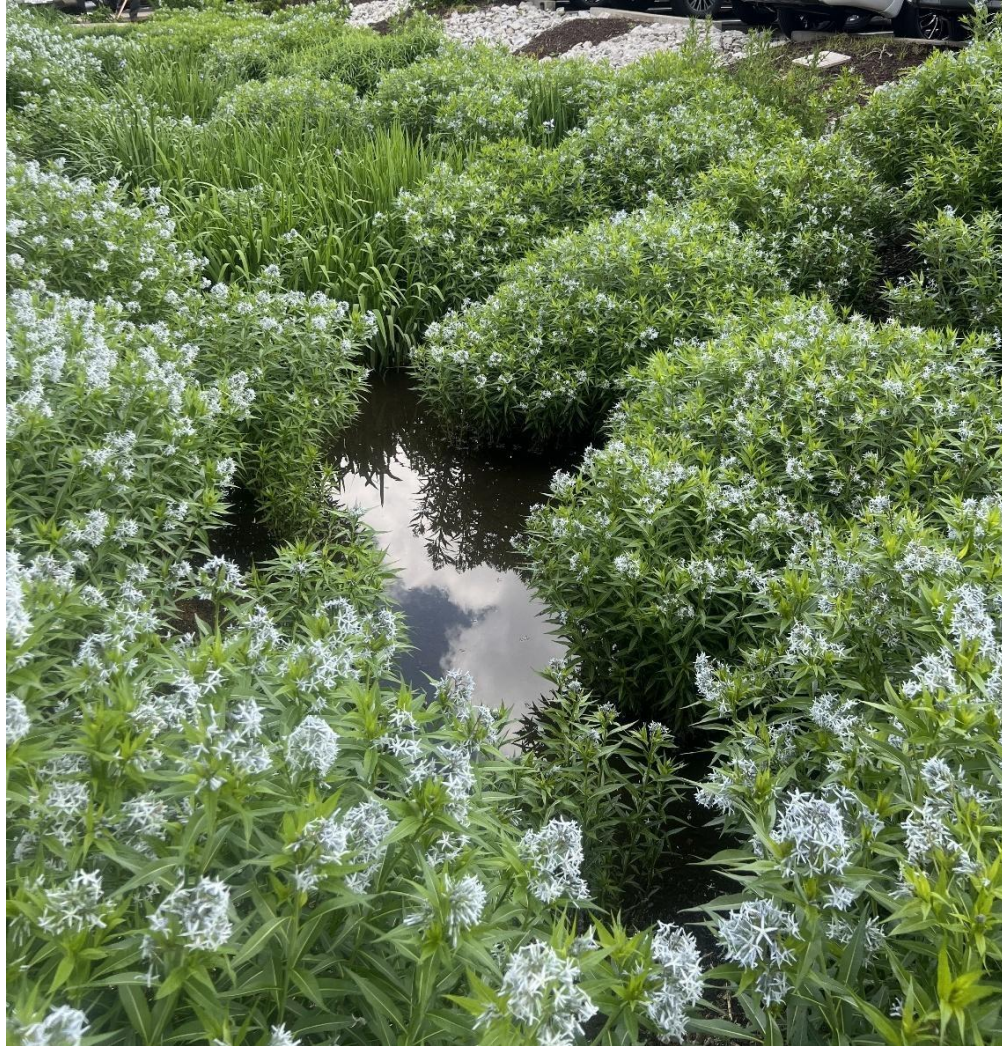


Improving Sustainability Practices at Stormwater Services LLC



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Abstract

Sustainable practices in business are constantly improving, and Stormwater Services LLC is no exception. By implementing changes to current practices and adding new ones, they will be able to align their actions more closely with the core values of the business. These improvements will be made in both the office and in the fieldwork and will require cooperation from the business owners and employees. Examples of these changes include eliminating single-use plastics in the office, improving routes taken during fieldwork, opting for more environmentally friendly products for maintenance activities, and exploring the use of company electric vehicles. Through these changes, Stormwater Services LLC will maintain goodwill with their clients, and remain committed to the company's core value of "doing the right thing."

Introduction

Stormwater Services LLC is a small company based in Saint Louis, Missouri, which provides stormwater best management practice (BMP) inspection, maintenance, consulting, and native plant stewardship services to the Saint Louis metropolitan area. While the company itself is sustainability-based, there is always room for improvement—both in the field and in the office—to continue fostering environmentally sustainable operations. Areas of improvement identified in the office setting are to decrease or remove individually packaged items, eliminate single-use plastics, and ramp up recycling practices. In the field, there are many ways that sustainability can be optimized through better route planning and by ceasing to use straw mats covered with plastic netting. The cost and ease of implementation will vary with each solution, and some will require minimal to no financial investment at all. The solutions introduced here in this proposal will provide Stormwater Services LLC with the knowledge they require to make informed decisions about what practices are most helpful to their aims and how they can continue to progress as a more sustainability-driven company.

Changes to be Made in the Office

Shifting office practices will be one of the least expensive sustainability activities Stormwater Services LLC can undertake. Today, most of the snack foods that are being made available to employees are single-packaged foods such as yogurt, granola bars, chips, popcorn, and fruit snacks. Altering even a part of these foods into bulk containers or bags would reduce the amount of plastic waste generated considerably. In a research paper

published by *The Royal Society*, it was estimated that close to 50% of plastics are used for single-use items (Hopewell et al. 2115). Another method of reducing plastic waste is by doing away with disposable plastic cups and cutlery provided in the office. Although this change would involve purchasing reusable plates, bowls, and silverware, the initial cost would be paid back by not having to use disposable ones.

