National Park Service
U.S. Department of the Interior

EPN
Environmental Purchasing in NPS

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IN THIS ISSUE

EPN: Environmental Purchasing in NPS

The Environmental Purchasing Newsletter (EPN) aims to keep NPS park staff up to date on the latest environmental purchasing strategies in the parks as well as the latest in industry news and trends. Because environmental purchasing is inextricably linked with solid waste, this newsletter also explores solid waste management topics and strategies.

The EPN August 2021 Edition includes an overview of the Great American Outdoors Act and its associated impact on funding; insight into sustainable strategies for road projects, including best practices; an explanation of how switching to compostable products may increase exposure to chemicals; a lookback at Grand Teton's 2019 Zero Waste Challenge; advice on how to avoid greenwashing; guidance on reducing supply chain emissions; a primer on how parks can accelerate the transition to low emissions vehicles; a summary of recent waste and recycling legislation; and a helpful guide to using calculators that estimate environmental benefits related to waste reduction, including source reduction, reuse, and recycling.

The Great American Outdoors Act and Solid Waste Management & Environmental Purchasing

The Great American Outdoors Act of 2020 (GAOA) is a dual-purpose Act that both established a new National Parks and Public Lands Legacy Restoration Fund (LRF) and guaranteed permanent full funding for the existing Land and Water Conservation Fund (LWCF). Through the LRF, the federal government will provide up to $1.9 billion in funding each year for the next five years to address priority deferred maintenance projects within the National Park Service and other federal lands.

Applications for LRF funding of deferred maintenance projects cover a wide range of projects, from trail, road, and campground maintenance to the installation of renewable energy generators in remote areas. However, each application should also specify how the project will enhance the sustainability and accessibility of the park. This requirement for incorporating improvements in sustainability opens the door for projects related to solid waste management (SWM), for which systems can be fixed, modernized, and replaced while prioritizing efficiency and longevity.

GAOA provides a special opportunity for parks to address both long-term SWM issues and upcoming SWM concerns. Although the funding comes from the LRF, parks have the ability to design projects that best fit their needs, and in that way can exercise vast purchasing power to support more sustainable and environmentally friendly solutions to their challenges.

Parks interested in applying for the next round of LRF funding during the next annual President's budget review can consider including SWM and environmental purchasing (EP) in their projects where feasible, and also best practices for the successful implementation of EP strategies. When designing your park's LRF application, consider how to incorporate SWM and EP into your project, and how that funding could support the park and local sustainability and industry.

Environmental Strategies for Road and Pavement Projects

An important development in the construction industry is the rise of the Sustainable Pavement Concept. Each year, parks generate tens of thousands of tons of asphalt material (the majority of which is recycled or reused). As parks engage in construction and road re-pavement projects, park staff should be aware of best practices in sustainable pavement.

Sustainable pavement is pavement that achieves its specific engineering goals, while, on a broader scale (1) meeting basic human needs, (2) using resources effectively, and (3) preserving and/or restoring surrounding ecosystems.

More specifically, Pavement Preservation (PP) and Full Depth Reclamation (FDR) are two best practices to be considered in NPS projects. Some benefits of these strategies include lower environmental impact, improved pavement condition, and cost effectiveness. A 10-year NPS Network Evaluation from 2008 to 2018 spent $240 million on PP across 50% of the NPS network and improved the pavement rating (i.e., the measure of the pavement's general condition) by 10 points. While PP is not a silver bullet solution, it has tremendous benefits if applied appropriately.

What Can Parks Do?

Build it right the first time. Build roads with performance requirements such as performance related specifications, increased pavement density requirement, and advanced construction technologies. This will improve the pavement's durability and longevity, which are important sustainability principles.

