



TRUE

FACILITY CASE STUDY

**Loll Designs
Manufacturing Facility
Duluth, Minnesota, USA**

Loll Designs

Manufacturing Facility

Certification level: Gold

Diversion rate upon certification: 97.4%

Facility location: Duluth, Minnesota, USA

Type of facility: Manufacturing

Website: loll designs.com

Contact person and information:

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Why zero waste?

Designed, made, and based in Duluth, Minnesota, Loll Designs creates durable, all-weather, and 100% recyclable outdoor solutions for residential and commercial applications.

Loll is outdoor furniture for the modern lollygagger.

Founded on principles of thoughtful design, the responsible use/reuse of recycled materials, and a deep appreciation for the environment, Loll embodies what it means to be a sustainable product and company.



Why zero waste?

Loll is made in the U.S.A. to help local economies.

Loll leads in continuous improvement, to optimize manufacturing processes while at the same time prioritizing the environment and human health.

In working with recycled and recyclable materials, Loll is part of the circular economy.

Building on Loll's long-time commitment to zero-waste, True Certification validates all the myriad efforts made to date, while also providing the framework to take the initiative even further.



Why zero waste?

Loll's first modern Adirondack chair has evolved into an expansive collection of maintenance-free, all weather, sustainable outdoor furniture for the Modern Lollygagger.

Their mission: to inspire others to appreciate the outdoors.

For Loll, achieving zero waste is worth striving for, so that we can all be part of a better, awesomely sustainable future.



Biggest wins

- With Loll's many endeavors in waste reduction, the team demonstrated strengths within the reuse, leadership, and innovation categories
- The certification lauds Loll's inventiveness in unique programs to reduce waste to landfill like Void Fill, the Yard Sale and Garage Sale, the Clothing Swap, Pallet Reuse, and more
- Loll leads in both Leadership and Training, demonstrating involvement in zero waste across the team, from executive management to the shop floor
- Zero waste initiatives extending outside Loll's walls have big impacts for partners and community. Like Clean Yer Creek, their annual community clean-up event which draws 300 volunteers, diverting trash and debris from the Lake Superior.

Credit category: Redesign

- At Loll, we design waste out, and the first step is understanding where waste happens
- This means we look closely at where waste occurs at every point of generation, and especially in warehousing and distribution, manufacturing, office spaces, and on our grounds
- We also think about what causes waste beyond our walls, providing services like replacement parts, so furniture stays in use and out of landfills



Fret not if a part becomes damaged, component parts can be removed and replaced.

Credit category: Reduce

- When it comes to reducing our impact, we know that keeping waste out of landfills goes a long way
- Going paperless, shifting to digital tools, and using duplex printing are all ways we can prevent waste before it occurs
- At Loll, we also show our care for ecology in our landscape with xeriscaping. Loll planted wild native plants, and leaves grass clippings to compost in place.
- Reducing waste in both upstream and downstream packaging is a key goal for Loll to further reduce discards



Durable, all-weather Loll furniture is the perfect complement to being outside in a wild setting.

Credit category: Reuse

- Reuse accounts for over 7% of our total diverted materials
- There are many systems of reuse throughout our manufacturing facility, whether it's purpose-built carts, reused pallets, or tailor-made upcycled tools
- We've eliminated single use cups and flatware, opting now for reusables for company events and daily use
- Every employee gets an insulated reusable beverage container to keep the re-use cycle going
- When we're finally done with supplies, we donate them to neighbors in need



Cheers, lollygaggers!

Credit category: Compost (Re-Earth)

- Appreciating the outdoors should also mean caring for our natural resources
- We separate food scraps, unbleached paper, and landscape trimmings from other discards, so they can be composted instead of going to the landfill
- The compost made from our biogenic discards becomes rich, fertile soil to replenish natural cycles, and enhance the health of our region
- In our first zero waste audit, food scraps represented the largest portion of cross contamination, which prompted us to revisit compost in trainings, and add bins to improve accessibility



It's one thing to appreciate mother nature. We go the extra distance to give back.

Credit category: Recycle

- A whole host of strategies are used to recycle useful resources that are left over after our manufacturing processes
- To ensure resources are living their best lives, we've determined the end markets for our recycled commodities
- HDPE, Single Stream Recycling, Wood Scrap, Plastic Banding and Carboard are all processed by recyclers locally
- We also send undyed HDPE to a local partner that makes board games



HDPE scrap pieces too small for the void-fill program are recycled locally to be made into new products.

