



Norm Thompson Outfitters

Norm Thompson Outfitters is an Oregon-based catalog and Web retailer with three sales divisions: 1) **Norm Thompson** – traditional, high-quality clothing for travel, leisure, and people on the go; 2) **Sahalie** (formerly Early Winters) – rugged clothing and products for those who play outdoors; and 3) **Solutions** – goods that make life easier by providing “solutions” to challenges throughout the home. In 2004, Norm Thompson distributed approximately 80 million catalogs to its national customer base. Annual revenues were approximately \$200 million.

Catalog and Web orders are fulfilled from a large distribution center in West Virginia. A smaller, retail distribution center in Portland helps supply outlet stores and a store at the Portland airport, and conducts a small number of direct-to-customer shipments.

This case study highlights more than fifteen actions Norm Thompson has taken to reduce the use and waste of packaging in three areas:

- Packaging received from vendors
- Internal (distribution center) practices
- Customer packaging

Estimates of financial savings are provided, where available. **Packaging waste prevention saves Norm Thompson \$1.6 – \$1.8 million dollars annually**, while reducing the use of packaging materials by an estimated 700 tons per year.

Packaging Received from Vendors

Inbound/Storage Box Sizes: Vendor Compliance and Stock Box Reuse.

At the Distribution Center, incoming products from vendors (such as clothing) are checked and then placed in storage for use in order fulfillment. Storage space on the shelves is at a premium. Shelves are vertically spaced to allow two standard 14-inch-high “stock boxes” (or four half-height “stock boxes”) to be stacked on top of each other on each shelf. Boxes that are higher than the standard size can only be stacked one high, so contents are repacked into standard-sized “stock boxes”, and the vendor boxes are discarded for recycling. Even though Norm Thompson reuses its stock boxes, annual expenses for purchase of new stock boxes historically averaged around \$50,000/year.

In order to maximize shelf use, minimize repacking time and reduce waste, Norm Thompson has begun requiring vendors to ship in specific sizes of boxes. Vendors that use other sizes are charged back a fee in order to encourage compliance. In the last three years, vendor compliance for box sizes has increased significantly. This increase in vendor compliance has significantly reduced time spent repacking vendor contents into stock boxes and has also significantly reduced the need to purchase new stock boxes. In fact, since Norm Thompson also reuses its stock boxes, the company spent only \$3,500 on new stock boxes in 2004, and won't have to purchase any in 2005. Increased vendor compliance coupled with box reuse reduces the need to purchase around 40,000 boxes (about 34 tons) a year, resulting in annual procurement savings of approximately \$50,000.

Inbound/Storage Box Sizes: Smaller Boxes.

As a result of communication with vendors regarding box sizes, Norm Thompson was able to make another valuable packaging change. Previously, it required

Land Quality Division
Solid Waste Policy
and Program
Development Section
811 SW 6th Avenue
Portland, OR 97204
Phone: (503) 229-5913
1 (800) 452-4011
Fax: (503) 229-6977
www.oregon.gov/DEQ/

Updated: 07/14/05
David Allaway
09-LQ-026

master cartons from suppliers to either be “full size” (12 – 14 inches high) or “half size” (6 – 7 inches high). In working with its largest pants vendor, Norm Thompson learned that because of the wide variety of SKUs, the vendor was typically sending only a few items for each SKU (an SKU, or “Stock Keeping Unit”, is a number associated with a product for inventory purposes). Because pants with different SKUs aren’t stored in the same box, one or two pairs of pants were being placed in a box that would easily fit 10 pairs. As a result, Norm Thompson began allowing vendors to ship in boxes even shorter than the half size box. This change not only freed up more shelf space, it also significantly improved shipping efficiency (and fuel) and reduced the quantity of corrugated cardboard used. It also reduced the use of pallets, since more pants (and less empty space) are shipped per pallet if the boxes aren’t overly large.

Vendor Influence: Save Your Back Bags.

One of Norm Thompson’s top-selling items is its line of “Save Your Back Bags”, a day bag that is designed to reduce muscle strain and fatigue. The supplier stuffs each bag with crinkled paper so that the bags aren’t creased and wrinkled when the customer receives them. During waste prevention evaluations at the distribution centers, employees pointed out the bags were excessively stuffed.¹ These concerns were passed to the buyers for this product, who asked the vendor to eliminate the use of filler altogether. After realizing that this change would compromise the aesthetic of the product, the buyers then asked the vendor to use some paper, but not as much as before, and to use recycled paper. Both changes have been made.