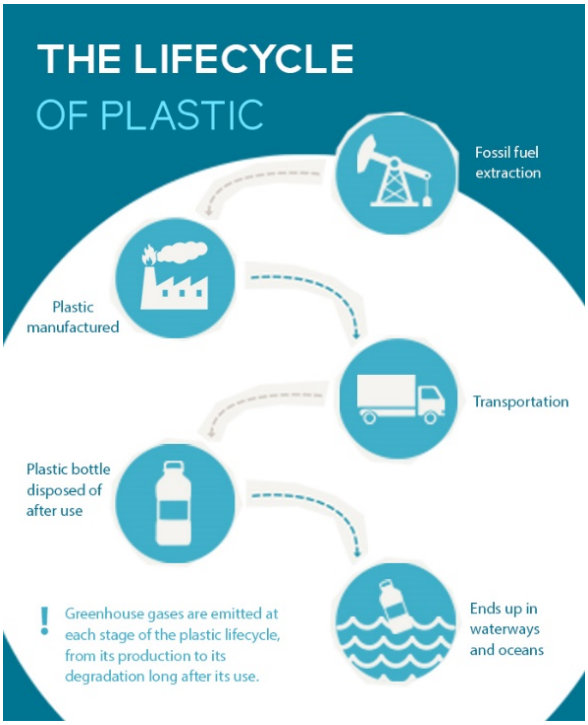
Use recycled and/or biobased material. Consider the use of recycled materials like recycled asphalt pavement (RAP) for which less than 1% of the material is sent to landfill. Also, parks should consider biobased pavement options when building roads to reduce costs and increase the sustainability of the pavement. USDA maintains a list of biobased products, including paving and concrete products, for which agencies and their contractors have purchasing requirements. Products with mandatory federal purchasing requirements are marked with "FP."

Use porous pavement. National parks are located in regions with the most beautiful landscapes, however, as climate change makes extreme weather events more common, the infrastructure of each park will have to adapt to the new normal. Porous or permeable pavement is an alternative to traditional pavement that reduces runoff by allowing water from rain, snow, and floods to infiltrate it. Porous pavement is as effective as traditional pavement and has a similar life cycle, but has the added bonuses of filtering out pollutants from surface water, reducing the cost of conventional drainage, and using recycled materials in its construction. Yellowstone National Park has already begun installing porous pavement in sensitive resource areas using recycled glass and recycled tires from the Yellowstone NP fleet vehicles to form the surface of the pavement.

For more on information, check out the NPS webinar: Environmental Purchasing Strategies for NPS Road and Pavement Projects.

Plastic Pollution: The 450-year lifespan of a plastic water bottle

A NOAA study found that plastic water bottles take more than 450 years to degrade.



Lifecycle of plastic. Photo credit: The Water Cooler Company

With such poor biodegradability, ramping up recycling efforts seems like the obvious answer to addressing plastic pollution. Recycling alone, however, cannot stop plastic pollution. On average, only 9% of plastic in the United States is recycled. Recyclability depends on the type of plastic. Rigid #1 Polyethylene Terephthalate (PET) and #2 High Density Poly Ethylene (HDPE) plastics used to make drink bottles are recycled around 30% of the time, while the soft Low Density Polyethylene (LDPE) used to make plastic bags is rarely recycled. The high costs of recycling and relatively low cost of new plastic production means that most of the plastic in the U.S. is produced without recycled content.

Plastic production is intrinsically tied to fossil fuel production. Many production plants use ethane, a by-product of natural gas fracking, as a feedstock to synthesize plastic compounds. The rise of ethane as a cheap and abundant feedstock has caused an explosion in domestic plastic production. Further compounding the problem, many petrochemical companies are converting their operations to

produce plastic as the market for petroleum-based transportation fuels shrinks. The International Energy Administration predicted that demand for plastics will drive over half of the growth in the petroleum sector by 2050.

Federal lawmakers are taking notice of the plastic problem. The Biden administration signaled its support of plastic pollution reduction, notably by directing the Department of Energy to invest $14.5 million in research to increase the recyclability of plastic. Several bills have also been introduced to Congress in 2021 that would address plastic pollution. The Break Free from Plastic Pollution Act proposes phasing out single use plastics beginning in 2022, while the RECOVER Act would give grants to states and municipalities to enhance their recycling programs. Although neither bill has passed through Congress, they signify increasing interest from lawmakers in tackling plastic pollution.

What Can Parks Do?

