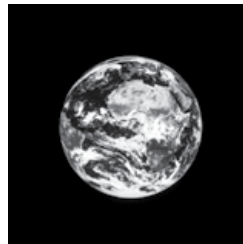




## Landscape Forms Environmental Statement



With our roots in the landscape and a stated purpose to “Enrich Outdoor Spaces,” Landscape Forms has a special relationship to the natural environment. We have always been mindful that as we design and manufacture products that are acted upon by the environment, we act upon it in turn. Environmental sustainability is completely consistent with our purpose, our goals, our values and our principles. We make stewardship of the environment a vital part of our business.



### Landscape Forms Sustainability Principles:

- ✦ We will pursue continuous improvement in all our operations: Lean is Green
- ✦ We will find healthy ways to grow
- ✦ We will conserve resources
- ✦ We will consider the complete life cycle (cradle to cradle) of the products we produce
- ✦ We will identify and address adverse consequences of our operations
- ✦ We will respect the needs of future generations

### Our sustainability principles are expressed in our products, processes, programs and facilities.

Landscape Forms employs recycled materials and wood from responsibly managed forests (including wood with FSC® Chain of Custody Certification upon request) in our products, and produces many products that are themselves recyclable. We actively seek ways to limit the environmental impacts of our manufacturing, packaging, shipping and administrative processes. We implement energy efficient building solutions and specify sustainable products in our facility. In all of these efforts we address our customers' expectation for high-design, high-quality products that also help them meet their sustainable goals.

## Products

Landscape Forms products are designed and engineered to live long, useful lives in outdoor spaces without the use of chemical cleaners to maintain the finish. We test our seating products to BIFMA durability standards. Products are designed to allow replacement of damaged parts. The durability, longevity and low maintenance of our products contribute to responsible stewardship of the earth's resources.

### Materials

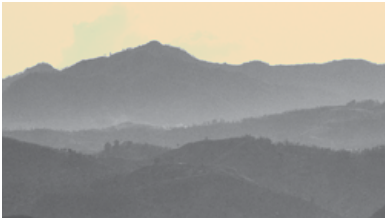
The primary materials used in the manufacture of Landscape Forms products are steel, aluminum and wood. These materials are chosen for their durability and their ability to withstand the rigors of outdoor environments and active public use.

#### Steel and Aluminum

Metal is an extremely durable material. It is also the world's most recycled material and is fully recyclable. Landscape Forms manufactures steel benches, chairs, tables, structural systems, bollards, litter receptacles, ash urns and other accessories. The average recycled content of steel used in Landscape Forms products is 97%.

Aluminum is used to make Landscape Forms benches, chairs, transit shelters, pedestrian lighting, bollards, display elements, shade structures, litter receptacles and other accessories. Aluminum is easily extruded or cast into a variety of shapes and is extremely durable in outdoor environments. The average recycled content of aluminum used in our products is 70%.

For more information about steel recycling or to locate a steel recycling location in your area, visit [www.recycle-steel.org](http://www.recycle-steel.org).



## Wood

Landscape Forms manufactures and markets wood benches, tables, chairs, and shade structures. We employ sturdy hardwoods for exterior use that are dimensionally stable, resistant to insects and rot, are difficult to carve into and do not require a protective finish. These include ipe, jarrah, teak, maple, oak, and redwood. All Landscape Forms wood products utilize wood harvested from sustainable managed forests. As part of our commitment to sustainable forestry, Landscape Forms shall not use illegally harvested wood, wood from genetically modified (GM) trees, or wood harvested from forest areas where traditional or civil rights are violated.

Landscape Forms has held FSC (Forest Stewardship Council™) Chain of Custody certification since 2004 and offers FSC Certified wood as an option on most wood products. Wood products certified by Rainforest Alliance are recognized as originating from well-managed forests that adhere to strict environmental principles and criteria established by the FSC.

Jarrah used in Landscape Forms products is harvested from western Australia's forests, which are managed by the Western Australian government agency, the [Forest Products Commission \(FPC\)](#), in compliance with internationally accepted principles of sustainable development. The FPC gained ISO 14001 certification in July 2001. All Western Australian jarrah is now from re-growth forests: harvesting of old growth forests is no longer allowed.

