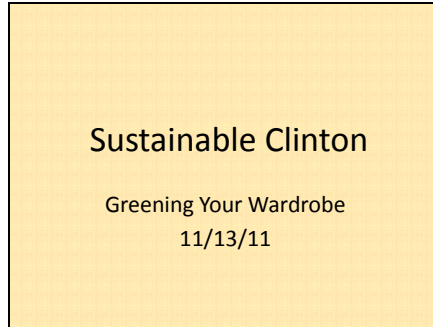
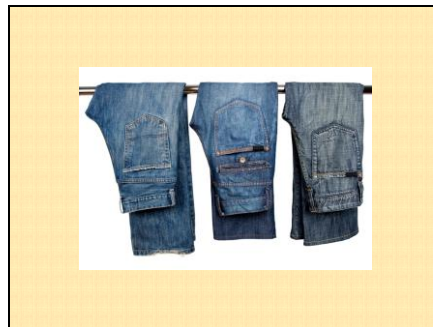


Slide 1



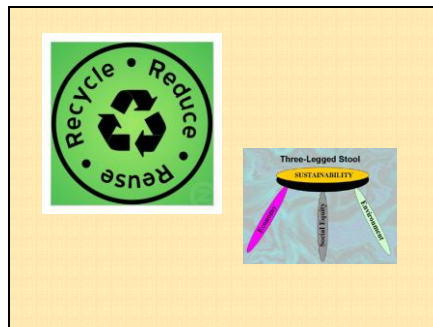
Slide 2



It should come as no surprise that much of the clothing we purchase every year carries hidden environmental and social costs.

A pair of organic cotton jeans, for example, leaves an 85-pound carbon footprint after its ten thousand mile journey from the field in India to the store in North America.

Slide 3



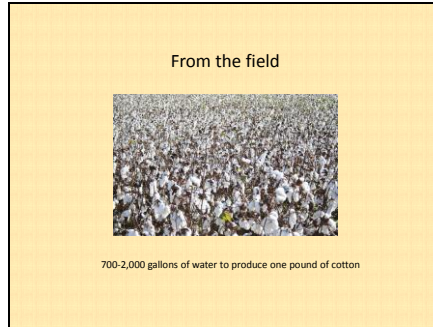
In attempting to make our wardrobe more GREEN, we will stick with the tried and true mantra:

Reduce, Reuse, and Recycle...

But we must also take into consideration that there are "Three Legs of Sustainability":

Which includes Economy and Social Equity in addition to Environment

Slide 4



Let's start off by taking a look at how a simple t-shirt is made.

Every cotton T-shirt starts life in a cotton field, most likely in China, India or the United States.

It takes anywhere from 700 to 2,000 gallons of water to produce about a pound of conventional cotton – enough for a single T-shirt.

Cotton grown in the United States uses comparatively less water; however, about a third of a pound of chemical pesticides and fertilizers go into each pound of conventionally-grown American cotton.

Slide 5

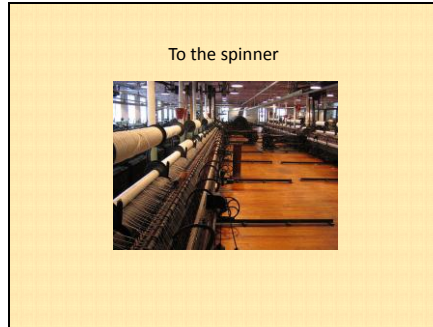


The harvested cotton bolls are shipped to a gin, where the fluff is separated from the seeds and pressed into bales.

The gin is usually located in the same country where the cotton was grown.

Ginning mills produce very fine dust that poses a significant breathing hazard to workers without proper ventilation and protective gear.

Slide 6

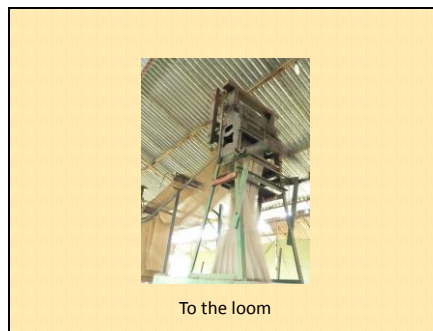


From the gin, the bales of cotton fibers go to a spinning facility, where they're carded, combed, blended and twisted into yarn.

Most spinning factories are located in China and India.