Parks can lead in addressing plastic pollution by leveraging their purchasing power to select plastic-free alternatives and avoid single-use plastics. Denali National Park & Preserve, for example, switched to buying water in aluminum cans, which are recycled at much higher rates than plastic bottles. Denali also cut down on plastic waste by offering fountain drinks in compostable cups, instead of pre-bottled soda. In addition to implementing an aggressive recycling program, Yellowstone National Park has committed to reducing single use plastics by phasing out the purchase of plastic water bottles and plastic straws. Yellowstone NP has been a leader in sourcing recycled plastic for infrastructure projects, such as using recycled plastic planking to replace old wooden boardwalks.

Engaging visitors is another effective strategy to reduce plastic pollution and use in the park system. Leave No Trace and Pack it In, Pack It Out principles, which are often taught to backcountry visitors, and can also be taught to front-country visitors. Grand Teton National Park educates visitors on Leave No Trace ethics in its 10 tips for park visitors' newsletter, which builds on NPS' Seven Principles.

Grand Teton NP also directs visitors to its Sustainability page, which contains information on recycling practices and advises visitors to pack refillable water bottles. Educational campaigns like Don't Feed the Landfills, which have been implemented in Grand Teton, Denali, and Yosemite, further reinforce the importance of proper waste disposal.

George Washington Memorial Parkway has gone one step further and designated itself a Trash Free Park. Visitors are encouraged to plan ahead to carry in and carry out all waste. Implemented in 2013, the program has cultivated a culture of respect and responsibility amongst visitors and alleviated the burden of waste management for the park. Overall, improving visitor education around sustainable waste disposal can be a successful tool for reducing plastic pollution within park boundaries.

PFAS and Compostable Food Packaging

As parks switch from buying single-use plastic products to compostable alternatives, they may be trading plastic pollution for exposure to per- and polyfluoroalkyl substances, or PFAS. PFAS are chemicals used for a variety of industrial applications, including food packaging, firefighting foam, oil recovery, and nonstick cookware. Often called "forever chemicals," PFAS resist environmental degradation. Their environmental persistence allows them to bioaccumulate in ecosystems. In fact, 97% of Americans have PFAS circulating in their bloodstream. Although exposure to older formulations of PFAS is dropping as they are phased out of consumer products, exposure to new formulations is on the rise.

The push to replace single-use plastics with compostable food packaging may be increasing everyday exposure to PFAS. Used to prevent paper from becoming greasy, PFAS are found in many compostable products, including molded fiber bowls and paper liners. The widespread use of PFAS in biodegradable packaging has worried commercial composters. A Purdue University study found that

facilities that accepted food packaging had 10 times the amount of PFAS in their compost as packaging-free facilities. Fearing permanent contamination, some composters will no longer accept PFAS-lined products.

Landfill operators are also concerned about how to manage PFAS waste. For proper disposal, products with PFAS need to be addressed separately from the broader waste stream. Removing PFAS, however, is often technologically impossible for landfills. As a result, many landfills have PFAS widespread PFAS contamination. In response to the challenges faced by the landfill operators, some scientists and industry leaders have pushed for incineration of PFAS waste. Incineration's potential to release PFAS pollutants to the air, however, makes it a highly controversial environmental justice issue. Several states have already passed bans on incineration of PFAS waste.

With public concern about PFAS mounting, the packaging industry and lawmakers have begun to act. As of 2020, the Biodegradable Products Institute no longer certifies products that contain PFAS as compostable. The FDA also announced in 2020 that it negotiated an agreement with manufacturers to voluntarily phase out one type of PFAS from food packaging. In July, the House of Representatives passed the PFAS Action Act, which proposed a ban on all PFAS use in food packaging.

Until PFAS are phased out of food packaging, parks should pay close attention to compostable packaging sourcing and aim to purchase PFAS-free products. The Clean Production Action group maintains a list of PFAS-free food service products that can help guide purchasing decisions.

Grand Teton's 2019 Zero Waste Challenge

The Zero Waste Challenge took place at Grand Teton National Park from August 12 to 26, 2019. The challenge was conceptualized as a way to engage park staff and associated members of the park community in sustainability efforts and encourage individuals to think critically about the daily impact they have on the environment.