See our [Wood Technical Brief](#) for more details.

## Plastics

Landscape Forms manufactures benches made with PolySite recycled plastic timbers. Polysite is formed of HDPE (High Density Polyethylene) containing 90% recycled content. PolySite is fully recyclable. See our [PolySite Technical Sheet](#) for more details.

We manufacture seating and shade structures containing polycarbonate, a high-performance engineered plastic that is extremely durable and is fully recyclable. See our [Polycarbonate Technical Sheet](#) for more details.

Landscape Forms manufactures and markets seating, planters, bollard sleeves and litter receptacle parts made of LMDPE (Low Medium Density Polyethylene). Our polyethylene products are flame, stain and scuff resistant and protected with UV inhibitors and stabilizers. LMDPE with recycled content does not provide the structural integrity required to produce durable site furnishings and therefore is not employed. However, our LMDPE parts are fully recyclable. See our [Polyethylene Technical Sheet](#) for more details.

Marneaux®, a 100% acrylic resin polymer used for Landscape Forms tabletops resists scratching, staining, chipping and cracking. While other tabletop materials may fade or chip, Marneaux® can sustain abuse and retain its "like new" appearance with minimal maintenance. Weather, harsh chemicals, and UV rays have virtually no effect on the "through body" color or structural integrity. Most scratches can be buffed out and graffiti rubs off easily. Small chips may be sanded smooth. Marneaux® has recycled content of 75%. See our [Solid Surface Technical Sheet](#) for more details.



Look for FSC  
certified products

The mark of  
responsible forestry



## LED Lighting

Landscape Forms is collaborating with award-winning lighting consultants to develop innovative solutions for new lighting products that use LED's as the light source. Our commitment to LED technology is consistent with our goal to address the needs of our customers while becoming a more environmentally sustainable company. We currently offer LED lighting in transit shelters, pedestrian & pathway lighting and bollards for pathway demarcation and wayfinding.

LED's are extremely energy efficient. Today's high-performance LED's produce @ 90 lumens per watt (90 lm/W) in comparison to @15 lm/W for conventional 60-100 watt incandescent bulbs. LED's have a lifespan of 100,000+ hours. LED's dim over time, they do not abruptly burn out, allowing scheduled rather than emergency replacement. (As LED's do not have catastrophic failures, their lifespan is defined as 70% of original output.) These facts, combined with LED's long life translate into reduced maintenance costs.

LED's provide focused light with no waste or "spill." Due to the directional nature of LED light, it is easier to put light where it is needed and avoid light pollution and trespass.

Landscape Forms, with the expertise of our sustainable-lighting consultant, is pioneering the use of white LED's for outdoor applications. While other manufacturers use cool blue-white LED's (6000°K+), we have developed LED arrays that provide light in the 3700-4300° Kelvin range, a warm white light that mimics nature and provides illumination similar to moonlight, supporting the natural melatonin/serotonin cycle that is essential for human health.

We offer LED lighting in wired and solar options. Solar-powered Smart Technology bollards, Connect and Kaleidoscope transit shelters, which use renewable energy and save on wiring installation costs, are an ideal solution for areas remote from wiring infrastructure and locations where security or emergency preparedness mandate uninterrupted lighting in case of grid failure.

## Processes

### Manufacturing

#### Lean is Green

Landscape Forms follows Kaizen principles of continuous improvement. The core Kaizen proposition is doing more with less. Targeted activities are focused on eliminating waste of space, time, skills, and materials. There is inherent environmental benefit in this approach to business operations; a continuous improvement process and culture seek similar outcomes to those sought under ISO 14001. When coupled with attention to the environmental impacts of specific solutions (for example, changes in the chemical composition of substances used in production), it is a useful tool for waste reduction and pollution prevention.

Kaizen events over a four-year period reduced the space utilized for manufacturing processes by 20,000 square feet, allowing new products and production processes to be added within the existing building footprint, in lieu of a planned facility expansion. That expansion would have resulted in 10,000 additional square feet, requiring the equivalent of 710 Mcf natural gas and 54,000 kilowatts annually for heating and lighting alone.