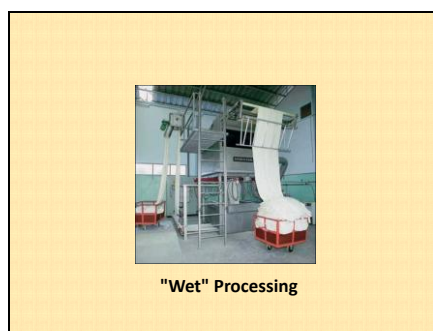
Some will go on to be woven or knitted into sheets on site, while some will move the spun yarn to another facility for weaving.

Slide 7



At a mill, huge machines knit or weave the cotton yarn into sheets of fabric—but the cloth is rough and grayish—not T-shirt worthy just yet.

Slide 8



The gray cotton moves on for "wet" processing, where it's treated with heat and chemicals to take on its final look and feel.

In many Chinese textile mills, when dyes are rinsed off fabric the polluted wastewater ends up in local rivers, which change color according to the fashion of the season.

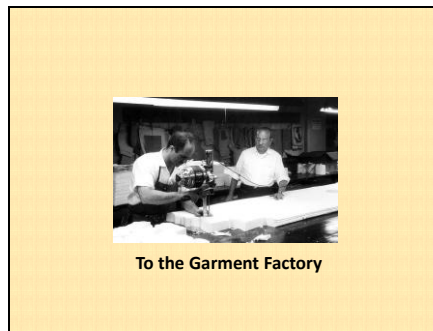
Many dyes contain toxic chemicals which are hazardous to human health and the environment.

At the final stage of wet processing, fabric is “finished” in order to make it softer, cleaner, smoother or better able to take on coloring.

To this end, the fabric is washed, scoured, bleached, rinsed and sometimes dipped in acid.

All these finishing processes require the use of chemicals, heat and water, and produce contaminated wastewater.

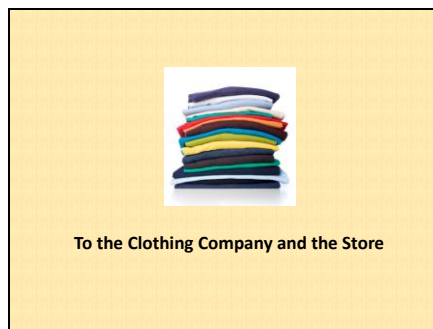
Slide 9



The finished cloth is sent (probably from somewhere in Asia) to a designer or directly to a garment factory (probably in Mexico) to be cut and stitched into a T-shirt.

About 12 to 15 percent of the fabric will end up as scraps on the cutting room floor, depending on how the pattern is laid out.

Slide 10

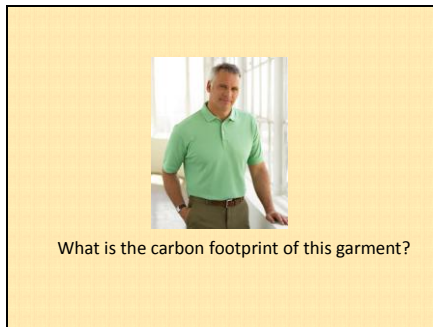


The finished t-shirt makes its way from the garment factory to a brand name clothing company or to a trading company and from there—on the last leg of its multinational journey—the shirt is neatly stacked on a shelf at your local department store, clothing store, big box retailer or factory outlet.

Yours for just \$9.99.

As is obvious, there are many opportunities for improvement throughout a t-shirt's pre-consumer life.

Slide 11



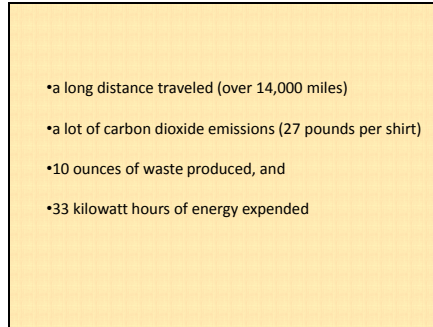
So what is the actual carbon footprint of clothing?

There's an app for that. The apparel company, Patagonia, has created a website tool called *The Footprint Chronicles* for that purpose.

The handy online tool takes you around the globe, following each garment from start to finish, from design to fiber sourcing, spinning, sewing and distribution.