For the challenge, participants were asked to collect all of their trash produced in a two-week period. Trash was defined as anything not compostable, recyclable, or reusable. A zero waste resource guide and a visual composting guide were created and made available online through Google documents, as well as posted in work areas and break rooms. Information was communicated through various channels, including park-wide emails, individual emails, the employee newsletter, individual correspondence (texts, emails), and word of mouth. Eco-Ambassadors were selected for each division to help disseminate information and build excitement and camaraderie prior to and during the challenge. The challenge had 75 participants, representing 48 households.

One exciting element of the challenge was partnering with the Signal Mountain Lodge, one of the park concessioners that composts through the Zero Landfill initiative (ZLI), to provide composting services for the park during the challenge. Composting bags were provided to participants and compost was collected twice during the challenge, once each week. Trash was collected, weighed, and documented throughout the last day of the challenge. Recycling quantities were not included, but all participants stated they recycle.

The park's social science intern surveyed participants as they dropped off their trash and compost, which provided insightful data, including best practices, overall response to the challenge, and general enthusiastic support of the composting

program. Additional social science data were collected in a post-challenge survey with a response rate of over 50%. Based on initial analysis, it is clear that this data will provide critical insight into how to best approach future composting and sustainability programming. In the post-challenge survey, 60% of respondents identified composting as the easiest and most exciting solution to diverting waste. Overall, responses to the challenge and composting program were positive, with numerous requests to continue the program into the future.

The composting program was overwhelmingly positive and has the capacity to increase Grand Teton's overall waste diversion rates. A composting program could also save the park money by decreasing the amount the park pays in tipping fees for the landfill-bound waste. During the two-week challenge, participants produced 117 pounds of trash and 424 pounds of compostable material, diverting 78% of waste generated from the landfill. Additionally, this initiative bolstered employees' morale about their capacity to have a positive effect on the environment.

In the end, the challenge proved to be a successful education and outreach project, engaging park employees with sustainable practices, resources, and lifestyles. The momentum and excitement surrounding composting has spurred the Subaru ZLI team to pursue a summer composting pilot for Grand Teton NPS Employees in 2021.

Photo of the trash drop at Grand Teton's Zero Waste Challenge. Photo credit: NPS

Greenwashing: How to Avoid Misleading Claims When Making Purchases

Greenwashing is the act of making false or misleading claims about the environmental benefits of a product or service. At national parks, federal purchases have the responsibility to drive the market towards environmentally conscious materials and sourcing. This means avoiding greenwashing at all costs. In fact, starting under Executive Order 12674, greenwashing was explicitly not permitted and federal employees were mandated to disclose fraud and misrepresentation of information.

NPS recently hosted a webinar describing how to navigate the changing landscape of greenwashing and its implication on the parks. Two speakers shared their expertise on greenwashing in their respective parks.

- Kent Bullard of Channel Islands National Park discussed the intersection of greenwashing and transportation fuels in national parks. This presentation includes best practices for maximizing carbon reduction when specifying renewable fuels in contracts.
- Laura Castellini of Golden Gate National Recreation Area discussed the implication of greenwashing on the exponentially growing global plastic industry.

The easiest way to avoid greenwashing is to know how to spot it. Keep an eye out for the following red flags of greenwashing:

- hidden trade-offs,
- no proof,
- vagueness,
- irrelevance,
- lesser of two evils,
- fibbing, and
- worshipping false labels.

For example, greenwashing is common in transportation fuel purchasing but can be avoided easily if you ask the right questions. When it comes to transportation fuels, request a Materials Safety Data Sheet (MSDS) and use RD95/B5 as the best option for carbon reduction. This way, the fuel will be composed of 95% renewable diesel and 5% biodiesel. Remember, imported renewable fuel is not necessarily more sustainable because there are domestic renewable options available.

See the NPS 2016 Green Parks Plan for additional information and guidance. An updated version of this plan is currently being drafted.

How to Avoid Greenwashing in EP

The best way to avoid greenwashing is to be an informed purchaser and know how to recognize it in the market. If you come across information that might be greenwashing, ask yourself, how does one substantiate this claim? Be sure to make purchasing decisions based on verifiable information.