In addition to reducing plastic usage, improving recycling habits for the company can help Stormwater Services LLC continue its sustainability. Recycling already exists in the office, but more adherence to recycling codes on packaging can assist in sorting correctly.

This would cut down on contamination of recyclables and further minimize the quantity of recyclable waste that goes into landfills. Another decrease in waste would



Source: <https://sustainability.wustl.edu/resources/campuswaste/single-stream/>

be achieved through the company's introduction of an in-office compost program. This could be facilitated by a local supplier such as Perennial City or New Earth Farm, or by an employee volunteering to take home compostables.

Each of the proposed office-based initiatives has its own limitations and expense. One limitation of making the shift from individually packaged snacks to shared food is the inconvenience it will present to some employees due to hygiene concerns. While bulk packaging is generally cheaper, its impact on workplace comfort needs to be weighed.

Increasing recycling compliance would cost virtually nothing but would greatly enhance sustainability procedures. Purchasing reusable dishware would cost one initial payment and would reduce plastic usage dramatically. A composting service subscription would run around \$300 per year, including weekly pickup, sanitizing of the container, and occasional compost returns for employee garden use. Though composting would introduce a regular cost, its implementation would have great environmental benefits.



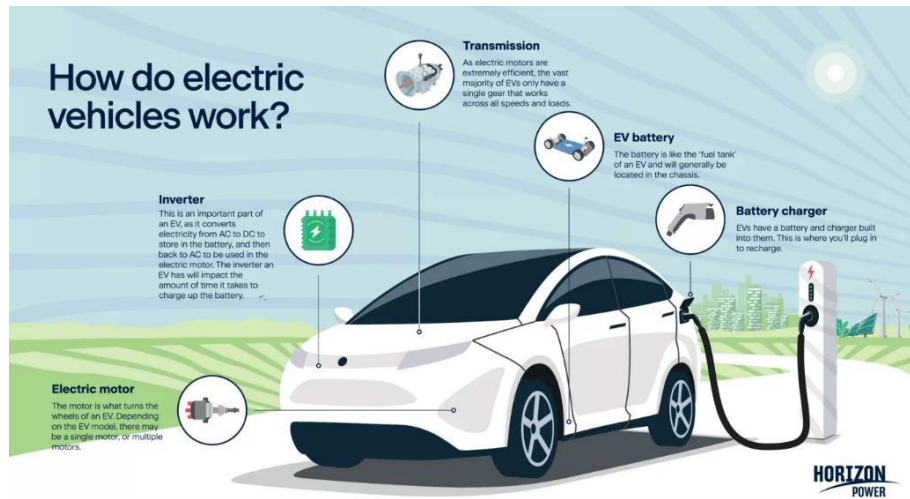
Changes to be Made to Fieldwork

Alternating Stormwater Services LLC in-field methods may be more expensive than making office-based alterations but making these adjustments would create tremendous gains in being a greener business. A few of the alterations include eliminating straw mats that contain plastic netting, organizing inspections to take more streamlined routes, buying tablets to review plans onsite, and ultimately purchasing an electric company vehicle (EV) fleet. As is the case for office-based measures, each recommended solution has some benefit, downside, and economic implications.

Stormwater Services LLC routinely performed maintenance work involving erosion repair and reseeding around stormwater BMPs. Because stormwater systems are sensitive to silt accumulation, straw mats are widely used to stabilize the soil and provide protection for grass seed to germinate. Most straw mats contain plastic netting that prevents the straw from washing away. Switching over to alternatives like hydroseeding, loose straw, or biodegradable straw mats like jute would create a significant environmental impact. Jute, which is a natural woven fiber, degrades over time and contributes organic material to the earth, which nurtures plant growth over the long term (Roberts et al. 72). Though more expensive than the standard mats, these alternatives' environmental advantages may appeal to Stormwater Services LLC's eco-conscious clients.

Given the central role of fieldwork in the company's business, sustainability here is especially important. Among the efficient steps is reducing inspection routes by clustering proximate sites, which would reduce fuel consumption, emissions, and travel time. Another helpful adjustment is to use tablets for storing and viewing site plans. This would reduce paper consumption and make it easier to access essential documents in the field. Some of the drawbacks are screen glare under direct sunlight and the need to recharge devices. While route optimization has no direct cost, there is labor and time in re-reshuffling scheduling. The purchase of tablets would require not only an up-front cost, but also replacement costs every few years.

The most extensive and costly long-term sustainability initiative would be purchasing an entire fleet of electric vehicles to do fieldwork. Aside from



Source: <https://www.wtsenergy.com/glossary/electric-vehicles/>

the upfront cost of purchasing EVs, the business will need to include costs such as insurance, maintenance, licensing fees for the plates, installing a charging station in the office, and increased electricity bills. Despite all these costs, EVs are worth exploring since their prices are approaching parity with traditional gasoline-powered cars and have long-term environmental as well as operational advantages (“Ending the Ice Age” 46).

Conclusion

As brought forth in this proposal, there are numerous choices Stormwater Services LLC can make in an effort to be a more sustainably focused company. These choices can be implemented in the office and in the field, which range in cost and complexity. Beginning with low- or no-cost solutions such as removing individually packaged foods, optimizing field route planning, or having a composting program can make becoming more sustainably focused less intimidating. As the business continues to grow and becomes used to having sustainable operations, it will be in a position to invest in costlier programs such as electric vehicles for field use. Whatever decisions are made, continuous

commitment and collaboration will be needed in order to make these programs effective.

To be more sustainable is not just a possibility for Stormwater Services LLC but a pride to be actively striving towards.

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