Strategies to Improve Recycling in Natural Areas: Examples from Zion National Park

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Landfill vs. Recycling Center

Have you ever visited a national park, or any large organization, and watched numerous people place what you feel to be obvious recyclable commodities in a trash can, when you see a recycling bin nearby?

The next life of a product, either a landfill or recycling center, is largely dependent on which bin products are placed in. As important as this may be, many people throw recyclable commodities in the trash, wasting valuable resources. Because it is difficult to encourage sustainable behavior, this fact sheet outlines tips to increase the ease and accuracy of recycling in high traffic areas, using Zion National Park as a case study.

Recycling in Zion National Park

Zion receives nearly three million visitors annually. Visitors from around the world view and protect Zion’s dramatic landscape by using the services provided by the National Park Service. There are two large campgrounds within the park and both of them have recycling bins throughout. A shuttle system, operating on propane, brings visitors up the Zion Canyon Scenic Drive, where cars are prohibited from entering eight months out of the year. There are recycling bins at the majority of shuttle stops, where the main commodity received is plastic from single-use water bottles. In 2008, Zion banned the sale of single-use bottled water inside the main canyon. Regardless of the ban, more than half the bulk of recycled goods is plastic, and of that plastic, 61% is from single-use plastic water bottles.

Zion has a goal of reaching 50% landfill diversion by the year 2015. Currently, the diversion rate is 35.4%. Maintaining a monitored stream of recycling helps to preserve areas like Zion for the enjoyment of future generations. Data is collected quarterly on landfill diversion and the Environmental Management Team has made an effort to increase recycling in the park. There are several strategies that are being implemented to increase diversion that will be outlined in this fact sheet; namely consistency, signage, and location.

Consistency

Variation in bin color, shape, terminology, and symbols within any large organization will lead to confusion with recycling. Zion has a large variety of recycling bins available to visitors. However, variety in bin design and signage leads to confusion. Consistency throughout the park would help to increase landfill diversion rates as people will become more familiar with the park’s recycling program via consistent branding and design.
Effective recycling container consistency includes bins, labels, locations, and lids. Consistent bins allow visitors to easily distinguish between recycling and trash. When a standard is established, it will be easier to locate and use the recycling facilities properly. Consistent labels clarify what commodities are taken in each container and assist with landfill diversion. New labels have been purchased by the park, identifying the type of commodity, an icon of the commodity, and textual translations of the commodity for the large number of foreign visitors the park receives.

To enhance the park’s recycling program, bins should be consistently placed next to trash cans and in convenient locations for visitors, such as popular trailheads. Ideally, recycling bins should be directly beside all trash cans, so when people dispose of any kind of waste in the park they have the option to recycle.

Using consistent lids that promote the proper use of the bins will aid in the reduction of contamination as visitors respond more rapidly to visual cues as opposed to textual cues. For instance, if the opening on a lid is slotted, then it is more obvious to the visitor that only mixed paper is taken at the location. Lids that are consistently labeled and colored will make it clear what should be placed in a container. This, accompanied by a corresponding hole for the commodity, will be effective in deterring contamination.

Consistency in the major aspects of a recycling program is beneficial in diverting waste from landfills. It may be difficult, however, to implement a consistent program immediately, particularly with a system already in place. This makes it especially important to establish measurable objectives and an overall program goal.

**Signage**

When trying to divert landfill waste in highly visited areas, it is critical to establish both consistent and effective signage. This helps visitors identify where to recycle as well as what can be recycled. Large signs that clearly identify the commodities accepted at a location are recommended. When visitors are left to decipher on their own, they may be confused, impatient, and improperly use the area.

Because Zion hosts many international visitors, it is especially important to include translations to ensure the proper use of the recycling program. This is why the park currently purchased labels translating the types of commodities accepted. In addition to textual translations, recognizable and consistent recycling symbols are to be mounted on the front and sides of the bins. This will aid visitors in recognizing the recycling containers from a distance. Making the signs clear as well as visible at a distance will ensure the effective communication of recycling practices and overall environmental ethic in the park. This is the main goal of having effective and consistent signage associated with recycling: to effectively communicate to the visitor what they are able to recycle and where. It is the park’s responsibility to make the recycling program intuitive to ensure proper use from visitors.

**Location**

The location of bins is an important consideration when establishing a more effective recycling program. Consideration should be given to both the location in proximity to the waste bins as well to the visitor. It must be clear where visitors can find recycling bins as well as what kind of commodities can be disposed of.
Grouping the bins in a central location that is clearly labeled is also important. Park employees have observed that visitors will improperly dispose of trash and recyclables if receptacles are not within the immediate area, or if only a trash can or only a recycling bin is present. Dumpsters that are twenty feet or more away from a recycling area are seldom used properly as it is a perceived inconvenience to the visitor. For the cleanest recycling stream and the highest diversion, a trash receptacle should always be placed with recycling bins and vice versa.

To cater to all visitors, it is the most effective solid waste management strategy to place recycling receptacles in locations where they will be seen before the trash bins. For instance, a plastic recycling container was located immediately after the trash when taking the shuttle to the Zion Canyon Visitor Center. Upon realizing the proportion of recyclable commodities that this trash can was receiving, the problem was instantly resolved by simply moving the recycling container to the opposite side of the trash can. Now when visitors exit the shuttle, the first thing they see is the plastic recycling container. Since its relocation, both the trash can and recycling bin have decreased in contamination levels.

**Observations**

When working to further increase landfill diversion in any high traffic setting, it is important to review what has been done previously and learn from it. Using observations of both the current bins as well as visitor behavior will aid in furthering any recycling program. By watching visitors interact with recycling bins, potential barriers can be identified. For instance, Zion National Park has an aluminum recycling container that crushes cans and feeds them into a slot. These an effective means of recycling aluminum but can offer some confusion to the average park visitor. By identifying this perceived barrier, a solution, such as a more clear set of instructions and a large recycling symbol, may be effective in furthering the program.

When working to enhance recycling in a high use area, it is important to remember that the visitor dictates what is or is not recycled. Evaluating the visitor and ensuring a consistent yet simplistic recycling program will aid in furthering any high volume visitor based recycling program.

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**Quick Tips for Improving Large Scale Recycling Programs**

- Consistency is key. Ensure all bins are labeled and located in a consistent manner.
- Labels that clearly identify what types of commodities are accepted will ensure a reduction in contamination.
- Evaluate the location of the receptacles in relation to not only the visitor but also existing waste receptacles.
- Maintain or implement a monitored stream of recycling. This will allow tracking of recyclable commodities as well as landfill diversion.
- Observe visitor patterns. Catering the recycling program to these patterns will also ensure a greater landfill diversion rate.

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**Interested in more information about sustainability and National Parks?** Visit the National Park Service’s Sustainable Operations and Climate Change initiative at: [http://www.nps.gov/sustainability/index.html](http://www.nps.gov/sustainability/index.html)

This project was a collaborative effort between Zion National Park Service’s Green Team and Utah State University Extension Sustainability.

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