Also check out the EPA's Sustainable Marketplace and the Federal Trade Commission's Green Guides to improve sustainability practices.

When it comes to greenwashing in the plastics industry, the recommended action is to reduce the purchase of virgin plastics and consider how the material was made before purchasing. In the last 50 years, the amount of plastic produced every year has seen exponential growth, with up to 40 million tons generated each year now. Moreover, less than 9% of this plastic is recycled.

Further compounding the problem, the recycling symbol on plastic products does not mean the product is actually recyclable in practice. The recycling symbol is currently unregulated, meaning there are no mandated recyclability requirements that need to be met before including the symbol on packaging. As a result, many manufacturers add the symbol to their packaging to appear more sustainable, even if the product cannot be recycled. To stop these misleading claims, California recently introduced a bill that would prohibit the use of the recycling symbol on unrecyclable materials. If passed, it could catalyze national reform in recycling labeling as manufacturers change their packaging to meet California's standards.

What Can Parks Do?

Even as legislation develops, parks can act now to avoid greenwashing in plastic purchasing.

There are also a variety of federal programs and resources focused on green products that provide for more information regarding international recycling requirements and biobased product recommendations, including:

- GSA's Sustainable Facilities Tool
- EPA's Sustainable Marketplace
- EPA's WaterSense Program
- EPA's ENERGY STAR Program
- DOE's FEMP Program
- USDA's BioPreferred Program

Upstream Supply Chain Emissions

The boundary for emissions from each national park does not stop at the edge of the trail map. When considering how to lower emissions, parks must also consider the upstream emissions from the supply chains that support the park.

These emissions and impacts are even greater for parks in remote areas where almost all of the materials used to support the park are shipped in from a great distance. When materials are shipped to the park, the emissions from the shipping and packaging processes are added to the emissions from the production and use phases, leading to greater emissions overall. Once the materials have

been used, additional emissions result from processing the waste and recycling, with some recycling being shipped abroad.

What Can Parks Do?

With all these additional emissions sources, how can a park keep its supply chain emissions down? When determining what to purchase and how to dispose of waste and recycling, ask yourself the following questions:

- How will these materials get to the park?
- What are the upstream environmental impacts of our purchasing decisions?
- Is this material available in bulk?
- Are there any purchases I could group together to reduce the number of shipments required?
- Are there any ways to eliminate or lessen the need for this material? For example:
  - Instead of shipping fuel to remote locations, could we install a renewable energy generator like solar or wind to meet our energy needs?
  - Can we prioritize the sale of reusable water bottles to reduce the need for shipped disposable bottles and reduce overall waste?
- Where will the waste from our park be processed, and how can we reduce emissions from the movement or processing of that waste? Examples include:
  - Is there a landfill with methane capture that we could use instead of a less sustainable one?
  - Can any of our waste be composted locally instead of discarded?
  - Are these goods recyclable in the local market? Where will they be sent in order to be recycled?
- Are we using our park's purchasing power to support suppliers who meet our standards for environmental health?

There is a lot to consider when choosing how to supply materials for your park, but with a bit more planning per purchase there is the opportunity for significant reductions in emissions.

Biodiesel and Electric for On-Road and Off-Road Vehicles and Equipment

From hydrogen and biodiesel to compressed natural gas and electric, there are a wide variety of alternative fuel vehicles that produce fewer emissions. Transportation alone is responsible for 30% of the National Park Service's annual GHG emissions. NPS can improve the sustainability of its fleet by switching to alternative fuel vehicles like biodiesel and electric.

Electrification of vehicles and equipment is essential to accelerating the transition to net-zero emissions. Electric vehicles (EVs) have no tailpipe emissions. Any greenhouse gases (GHGs) associated with their use occur during vehicle manufacturing and electricity generation. Many models of electric vehicles exist, including light duty passenger vehicles and heavy-duty vehicles like trucks and buses. Electric versions of small equipment are also on the rise. Battery-operated lawn mowers, for example, are becoming increasingly popular.