Credit category: Zero Waste Reporting

- When zero waste is the goal, everyone gets involved
- Through the TRUE certification process, our finance and facilities teams came together to track twelve months of diversion data, and to put systems in place for continual diversion tracking
- For those streams where weights aren't tracked along with financial information, the results of a waste audit showed what a typical week in discards looks like for our facility
- So the whole organization understands the importance of our zero waste goals, we report out diversion as a monthly key performance indicator



A bright spot in the landscape.

Credit category: Diversion (Min. 90%)

- As of TRUE certification, we achieved a 97.4% materials diverted from landfill or incineration.

DIVERTED MATERIALS

- Single Stream Recycling
- Paper and Cardboard
- High Density Polyethylene
- Low Density Polyethylene
- Plastic Films
- Organic wastes (food scraps)

DISCARDED MATERIALS

- Municipal Solid Waste (garbage)
- Low Density Fiberboards
- Compressed Paper Boards
- Spent Lightbulbs
- Wood scrap and Pallets



Loll team members getting into the details.

Credit category: Zero Waste Purchasing

- Loll has a proud history of collaborating with materials producers and manufacturers to create new solutions
- Working together, we will uncover more opportunities to make the best use of the materials we utilize
- Loll encourages purchasing to be more mindful of potential environmental impacts through a set of preferred attributes and attributes to avoid through Environmentally Preferred Purchasing Guidelines



Credit category: Leadership

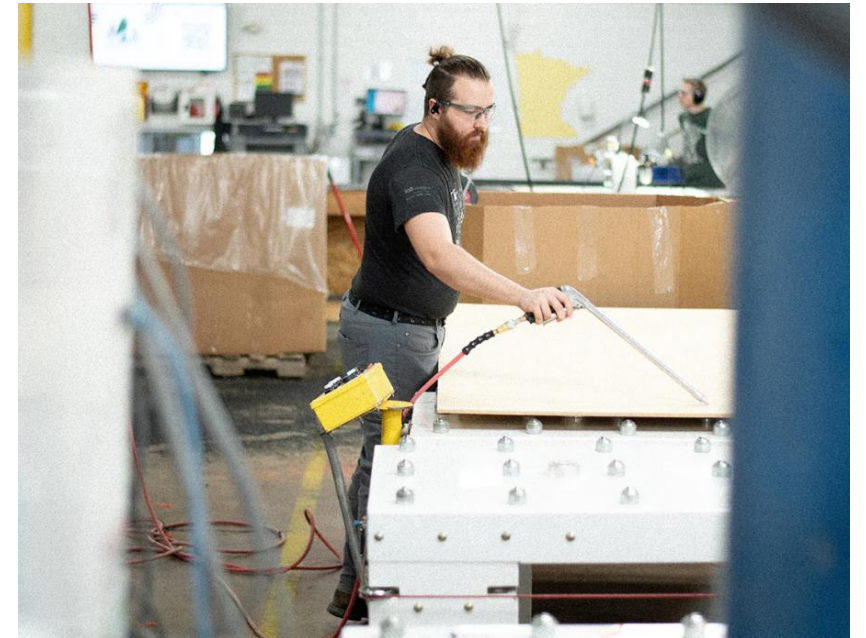
- Loll's commitment to environmental sustainability has meant striving to reduce wastes from the beginning
- In early 2024, we adopted a formalized goal to document our diversion rate, pursue TRUE Zero Waste Certification, implement a zero-waste policy, and improve waste streams annually
- Loll further commits to reduce waste generation; promote responsible waste management with suppliers, customers and community; and increase overall diversion by 1% annually until arriving at 100% diversion from landfill
- Since 2008, Loll has come together with other local businesses to improve the local watershed with "Clean Yer Creek"
- Leading by example not only reduces our footprint, but helps advance action with and for the communities we care about



Loll team members protecting the Lake Superior ecosystem by clearing trash from waterways through "Clean Yer Creek"

Credit category: Training

- The whole team needs to be on board to reduce waste before it happens and make sure that discards are going to the right place, daily
- Strategies for waste diversion, and what is expected from every team member to meet our zero waste goals, are codified in our zero waste policy, and every team member is trained in separating discards
- Quarterly, waste goals and updates are reviewed so we can continuously improve towards zero waste as a team



Every team member contributes to achieving zero waste, and success starts with training

Credit category: Zero Waste Analysis

- To understand the full story for resources used and discarded in the factory, Loll conducted a zero-waste analysis
- Discards were collected for a full, typical week, and sorted into material types by team members from operations, office, and management areas
- This dumpster deep dive showed what's going in the wrong bin, and what materials may be possible to divert instead of discard
- The entire Loll team joined the audit to hear the report-out, share ideas on how to further reduce, and get a refresher on what waste goes where
- The biggest takeaway: food waste often goes in the trash, but Loll composts! Additional bins and signage were quickly added to curb cross contamination with compostables