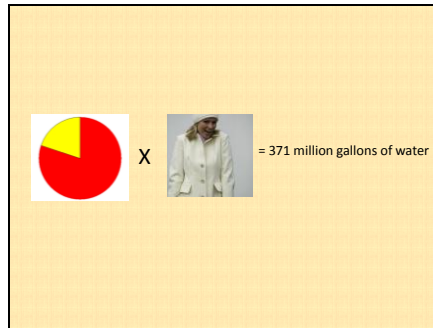
In the case of a single cotton men's polo shirt, it all adds up to:

## Slide 12



- a long distance traveled (over 14,000 miles),
- a lot of carbon dioxide emissions (27 pounds per shirt),
- 10 ounces of waste produced (roughly the same weight of the shirt itself), and
- 33 kilowatt hours of energy expended.

## Slide 13

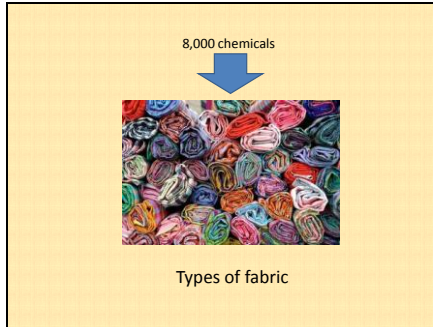


This report does not mention the amount of water used,

however one study in the UK estimated that if all of Britain's 61 million residents (about 20 percent of the U.S. population) were to buy one recycled woolen garment, the nation would save 371 million gallons of water.

That's enough fresh water for more than 2 million people for a year.

Slide 14



Let's take a look at the types of fabric that are used to create clothing.

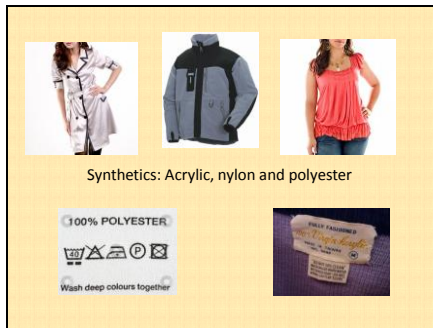
Textile-making is one of the most polluting industries in the world, partly because of the toll that growing cotton and making synthetic fibers takes on the environment, and partly because of outdated manufacturing methods used to dye and finish fabric.

The Chinese textile industry, which produces about half the clothing Americans buy, creates about 3 billion tons of soot each year.

At least 8,000 chemicals are used to turn raw materials into textiles and 25% of the world's pesticides are used to grow non-organic cotton.

This causes irreversible damage to people and the environment.

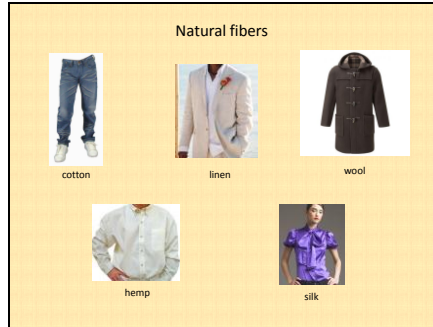
Slide 15



**Synthetic fibers** like acrylic, nylon, and polyester are derived from nonrenewable petroleum, and the manufacturing process can consume a lot of water and energy while generating global warming pollution.

Avoid these fabrics when possible; if you need a material like fleece, choose one made from reclaimed/recycled fibers.

Slide 16



**Natural fibers** such as cotton, linen, wool, hemp, and silk are typically grown using a lot of water, fertilizer, and pesticide.

Choose clothes made from fibers that meet U.S. Department of Agriculture organic standards for crop and livestock production, which can reduce the water and air pollution associated with these fabrics

Slide 17



**Cellulosic fibers** including bamboo, Tencel, and rayon are made from reconstituted plant and wood pulp.

While the production process can be chemical- and energy-intensive, Tencel production minimizes toxic emissions by reusing solvent.

Choosing clothes made from organic crops or sustainably managed forests can also help reduce these fabrics' impact.

Slide 18

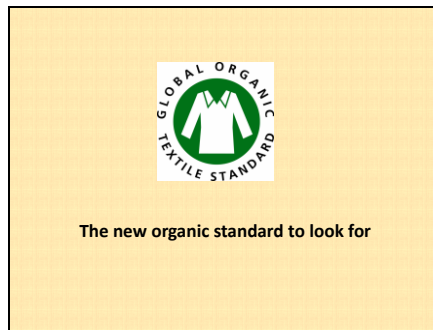


**Reclaimed/recycled fibers** can be a good option as they are made from materials that would typically end up in landfills:

plastic bottles and tofu manufacturing waste (from soybeans), for example, can be made into fleece and "vegetable cashmere."

