



NATURAL RESOURCES DEFENSE COUNCIL
www.nrdc.org/media

NRDC Fact Sheet

NRDC Southern California Green Offices

The new Southern California home for NRDC (Natural Resources Defense Council) aspires to the highest standards of green building design, construction and maintenance. It is being considered by the U.S. Green Building Council for a LEED (Leadership in Energy and Environmental Design) Version 2 Platinum green building rating, and may become one of the first projects in the United States to achieve this status. (www.leedbuilding.org)

Location

Converted commercial structure at 1314 Second Street, downtown Santa Monica, California.

Size and Use

15,000 square feet on three levels. Environmental Action Center and e-Activism Zone with street-front access. Office facilities for up to 36 employees.

Tenant/Owner

NRDC, a national, non-profit organization of scientists, lawyers, environmental specialists and public policy experts dedicated to protecting public health and the environment. Founded in 1970, NRDC has more than 1 million members and activists nationwide, served from offices in New York, Washington, Santa Monica and San Francisco.

Architects

Moule & Polyzoides, Architects and Urbanists, Pasadena, California.
Elizabeth Moule, partner; Dimitris Klapsis, project manager
(www.mparchitects.com).

Project Manager

Tishman Construction Corporation, Los Angeles, California
(www.tishmanconstruction.com).



Contractor

TG Construction Inc., El Segundo, California (www.linkline.com/personal/tg1).

Mechanical, Electrical and Plumbing Engineers

Syska Hennessy Group, Los Angeles, California. (www.syska.com).

Structural Engineers

Nabih Youssef and Associates, Structural Engineers, Los Angeles, California
(www.nyase.com).

Environmental Planning

Environmental Planning and Design, Santa Monica, California (www.epd-net.com).

Commissioning Authority

CTG Energetics (www.ctg-net.com).

Budget

Land acquisition – \$3.2 million

Construction – \$3.8 million (\$258/ft²)

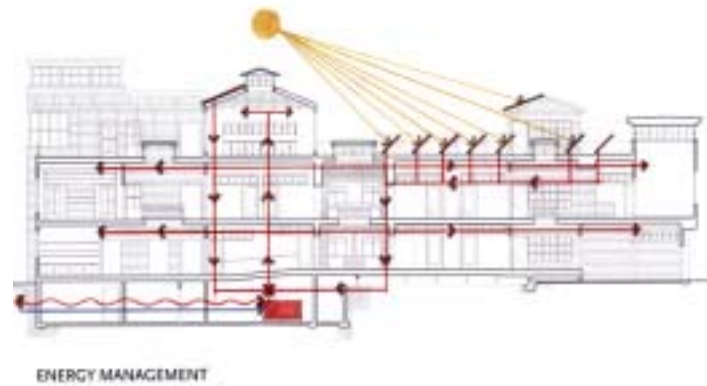
Design, project management, LEED commissioning, and indirect costs – \$1.3 million.

Green Urban Design

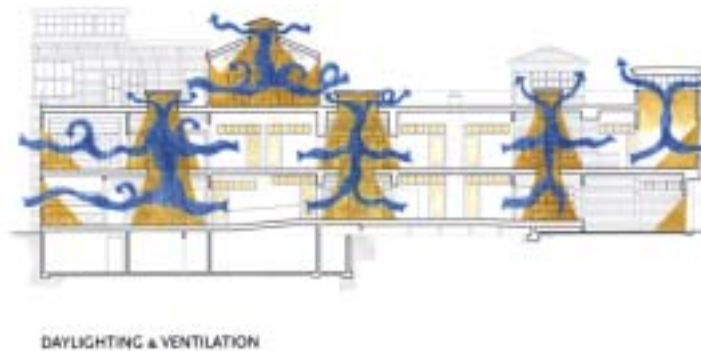
Building development consumes 2 million acres of forests and farmland each year. NRDC's downtown Santa Monica location conserves resources by converting an existing structure. It is a mixed-use building (office and public action center) in a high-density urban infill environment close to public transportation and within walking distance of many other amenities and attractions (residential, shopping, offices, entertainment and the Pacific Ocean). The storefront retail Environmental Action Center promotes pedestrian activity in the neighborhood. Bathrooms include showers for commuters using human-powered vehicles.

Energy Efficiency and Renewable Energy

Operating commercial and residential buildings consumes nearly 40 percent of the country's energy – twice as much as passenger cars and trucks. With its energy-efficient design and clean power production, NRDC's building uses 60 to 75 percent less energy than a typical office structure. If all commercial buildings in the U.S. were this efficient, the country would achieve 70 percent of its Kyoto Protocol obligation.



Lighting



Lighting is the largest energy user in commercial buildings. NRDC's building reduces the need for artificial lighting. Three multi-level light wells with rooftop monitors, as well as side-yard light wells, allow sunlight to reach three floors. Clerestories and architectural glass afford privacy while diffusing natural light throughout the building. "Task/ambient" lighting puts light where it's needed, and state-of-the-art fixtures with occupancy and photo-sensors dim lights when daylight is sufficient.