### ALL STEEL, ALUMINUM, WOOD SCRAP AND SAWDUST

generated in our manufacturing processes are recycled.

99% OF THE WATER used in our manufacturing process is recycled.



We give preference to local/regional material suppliers and vendor services to reduce environmental impacts resulting from transportation. The majority of our steel and extruded aluminum comes from mills and plants within 150 miles of our facility.

Landscape Forms is in full compliance with current environmental laws and retains a consultant to assure that we remain in compliance. As a result of reengineering our processes, our impact on air and water is so minimal that the DEQ no longer requires air or water permitting.

#### Paints and Finishes

Landscape Forms metal products are undercoated with Primegard® rust proofing, which provides a high level of resistance to environmental degradation. Products are finished with Pangard II® polyester powdercoat, which is lead-free, hazardous air pollutants-(HAPS) free), does not generate hazardous waste, and contains less than 1% Volatile Organic Compounds (VOCs). Once processed these trace VOCs are fully inert and therefore cause no emission into the environment.

Landscape Forms wood furniture for outdoor use is manufactured from wood species that weather naturally in outdoor settings. We do not apply paints or finishes to these products and do not recommend the use of finishes on species suitable for natural weathering. Our wood furniture for indoor use is finished with LF 80, a clear, catalyzed low-VOC acrylic finish.

#### Packaging and Shipping

We have eliminated polystyrene in our packaging. Products are sleeved in plastic to protect the finish from rubbing against cardboard, which can become quite abrasive during transport. Products are placed on recycled skids and surrounded by triple wall cardboard for further protection. All cardboard meets the industry standard of 30% - 40% recycled content and is recyclable. The website address used to locate recycling centers is printed on all outer packaging.

**We are currently testing biodegradable materials to  
REPLACE PLASTIC COVERING ON PRODUCTS.**

**We ship our products on RECYCLED SKIDS.**

In 2006 we reengineered our shipping process to consolidate loads and coordinate deliveries so that freight loads are maximized, allowing fewer large trucks to make several stops and reducing the amount of under-utilized truck capacity and the number of trucks on the road.

#### Paperless Processes

In 2007 Landscape Forms began the transition to paperless processes at our administrative and manufacturing facility. 57% of the transition is completed, reducing the amount of paper used in the main office by 265,000 sheets per year. This results in the following annual savings: (ref: Environmental Defense Fund Calculator <http://www.edf.org/papercalculator/>):

**TONS OF TREES: 4.56**

**BTU'S OF ENERGY: 50.16 MILLION**

**POUNDS OF GREEN HOUSE GASES: 7,433**

**GALLONS OF WASTE WATER: 24,870**

**POUNDS OF SOLID WASTE: 2974**



The remaining 43% of the paperless process, focused on manufacturing, is ongoing and will be completed in 2009, further reducing the amount of paper used by 193,000 sheets per year. This will result in additional annual savings of:

- TONS OF TREES: 3.44**
- BTU'S OF ENERGY: 37.84 MILLION**
- POUNDS OF GREEN HOUSE GASES: 5,608**
- GALLONS OF WASTE WATER: 18,761**
- POUNDS OF SOLID WASTE: 2,243**

Server Virtualization

In 2007 Landscape Forms “virtualized” company servers, using software to allocate memory as needed and reducing the number of servers from 10 to 2. The energy saved in power and cooling hard drives reduced our carbon emissions by 33 tons, which is equivalent to taking 6 cars off the road per year.

Other Programs

- ✦ We recycle materials such as: cardboard packaging, office paper, beverage cans/bottles, printer cartridges and purchase recycled paper office products.
- ✦ Bottled water was removed from on-site vending machines in 2008. Employees are provided with refillable water bottles, filtered tap water and ice.
- ✦ In 2009, we planted 100 indigenous blueberry bushes on site as a natural vehicle barrier and productive landscape. Future employee events will include pruning and harvesting blueberries.
- ✦ Carbon Neutral Auto Lease - In January 2009, Landscape Forms instituted a program to reduce the environmental impact of its leased vehicles through payment of carbon offsets. Vehicles used by the company’s direct sales representatives are leased through EMKAY, the first fleet management company to be carbon negative. As a participant in the EMKAY goGreen fleet program, Landscape Forms offsets every ton of CO2 produced by its leased vehicles by paying for an equivalent one ton of CO2 to be saved through designated projects. Payments are calculated as a percentage of monthly mileage. Landscape Forms directs its offsets to Carbonfund.org, a non-profit that funds high-quality carbon offset initiatives and The Conservation Fund, which uses offsets to fund land and water conservation projects.