In addition, it takes about 70 percent less energy to make recycled polyester fiber than virgin fiber.

Slide 19



The Global Organic Textile Standard is a set of rules for ecological and socially responsible textile production.

This comprehensive fiber certification has provisions to reduce the environmental impact of every stage of a fabric's production, from the harvesting of raw materials to the dyes, bleaches and processing agents used.

Nordstrom, H&M, Banana Republic, Target, Levi's and even Walmart are just some of the companies that are using GOTS certification for their organic products.

Slide 20



Clothing also has an ETHICAL COST.

Large clothing companies produce apparel in 160 countries, often with shockingly low wages and horrible working conditions.

Apparel workers in the free trade zones in El Salvador earn a whopping 56 cents an hour...

...In Vietnam they earn 52 cents

... in Bangladesh they earn 20 cents an hour.

The clothing companies then export that apparel to 30 developed countries, like the United States and Canada.

Slide 21



The number of sweatshops in Mexico soared in the 1990s after NAFTA enticed companies to close their US operations and move south. As global manufacturing costs continued to shift, many companies then moved their operations from Mexico to even more attractive Asian countries. And more recently still, after the US-Jordan Free Trade agreement went into effect in 2000, the number of sweatshops in that country exploded as well. Between 2000 and 2005, apparel exports from Jordan to the US soared 2000 percent, often due to the round-the-clock labor of guest workers from poor Asian countries who were following the jobs as they moved.

*Here's what's kind of amazing: In Mexico's apparel industry, economists*

*found that doubling the pay of garment workers would add just \$1.80 to the cost of a \$100 men's sports jacket, and a recent survey found that US consumers would be willing to pay \$115 for the same jacket if they knew it had not been made under sweatshop conditions."*

Living wages and reasonable working hours would not threaten companies' overall profitability. No one should have to work 17-hour days just so Americans can save a few dollars on clothes.

Slide 22



What can you do?

First of all, you can vote with your dollars. The spending choices we make help to support companies that treat workers fairly.

Organizations such as these listed here are working to call upon retailers such as Walmart, Disney and Nike to make public the list of factories producing its good around the world; to open those factories to monitors; to pay a living wage.

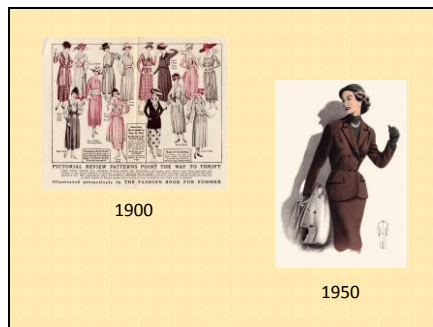
Slide 23



Another very important thing we can do is REDUCE overall clothing CONSUMPTION

The average American owns between 19-22 items of clothing they'll never wear. Impulse shopping is the common cause. Guilt over money wasted is the biggest reason for these items languishing in the closet. (Although keeping unworn clothing in your closet isn't going to put that money back into your wallet).

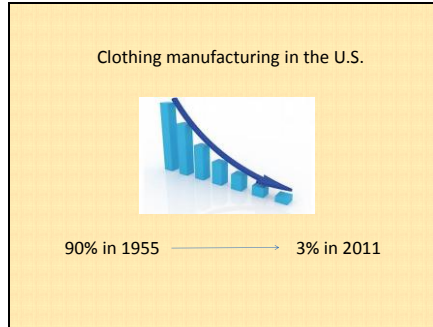
Slide 24



It wasn't always that way. In the early 1900s, the sewing machine had only been around for a half century and the production quality and fit of clothing that came off the assembly lines was not all that great. Ready-made dresses in the department stores were pricey – as much as \$600 in today's dollars. Most women made their own clothes or ordered them from a local dressmaker.

By the 1950s the quality of ready-made fashions were within reach of the middle-class. America's garment industry was the envy of the world and women's wear was its number one product. The Sears catalogue carried good quality dresses for as little as \$72 (in today's dollars). Women continued to sew at home.