The reduction in bag stuffing reduces paper use and waste generation by around 5,500 pounds per year. It also saves around \$2,900 annually for Norm Thompson on outbound delivery charges, as the average bag now weighs less because of reduced stuffing.

Although these savings may seem small, Norm Thompson is just one of the vendor’s customers. If the vendor reduced stuffing in all of its customers’ bags, then the environmental benefit is significantly larger. This example illustrates one of the potential benefit of supply chain environmental efforts – by communicating this request with its vendor, Norm Thompson may have extended influence to a large number of other customers.

Eliminate Printing on Poly Bags.

Most clothing items shipped to the Distribution Center are packaged in a clear polyethylene bag in order to protect the clothing from dust. The bags used to be printed with the Norm Thompson name on them along with an inventory number, which required vendors to order custom-printed bags, oftentimes in small lots. Norm Thompson eliminated the printing requirements, which reduces the use of ink and makes the bags more recyclable.

Vendor Manual: Environmental Considerations.

Norm Thompson’s Vendor Compliance Manual specifies many of the company’s requirements of its vendors. (The manual can be viewed at <http://vendor.nortom.com>.) Environmental and waste-related issues are featured prominently in the vendor manual, including the following:

- Environmental leadership is explicitly called out in the introduction of the Manual. Norm Thompson states that it is “committed to being a leader in environmental sustainability” and notes that “our business partners (suppliers) are critical to our success at maintaining our environmental leadership position”.
- The Manual requires polybags to be made from a standard resin (LDPE) and to not exceed 1 mil thickness unless necessary to protect the product. The Manual also requires that polybags conform to the size of the product and be labeled with a resin identification code to facilitate recycling. It also expresses a preference for post-consumer content.

¹ The waste prevention evaluations were conducted by Norm Thompson’s sustainability coordinator and a waste prevention specialist from the Oregon DEQ.

- Pallets can be secured with alternatives to stretch wrap, such as pallet straps and water-based/non-toxic commercial pallet adhesives.
- Void fill (inner pack) is only allowed with the pre-approval of the Norm Thompson buyer, and is limited to paper and polyethylene void fills.

Norm Thompson encourages compliance by charging back fees for use of non-compliant boxes as well as the use of void fill (“inner pack”) if not specified in the purchase order. The purpose of the charge backs is not to make money off the vendors, but rather to encourage vendors to comply.

Sustainability Tool Kit: Project Packaging Guidelines.

Norm Thompson has developed a “Sustainability Tool Kit” that provides sustainability language for buyers to use in their conversations with vendors. One page of the Tool Kit addresses packaging (see attachment). The company hasn’t been able to document vendor changes occurring as a result of the Tool Kit, but nevertheless considers it to be a valuable tool for awareness raising that contributes to change over time.

Internal (Distribution Center) Practices

Stock Box Reuse.

As described above, stock boxes are used to store vendor products prior to the products being picked, packed, and shipped to customers (if the vendors don’t ship in compliant box sizes). When a stock box is emptied in the picking area, it is removed, palletized, and put into storage for eventual return for reuse in product preparation/storage. Staff estimate that most stock boxes are reused at least 10 to 15 times each.

Reuse of Polystyrene Loosefill and Bubble Wrap.

Some fragile items arrive at the Distribution Center packed in boxes filled with expanded polystyrene (EPS) loose fill (“peanuts”). Norm Thompson doesn’t use EPS in shipments to its customers, so if necessary, re-wraps fragile items in bubble wrap. The Distribution Center reuses bubble wrap to the greatest extent possible. EPS “peanuts” are accumulated in large plastic bags and set aside for a nearby shipping/mailling store that comes by and picks them up every week for reuse. To make consolidation of the peanuts easier, Norm Thompson uses a “peanut vacuum”, which consists of a large flexible hose that sucks up loose peanuts and feeds them directly into the large storage bags.

The Retail Distribution Center in Portland also reuses packaging. The RDC is able to reuse about 20% of vendor-supplied bubble wrap and polystyrene. Reusing the polystyrene loose fill alone saves about \$925/year in avoided purchasing costs. The remaining materials are offered to an Italian dishware store located across the street. The RDC is able to divert all of the excess polystyrene in this way (about eight 60-gallon bags/week) as well as about half of the excess bubble wrap.

The remaining bubble wrap (whatever the RDC and the neighboring store can’t use) is placed in a roll cart along with other film plastics to be picked up for recycling. Reuse and recycling of these materials has cut the RDC’s garbage bills by about 2/3, saving an additional \$3,000/year (estimated).

Area retail stores, such as the outlet stores in Lake Oswego and Troutdale also separate their polystyrene loosefill and donate it to neighboring mailing/shipping stores for reuse.