Facilities

Since 2003, our facility expansions have been planned with sustainable solutions as a strategic goal. The 50,000 sq ft office expansion in 2003 implemented sustainable practices including reducing site disturbance and heat islands; leveraging site orientation to maximize energy conservation; and installing sliding glass doors to allow natural cooling during temperate seasons and ready access to outdoor break areas in our wooded courtyards. We utilized environmentally responsible products and materials, including Eco-Systems flooring fabricated from post consumer tire rubber; Interface’s Solenium flooring, developed to reduce VOC emissions; Herman Miller Aeron chairs, which contain 60% recycled content materials, and are 94% recyclable



and MBDC Cradle-to-Cradle™ certified. Haworth Crossing mobile furniture system was specified to allow for future workspace rearrangement with no construction waste.

Our 2009 renovation encompassed office, restrooms and lunch room and although not large enough to qualify for LEED certification, design planning and construction implementation were based on the following LEED credit intents and requirements: Optimizing Energy performance, Enhanced HVAC Management, Building Reuse, Construction Waste Management, Recycled Content, Rapidly Renewable Materials, Certified Wood and Low Emitting Materials.

### Low-energy Lighting

Landscape Forms has replaced metal halide lighting in our manufacturing facilities with energy-saving T5 and T8 bulbs and ballasts. This conversion has reduced lighting energy usage by 30%.

### FSC

Landscape Forms has held Forest Stewardship Council (FSC) certification since 2004 (SW-COC-001261). We offer FSC certified furniture made from maple, oak, redwood and ipe.

Independent  
Certification

### LEED®

Since 2002, Landscape Forms has been a member of the U.S. Green Building Council (USGBC), the nation's foremost coalition of leaders from across the building industry working to promote buildings that are environmentally responsible, profitable and healthy places to live and work.

Landscape Forms products may contribute to the following points under LEED 2009 Rating System. For specifics regarding rules for the inclusion of furniture, please consult the rating system and reference guide that applies to your project.

SSc4.2 Alternative Transportation: Bicycle Storage (*Bike racks*)

MR Prereq. 1 Storage and Collection of Recyclables (*Recycling receptacles*)

MRc4 Recycled Content (*Steel and aluminum benches, chairs, tables, bollards, umbrellas, planters, structural canopies; polyethylene benches, picnic tables, receptacles; acrylic tabletops.*) Click [here](#) for a PDF of Recycled Content by Product.

MRc5 Regional Materials – (Most products are assembled in Kalamazoo, Michigan, zip code 49048, and the majority of our steel and extruded aluminum comes from mills and plants within 150 miles of our facility. When a specific product and option has been selected, contact your Landscape Forms representative to initiate calculation to meet this credit criterion.)

MRc7 Certified Wood. (FSC Chain of Custody certified wood is an option for most of our wood products.)

EAc1 Optimize Energy Performance (*LED lighting in bollards and structural canopies*)

EQ Prereq. 2 Environmental Tobacco Smoke (ETS) Control (*Ash urns, seating, tables and umbrellas in designated outdoor smoking areas.*)

Making sustainable product choices requires careful assessment of their source. Specific product attributes matter, but so do the way a company conducts its manufacturing, operates its facility, selects materials, chooses vendors and partners, and treats its employees. Sustainability is a long-term proposition. It requires commitment, infrastructure, investment and employee participation. Landscape Forms is taking the long view in the operation of our total business to achieve our sustainability goals. We provide products today that contribute to sustainable sites. And we continue to pursue new ways to minimize our footprint and provide more sustainable solutions going forward.

landscapeforms®

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