (LPD) of 1 Watt per square foot (W/s.f.). The project was designed for a 0.74 W/s.f. LPD. EPA projects a 25% reduction in annual energy use for lighting.

Sustainable Materials

When reuse was not an option, EPA selected sustainable new furniture and materials based on the recommendations of third-party environmental organizations. All the new furniture meets the GreenGuard certification standard, ensuring that fabric was sustainably produced and has low or no emissions of volatile organic compounds (VOCs). EPA sought materials with Cradle-to-Cradle certification, which attests to a product's safety to humans and the environment and its design for future life cycles, as well as BIFMA-level certification, which attests to the sustainability attributes of commercial furniture. Most of the wood products, including doors and furniture, were certified by the Forest Stewardship Council, which supports products that originate from well-managed forests. In addition, EPA's work stations have at least 30% recycled content; its high-density mobile storage systems have more than 50%.

Carpeting

The carpet tile flooring has 24% recycled content. Also, wall-to-wall carpeting requires complete replacement when sections are worn out; carpet tiles make it easy to replace just the areas needed.



Skyfold Walls

In its new conference area on the 21st floor, EPA installed three collapsible walls that are not only great for functionality and space utilization but also highly sustainable. The infrastructure is made of 92-95% recycled steel and aluminum. The fabric covering contains 40% recycled content and is GreenGuard Gold certified for low emissions.

Sustainable Sites

The remodel is located in an existing building in a dense urban area. This site has a WALK Score of 99/100, which reflects easy walking distance to amenities such as dining, shopping, parks, schools, and entertainment. It has a TRANSIT Score of 100/100 with easy access to multiple bus lines and light rail stations. The commitment to remodel downtown encourages development in an urban area with excellent existing amenities and infrastructure, which protects undeveloped habitats and natural resources.

Conclusion

EPA's desire to be as sustainable as possible led Region 10 to undertake the challenge of applying for a LEED Commercial Interiors certification for its Seattle offices. The end result is a building that testifies every day to EPA's commitment to protecting human health and the environment.



Above: With collapsible walls in the main conference rooms, spaces can be easily reconfigured to allow for more or less meeting space.

Functional & Flexible Workspace

“Only once in a career does the opportunity come around to shape our workspace in the significant way that has been done in Region 10. The project stands as a model for involving employees in a deep and meaningful way. The efforts undertaken to do so have resulted in the creation of a functional and flexible workspace that will meet the needs of Region 10 employees for years to come.”

Mary Kay Voytilla
Lease Project Manager

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*All photos courtesy of Jacobs,
except for the following:*

Image of Building Exterior
(Page 1), courtesy of EPA

Image of Open Office Layout
(page 1), courtesy of Sara Ellen

Image of Gina McCarthy
(page 2), courtesy of Emerald Laija

Image of American Dipper Bird
(page 5), courtesy of Nancy Partlow

Image of Skyfold Walls
(page 7), courtesy of Mackenzie
Borgogni, interiorTech



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