Durable Totes for Internal Use.

The Returns Department uses durable plastic totes to redistribute returned items back to other departments throughout the 241,500-square-foot Distribution Center.

Durable totes are also used to deliver goods from the Retail Distribution Center to the Airport store. Deliveries are made using a corporate van. Empty totes are nested at the Airport and returned to the Regional Distribution Center when a new delivery is made. Tote reuse is easy because of this closed-

loop distribution system, and saves an estimated \$3,100/year in box purchases. Norm Thompson purchased its totes at least six years ago. Steve Wilcox, the RDC's Supervisor says that the totes "really have held up well".

Reused Boxes for Inter-Store Transfers.

Most shipments from the Distribution Center to the RDC are made using a standard box size, called an S-20. The RDC sets S-20s aside and then refills them when making shipments to the other retail stores, saving another \$1,200/year.

Use and Reuse of Durable Pallets and Gaylords.

Shipping bags used to ship soft goods to customers are sealed, labeled, are packed into large gaylords to transport them to the nearby bulk parcel mailing facility. The gaylords are positioned on high-durability pallets. Both pallets and gaylords are cycled between the Distribution Center and the mailing facility and are reused as many times as possible.

Pallet Exchange.

Packaging suppliers, invoice suppliers, and catalog suppliers all deliver product direct to Norm Thompson's Distribution Center on pallets. At Norm Thompson's request, these suppliers all take back as many "empty" pallets as they delivered.

Customer Packaging

Choosing the Right Sized Box.

Typical packing stations are supplied with 10 – 15 different box sizes to choose from. With three different catalogs and many customers ordering multiple items, choosing the right sized box can be a real challenge. Too small, and the products won't fit or won't be adequately protected. Too large, and time and money is wasted on unnecessary packaging. A box that is "just right" reduces materials use in the box as well as void fills, and can save money on labor and freight as well.

The Distribution Center has recently rolled out a warehouse management system called "MARC". When an order is created, MARC software calls on a database of product and box dimensions and recommends the smallest possible box or bag for the unique combination of items being shipped. This is expected to reduce packaging use, although its impact has not yet been evaluated.

"Ship All Together".

When customers order multiple products, standard practice has been to ship those products that are in stock and follow up with shipments of other products as they come into stock. Under a program called "Ship all Together," if the out-of-stock items are expected within one week, sales agents at the call center will ask the customer if they want their order shipped all together, or in separate packages (some now, some later). In April of 2001, sales agents were trained to add a new closing line to their script: "And, shipping all together means less packaging so we can work together to help the environment."

In the nine months prior to April 2001, 8.8% of "Ship All Together" opportunities were accepted by customers. In fiscal year 02-03, this rose to 15.3% (following the addition of environmental benefits to the call center script). Annual cost savings for "Ship All Together" are estimated at \$400,000 - \$600,000 and 50,000 – 75,000 fewer shipping boxes or bags, plus filler, tape, labels, and inks, and energy and pollution from shipping. Waste prevention (reduced use of materials) is estimated at 29 – 43 tons/year. The higher participation caused by adding the packaging/environmental reference to the script increased savings by more than \$170,000 per year!

Using Shipping Bags for Soft Goods.

Since the early 1990s, the main Distribution Center has used shipping bags to package non-breakable customer orders such as clothing and linens for shipment to customers. Currently, Norm Thompson's shipping bags are made from linear low density polyethylene (LLDPE), although the retail distribution center has chosen to use an all-paper shipping bag in the future.

The advantages to Norm Thompson from using shipping bags are many, including:

- Lower material costs. Shipping bags cost considerably less than boxes and void fill. An average box plus crinkled newsprint for void fill costs Norm Thompson around \$0.62 per parcel, compared to a per-bag cost of \$0.14. Net reduction in packaging material use (waste prevention) is estimated at 627 tons/year. **Annual savings: \$415,000.**
- Less storage. Bags can be stored more compactly than boxes and void fill. **Annual savings: not quantified.**
- Labor: Bags don't have to be "set up" for use, require no time filling with crumpled paper, and are easier to close (requiring no taping). An average packer can complete 34 boxes per hour compared to 45 bags per hour. **Annual savings: \$75,000.**
- Lower freight costs. The bags weigh less than boxes, so shipping charges are less. **Annual savings: \$664,000.**