Slide 25



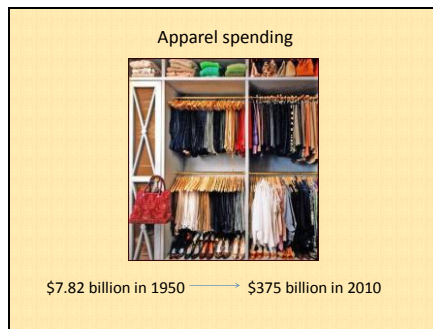
Fast forward fifty years and the price of mass-market fashion has plummeted, as the garment industry has moved to lower wage countries.

We now only make 3% of our apparel in the United States, down from 90% in 1955.

The prices of these imports are so low that we have long since abandoned our sewing machines and deserted our dressmakers.

Our clothes have also become increasingly casual and simplified, another reason for lower price tags.

Slide 26



As clothes have become cheaper, our clothing consumption has gone through the roof. In 1930, the average American woman owned an average of nine outfits.

Today, we each buy more than 60 pieces of new clothing on average per year. Our closets are larger and more stuffed than ever, as we've traded quality and style for low prices and trend-chasing.

In the face of these irresistible deals, our total spending on clothing has actually increased, from \$7.82 billion spent on apparel in 1950 to \$375 billion today.

As a result, stores like H&M, Zara, and Wal-Mart — all discounters who sell low-quality clothing — are now the most powerful clothing brands in America.

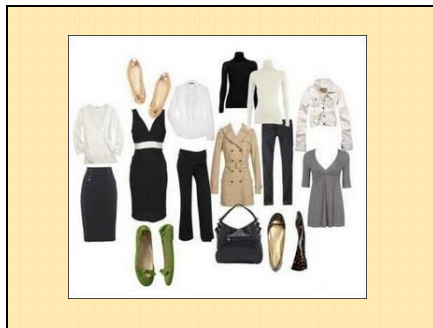
Fashion seasons are short, yet growing seasons are long. Manufacturing to specifications on the short notice that has become typical leads to careless mistakes in production as well as hindering eco-smart production scheduling, such as running similar colors on the same day.

Further, when the garments fail to sell, millions of tons of useful, high-quality materials—even organic cotton—end up getting dumped in landfills or incinerated.

*the age of cheap fashion, when low prices and rapid turnover of styles have ignited out-of-control clothing consumption*

We have become addicted to cheap clothing.

Slide 27



Maybe the greenest thing you can do for your wardrobe is buy fewer clothes. But that doesn't mean you don't get to have any fun.

Here are a few ways to green what you've got, and get green what you don't.

Focus on investing in, rather than just consuming, clothing that is durable, locally made and multi-purpose.

Concentrate on essential items that can be combined with each other and with accessories to create a variety of looks. Choose quality pieces and consider

them an investment, to be used, to be extremely functional, and to last through time and trends.

Slide 28



Uniform Project was started in 2009 by a young woman who came up with an unusual creative challenge;

to wear the same dress for an entire year—but,

and this is where the real challenge came in,

she'd have to make it look unique every single day.

She also vowed to make the challenge more meaningful by turning it into a fundraiser to send less fortunate kids to school.

Everything was built around the Little Black Dress or LBD.

The key is accessories...

Slide 29



Link to video:

<http://vimeo.com/11113046>

Slide 30



Another eco-friendly wardrobe concept is **UPCYCLING**. Upcycling means getting creative and making something new out of something that is no longer of use.

This woman made a commitment to create a whole year's worth of outfits by upcycling old dresses **AND** all of the original dresses had to cost less than one dollar. It was an ambitious project and she came up with some pretty clever solutions!

In fact, sewing is making a comeback.

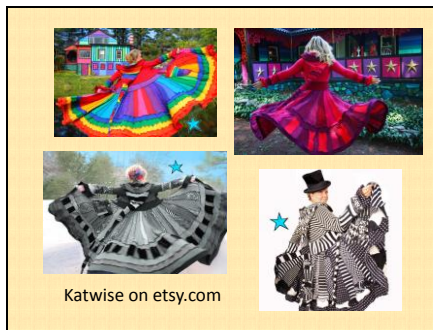
Slide 31



“Sewing Rebellion” is a group that has chapters spring up all over the country – people who are learning how to repair their clothing in an effort to reduce consumer waste. Websites with names like “Sew Chic” “Sew Liberated” and “Sew Retro” are sweeping the internet as well as a plethora of YouTube videos. Books like “The Sweater Crop Shop” are flying off the shelves.