Cooling and Heating

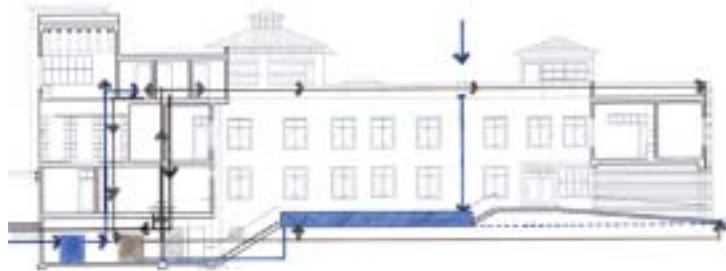
Scientists at Lawrence Berkeley National Laboratory estimate that “urban heat islands” result in \$100 million of extra energy costs in Los Angeles alone (eetd.lbl.gov/HeatIsland/EnergyUse/). NRDC’s building uses plantings and light-colored roofing to reduce heat islands. Natural ventilation cools offices through operable windows, transoms, and airflow out rooftop monitors. When needed, NRDC uses a high-efficiency, multi-staged, low-velocity displacement ventilation air conditioning system with ozone-friendly refrigerants from Carrier Corp. (www.global.carrier.com). Heating and cooling to an individual office shuts off automatically when windows are opened.

Clean Power

A PowerLight 7.5 kW grid-connect solar electric array produces approximately 37.5 kWh of electricity per day, enough for approximately 20 percent of NRDC’s needs (www.powerlight.com). When the building’s electrical consumption is low, the system puts power back into the grid, running the electricity meter in reverse. Designed by Solar Design Associates, Cambridge, Massachusetts (www.solardesign.com) and installed by Solar Webb Inc., Arcadia, California (www.solarwebb.com).

Remaining electricity needs are met with renewable energy trading credits (“wind certificates”), so 100 percent of the building’s energy is from renewable sources.

Water Efficiency



WATER MANAGEMENT



Less than two-tenths of 1 percent of the planet's water is drinkable, and 90 percent of that goes to uses in buildings, including flushing toilets.

Using an integrated water recycling system along with high efficiency fixtures, NRDC achieved a 60 percent water savings compared to similar buildings, which translates to tens of thousands of gallons per year.

Instead of flushing toilets with drinking water, NRDC's building uses filtered and disinfected water reclaimed from rainfall, showers and sinks. This reduces use of potable water for sewage conveyance by 90%. The toilets are dual-flush models that use only as much water as needed (www.caromausa.com). Other savings come from a waterless urinal (www.falconwaterfree.com) and low flow plumbing. Recycled water is also used to irrigate low-water landscape plantings. Porous paving lets rain recharge the water table.

The recycled gray water system alone will reduce water consumption approximately 50 percent compared to a traditional building of this size. It is based on an Equaris treatment system, which settles and aerates sink and shower water, known as "gray water." Two custom-built cisterns beneath bamboo planters capture and pre-filter storm water from the roof. An Equaris Infinity water recycling system filters and disinfects both gray and storm water. Capacity: 800 gallons per day. Designed and installed by Environmental Planning and Design LLC, Santa Monica, California (www.epd-net.com) in collaboration with Equaris Corporation, Afton, Minnesota (www.equaris.com).

Environmentally Preferable Materials

The construction and furnishing of buildings consumes about 50 percent of all materials produced. The energy used to produce them amounts to 5 to 7 percent of U.S. energy consumption.

By converting an existing structure, NRDC saved material resources. NRDC also recycled 98 percent of building materials from deconstruction and those left over from construction. And NRDC specified many products with significant recycled content, including: carpets, ceiling tiles, and the Hardiplank wood-fiber/cement siding on the exterior and in the three light wells.

Approximately 50 percent of all wood harvested – about 1.25 million acres annually – goes to constructing and furnishing buildings. All wood and lumber products in NRDC's building are Forest Stewardship Council certified.



Lobby and conference room floors are bamboo laminate, a fast-growing wood substitute, harder and more stable than red oak. Linoleum floors are Marmoleum, made from linseed oil, rosin and wood flour from timber grown in controlled European forests. Marmoleum received the 1998 Netherlands Environmental Quality Mark (www.themarmoleumstore.com). Some office furniture and fixtures are reused from old movie sets.

Indoor Environmental Quality

Americans spend 80 to 90 percent of their time indoors, and the EPA estimates that poor indoor environmental quality causes productivity loss and health care costs of more than \$2 billion per year.

NRDC only used low- or non-emitting adhesives, paints and materials, including Benjamin Moore Pristine Eco Spec interior latex, low-odor, low-VOC paint (www.benjaminmoore.com). The building is free of urea formaldehyde and vinyl. Areas where harmful substances are present, such as copy rooms, are designed with negative pressure, and vented outside the building. Carbon dioxide levels are constantly monitored and occupants have control over their temperature, ventilation and lighting, as well as views to the landscaped outdoors for optimal comfort and productivity.

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