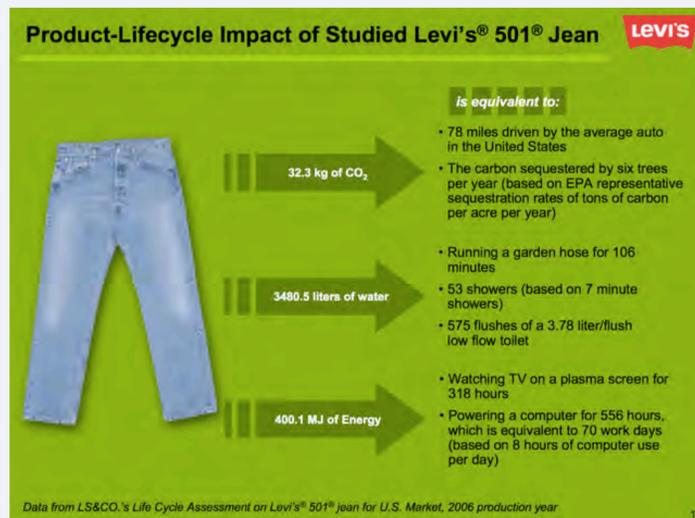


# New Sustainability Methods for Denim

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## Introduction

Denim is a prominent textile in today's society and made in many different ways. Producing denim is extremely harmful to the environment, as tons of water and dyes are used to create just one pair of jeans (Lindwall, 2019). Therefore, changes need to be made so this textile is not as harmful to the environment. Through recycling, upcycling, and reconstructing, denim can be produced and used in more sustainable ways. According to Levi's (2018), they have designed various techniques that can help recycle denim, extend its lifecycle, and decrease the amount of water used to produce one pair of jeans.



## Research Question

What are new innovative ways to make denim more sustainable through various ways, such as upcycling, recycling, and overall reconstruction for consumer use?

## Method

To explore our research question, we used a case study methodology. We explored three methods currently utilized in the industry to recycle, upcycle, and reconstruct denim products. We conducted a deductive content analysis of these three methods, analyzing both positive and negative aspects of each. From this content analysis, we then created a comprehensive list of recommendations for additional, unique ways to extend the lifecycle of denim fabric and products.

## Recycling

The [WaterLess®](#) technique was just 1 of 20 ideas introduced by Levi's, and it is considered a finishing technique for this company. In 2019, 69% of Levi's® bottoms were made using this method ("What Are Waterless Jeans?" 2018). **It uses a thimble of water and replaces the detergent with a bit of ozone while typically using fabric softener to create a soft finish. Moreover, the company uses bottle caps and golf balls for tumbling jeans, completely eliminating the use of water** ("What Are Waterless Jeans? 2018). The process may be different, but the product result is the same.

Levi's also launched a new denim recycling initiative with Cotton Incorporated's Blue Jeans Go Green program in 2019, designed for consumers to bring in unwanted denim to recycle, where the product is transformed into insulation for schools, libraries, houses, etc. (Danigelis, 2020). In return, consumers received 20% off their next purchase with Levi's (Danigelis, 2020). Through this program and others, waste is decreased by extending the lifecycle of denim. Moreover, Levi's jeans are likely to have recycled material in them from older pairs that have previously been produced (Peters, 2020).

## Upcycling

Upcycling denim is another way for environmental impact to be lowered, and it is becoming very common among different companies. This method involves taking a denim product and changing a few aspects about it to give it a more personalized look. Since the majority of denim is produced with the same ingredients, it makes the product more durable, which gives more room to upcycle the textile in different ways instead of throwing it away. This is becoming very popular, as designers are even turning to this method for their new products. Ways to upcycle denim are listed below:

- Paint/add to a denim jacket to give it a more personalized style
- Paint denim jeans to express personality
- Transition jeans into shorts or a skirt
- Add pieces of scrap fabric to make a trench coat or another type of clothing article

## Reconstructing

Total reconstruction of denim is another way to lower the environmental impacts of this textile. This method involves taking a denim product that has already been produced and completely transforming it into something new. By adopting this method, manufacturers can cut down waste by utilizing unwanted scraps of denim instead of producing new. This method has been tried and proven to be successful through personal experience and projects. By choosing to reconstruct a denim product, waste can be reduced and denim's life can be extended.

## Conclusion

After researching each method and performing tests, it is concluded that there are ways to successfully make denim more sustainable. Through recycling, upcycling, and reconstructing, the lifecycle of denim can be extended and waste can be reduced. Manufacturers and designers can adopt and use these methods in different ways. Used denim does not mean it should be trashed; instead, the scraps can be used to create something new. Environmental impact can be lowered by adopting new methodology while producing and using denim.

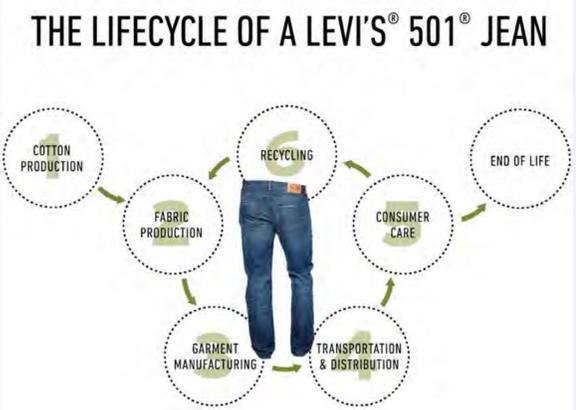


Image Courtesy of: Alexander



Image Courtesy of: Gracefully Designed, Mal's Designs 2021

## References

- Danigelis, A. (2020, May 7). *Levi Strauss & Co. Introduces denim recycling for consumers.* <https://www.environmentalleader.com/2019/04/levi-strauss-denim-recycling/>.
- Lindwall, C. (2019, August 27). *Are my denim jeans bad for the environment?* NRDC. [https://www.nrdc.org/stories/are-my-denim-jeans-bad-environment?gclid=Cj0KCQIAst2BBhDJARIsAGo2IdUNDJg3SSYdwRfOPukG9zzfwVDIEMKN-iCUEeCW6GeGPi-KbE12L0aAodWEALw\\_wcB](https://www.nrdc.org/stories/are-my-denim-jeans-bad-environment?gclid=Cj0KCQIAst2BBhDJARIsAGo2IdUNDJg3SSYdwRfOPukG9zzfwVDIEMKN-iCUEeCW6GeGPi-KbE12L0aAodWEALw_wcB).
- Peters, A. (2020, July 21). *Your new Levi's will now be part old, recycled Levi's.* <https://www.fastcompany.com/90529709/these-new-levi-are-made-in-part-from-recycled-jeans>.
- What are Waterless Jeans? – Levi's® Water.* (2018, March). [https://www.levi.com/US/en\\_US/blog/article/how-we-make-jeans-with-less-water/](https://www.levi.com/US/en_US/blog/article/how-we-make-jeans-with-less-water/).