For some...upcycling is an art unto itself.....!

Slide 32



This woman in Brooklyn, NY has been making these amazing coats from old sweaters for twenty years. She has made thousands of them and they tend to sell out as soon as she posts them online. They average about \$300 each. Each coat uses about 20 sweaters.

Slide 33



But not all clothing manufacturers are from the dark side.

Patagonia, the Californian apparel company, last month launched an initiative encouraging their customers to reduce, repair, reuse, and recycle their clothing and equipment. Their ad even features the line: "Reduce what you buy," in bold caps, much like something out of an anti-capitalism rally. As part of its Common Threads scheme, Patagonia offers to repair its clothes (for a "reasonable" fee) on a 10-day turnaround. It also will help you sell its clothes via an eBay channel or at Patagonia.com.

Common Threads Initiative commercial: <http://video.patagonia.com/video/Common-Threads-Initiative-2>

There's a reason that 'recycling' comes last in the mantra: Reduce, Repair, Reuse, Recycle.

Slide 34

Recycling is what we do when we're out of options to avoid, repair, or reuse the product first. That's why I am so impressed with Patagonia for starting its Common Threads Initiative with the real solution:  
*Reduce:* Don't buy what we don't need.  
*Repair:* Fix stuff that still has life in it.  
*Reuse:* Share.  
Then, only when you've exhausted those options, *recycle*.

– Annie Leonard, author of *The Story of Stuff*

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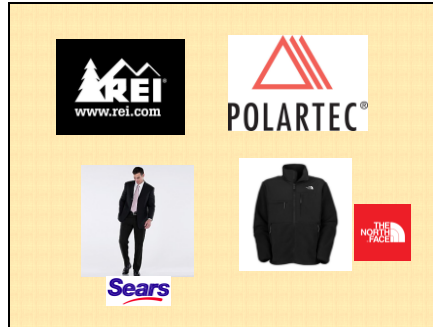
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Slide 35



Patagonia isn't the only one.

REI features a line of clothing they call **ecoSensitive** to describe their use of high percentage of recycled, renewable, and organic fibers

Polartec uses the term **Eco-engineered** to describe the blend of renewable wool with recycled polyester

Sears sells this suit made from recycled plastic bottles

And North Face sells this jacket made from recycled fleece.

Slide 36



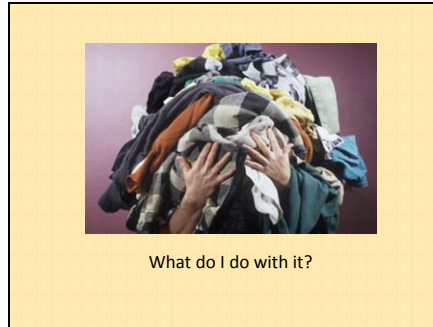
You can also use recycled cotton to insulate your home.

Yep - Home insulation is available that is made from 90 percent post-consumer recycled denim and cotton fibers.

It uses less energy to manufacture than traditional insulation, contains no fiberglass or formaldehyde, and doesn't off-gas.

The cotton industry's "From Blue to Green" campaign showed that consumers are eager to recycle when it collected more than 40,000 pairs of old jeans in 2010. These were used to make insulation that was then donated to community housing projects

Slide 37



When you simply cannot reuse or repair your clothing – what do you do with it?

Sadly, of the textiles that consumers discard, only about 15-30% are donated to thrift stores.

The rest is sent to landfills, making it the fastest growing component of waste in the household waste stream. Within the last five years, textiles disposed of in landfill sites have risen from 7% to 30%.

How long does polyester take to decompose? Unfortunately, like bad fashion, it simply will not go away.

Estimates for a more complete breakdown of polyester seem to range from 20 to 200 years, given various conditions.

So the most logical thing to do...is **DONATE IT!**

Slide 38



Consignment and second-hand stores such as Goodwill, are more than happy to take your old clothes as well as other used items.

These stores are not only a perfect place to take your old stuff, they are an awesome place to BUY stuff. Buying pre-owned clothing reduces the demand for new clothing – it reduces consumption and the associated waste and harm to the environment caused by the production of new clothing.

Mary Anspach is the manager of the

Goodwill here in Clinton and Mary is  
here to fill us in on what makes  
Goodwill great!

Then, after we hear from Mary, we will  
present a very special and fun fashion  
show featuring some of the terrific  
garments you can find at places like  
Goodwill.