The Loll team convened for a report out of the 2024 waste audit, and share ideas for further reduction

Credit category: Upstream Management

- A 2023 Carbon Footprint report for five Loll products showed that of the impacts occurring over the full cradle to grave life cycle, 50% occurred upstream of manufacturing
- That means that, on average, half of a Loll product's carbon footprint comes from the production and transport of the materials used to make it
- Loll builds relationships with supplier partners to reduce sources of upstream waste, and enhance circularity wherever possible
- For a recent product launch, Loll requested supplier packaging be redesigned for 100% recyclability



This illustration of a product life cycle depicts a product's life cycle stages from raw material extraction or recycling, through production, construction, use and disposal

Credit category: Hazardous Waste Prevention

- Loll utilizes the Global Harmonization System to safely store and handle all chemicals used in production
- When hazardous or universal wastes require disposal, Loll works with the WLSSD Clean Shop Program to safely dispose of wastes
- Employees are encouraged to bring in their own universal wastes (such as lightbulbs) for safe disposal
- Loll engineers recently made a shift to an alternative cleaner in one production process, eliminating the use of a hazardous substance in favor of a safer option



It's up to us to ensure hazardous substances are safely handled, and where possible to eliminate their use altogether

Credit category: Closed Loop System

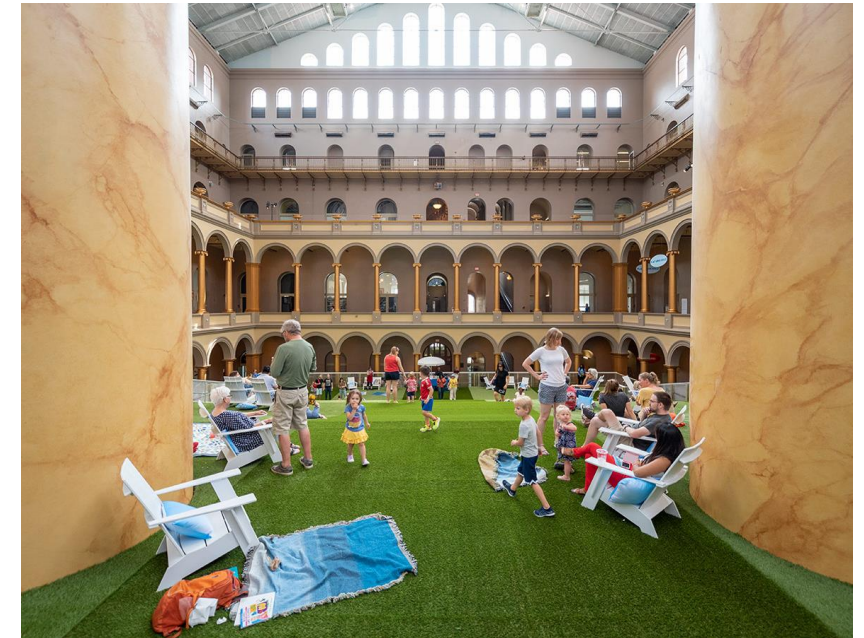
- With sustainability ethics in mind, Loll aims to play a role in a circular economy where plastics made will be recycled continuously, thus reducing waste
- Loll uses local compost to enhance their vegetable garden soils every year
- Being an active part of Duluth's local community of manufacturer's means that one facility's waste can become another's raw material
- Loll is working closely with local partners to knit together a more circular economy with natural HDPE, compressed paper board, and plastic film programs



Loll's HDPE material contains post-industrial or post-consumer plastics, like the number 2 plastics shown here

Credit category: Innovation

- Striving towards zero waste means creating recycling programs for anything that can be recycled, and finding uses for useful resources
- Some of the inventive ways that Loll has conserved resources include:
 - The “Swap Don’t Shop” event for team members to exchange unwanted clothes
 - Donations of un-needed cushions to a local school
 - Hosting a Yard Sale of seconds, prototypes, and unused equipment and materials
 - Employee E-Bids where team members can purchase a variety of unsalable items



Trying new things is how we learn.



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This TRUE Gold achievement is a proud moment, as it recognizes all the ways Loll's endeavors in zero waste contribute to the circular economy and a sustainable future.

*Eric Swanson
President, Loll Designs*

Zero waste is our mission
true.gbci.org