The use of bags in lieu of boxes with void fill reduces materials use by an estimated 627 tons of packaging per year. Although the bags are made from virgin plastics, their considerably lower weight and more compact shipping volume (relative to boxes) lead to some environmental gains. DEQ's [life cycle inventory report](#) estimates that using shipping bags in a similar application reduces fossil fuel use, solid waste generation, and a host of atmospheric and waterborne emissions by 70 – 95% compared to the box/void fill option. Estimated environmental benefits from bag use specific to Norm Thompson include:

- Energy savings (all sources) of 21 billion BTUs/year.
- Energy savings from non-renewable sources (fossil fuels and nuclear) of 14 billion BTUs/year, equivalent to the energy value of roughly 110,000 gallons of gasoline.
- Reduction in greenhouse gas emissions in excess of 1,100 metric tons of carbon dioxide equivalent/year, roughly the same benefit as removing 210 passenger cars from the road.²

For many years, Norm Thompson had an internal standard that shipping bags could only be used when the price of the total shipment was less than \$75, and no one product could be priced higher than \$50. This standard was recently eliminated, leading to a significant increase in bag use. Bag use for outbound deliveries went from 11.5% to 28.1% (the remainder of deliveries are shipped in corrugated boxes). This change increased annual savings to Norm Thompson by approximately \$680,000, for total savings estimated at \$1,154,000.

Improving "Cause of Return" Data.

For every catalog retailer, managing returns is an expensive proposition. There are many reasons why products are returned, including damage in transit. However, if a product is returned to the Distribution Center and arrives damaged, Norm Thompson doesn't know if the product was damaged in shipment to the customer (when Norm Thompson packaged it) or in the return trip (when the customer packaged it).

Not knowing the causes of returns makes it difficult to evaluate the effectiveness of packaging practices. Relying exclusively on anecdotes and personal opinions can lead to defensive over-packaging of products.

Norm Thompson recently applied a software application to better manage and reduce returns, allowing for proactive analysis of returns, including analysis of root causes. According to Meg Miller, Director of Product Quality Management, "overall, the program has proved to be an invaluable tool in returns

² Not including forestry-related emissions and emissions/credits involving decomposition/sequestration of materials in landfills.

analysis company-wide, saving money, time and customer satisfaction.” Specific to packaging, the software has helped the company pinpoint damage returns at a product level, thereby enabling direct resolution to explicit, significant packaging issues. The exact impact on packaging and waste is difficult to estimate, but this is assumed to be a positive change. If packaging is insufficient (leading to product damage), it can be remedied (reducing product waste), and if packaging is sufficient, then there is no reason to add to it further. Over time, this data will help Norm Thompson to optimize its packaging.

Paper Tape.

The Distribution Center uses a paper tape for sealing the tops and bottoms of boxes. This improves the recyclability of the boxes.

Alternative formats (such as large type, Braille) of this document can be made available. Contact DEQ's Office of Communications & Outreach, Portland, at (503) 229-5317

Sourcing Preferences

Good

- Reusable (Take-Back programs)
- Low weight
- Sustainably harvested fibers (e.g. organic cotton, hemp and kenaf), unbleached, process chlorine free (PCF) or totally chlorine free processing (TCF), un-dyed
- Certified organic bio-based polymers
- >50% recycled content
- 100% recyclable
- Single material

Adequate

- Recyclable, reusable through down cycling
- Minimum recycled paper content 50%
- Soy based inks
- Elementally chlorine free processing (ECF)
- Unbleached paperboard, cardboard from FSC certified or traditional (non-industrial) grown with minimal chemical inputs
- LDPE, HDPE product bags (garments)
- Minimal support materials – such as pins, collar stiffeners, tissue, etc.
- Two material, easily separable
- HDPE, LDPE, PET strapping
- 3-49% recycled content

Poor

- One use/disposable
- Multi-material packages (e.g. plastic laminated paper)
- Heavy
- No recycled content
- Chlorine bleached
- New pulp from industrial grown with heavy chemical inputs
- New pulp derived from poor forestry programs
- PVC, PVC shrink-wrap
- Polystyrene
- PP, PVC strapping

Resources

Better packaging for overnight shipping:

http://www.environmentaldefense.org/documents/520_AchievingPP.pdf

Information on environmentally improved packaging: <http://www.ciwmb.ca.gov/Packaging/>

Hewlett-Packard has some great packaging links and a whole environmental section:

<http://packaging.hp.com/misc/links.htm>

Better paperboard for packaging:

<http://www.environmentaldefense.org/pdf.cfm?ContentID=532&FileName=PaperboardReport.pdf>

For specific questions on materials and processes, please contact
Derek Smith, Corporate Sustainability Manager, at dsmith@nortom.com
or 1.503.614.4402



PRODUCT PACKAGING