In addition to reducing GHG emissions, electrified vehicles and equipment reduce noise and local air pollution. Although electrified vehicles and equipment generally have a higher purchase cost than conventional options, their lifetime cost is less than conventional gas-powered options. In fact, a recent analysis by Atlas Public Policy group found that electrifying 97% of the federal fleet by 2030 could save more than $1 billion in ownership costs and reduce emissions by 7.6 million tons of CO_2. Electrification would save the Department of the Interior alone nearly $50 million by 2030. Electricity is a cheaper fuel source than gasoline. Electric engines also have fewer parts than combustion engines, lowering their maintenance costs. Both

factors produce large lifetime operational cost savings for EV owners.

Although battery technology has improved significantly over the past few decades, electric vehicles typically have shorter driving ranges than gas powered vehicles. To supplement the shorter range, fleet electrification requires substantial investment in charging infrastructure. Level 2 and Level 3 chargers are especially needed to ensure efficient charging. The National Park Service has already installed more than 140 chargers in parks and nearby communities, which can be used to charge park and visitor vehicles. A joint partnership between BMW, NPS, the Department of Energy, and National Park Foundation will add charging stations to even more parks, including Death Valley, Everglades, Grand Canyon, and Mount Rainier.

Many parks have already incorporated electric vehicles into their fleets. Yellowstone and Grand Teton worked with Yellowstone-Teton Clean Energy Coalition to obtain a grant that funded chargers for park lodges and villages and for the federal fleet. This grant also funded two Chevy Volts for Grand Teton and a Chevrolet Volt and a Ford C-Max for Yellowstone. Even very remote parks are seeing success with EVs. Denali, for example, installed an electric vehicle charging station and added hybrid and electric cars to its fleet.

For parks across the country, shuttle buses are emerging as a key area of electrification. Yellowstone purchased an electric autonomous shuttle in 2021 to transport visitors between campgrounds and villages. Nicknamed TEDDY, the shuttle is designed to reduce congestion and pollution. Zion also announced earlier this year that they will be replacing their entire bus fleet with electric buses, as well as installing 27 public chargers. Park officials hope that the EV Zion project will reduce noise and air pollution. Glacier and Yosemite have relied on plug-in hybrids and fully electric vehicles to improve the sustainability of their shuttle fleet.

Parks can expect sustained support for electrification from the Biden administration. The Biden administration sees electrifying the federal fleet as a high priority action. The Executive Order on Tackling the Climate Crisis at Home and Abroad directed GSA to work with car manufacturers to procure EVs for the federal fleet. The administration also announced goals to install 500,000 EV charging stations around the country and boost EV sales to 50% of the U.S. market by 2030.

EVs charging at Zion National Park. Photo credit: Alex Barajas

Biodiesel is also emerging as a popular transition fuel for diesel equipment. The long lifespan of diesel engines and generators makes them an attractive investment, but costly to replace with new low emissions technology. Fortunately, biodiesel can be used as a direct substitute for petroleum-based diesel or be mixed with it to create a semi-renewable blend.

Most diesel engines and equipment can reliably use biodiesel blends. Like electric vehicles, biodiesel offers superior environmental performance. Biodiesel is synthesized form soybean oil, helping it reduce GHG emissions by around 75% compared to conventional diesel fuel. Depending on the blend, biodiesel can also offer cost savings compared to diesel. B20, which is a blend of 20% biodiesel and 80% conventional diesel, costs less than conventional diesel, while B100 pure biodiesel commands a premium price.

Biodiesel's performance can be impaired at colder temperature. At temperatures below 30 degrees F, pure biodiesel tends to crystallize, which can clog

fuel filters and cause vehicle stalling. Mixing biodiesel with petroleum diesel improves cold weather performance but reduces the emission reduction benefits of using pure biodiesel. Parks in very cold climates may want to use blends like B20 to prevent crystallization or consider investing in other zero emissions technologies like EVs.

Several parks have transitioned to biodiesel. Great Smoky Mountains uses biodiesel to heat its headquarters and B20 to run diesel vehicles. Shenandoah National Park and Voyageurs National Park also rely on B20 to power their diesel fleets. Voyageurs even converted a tour boat to run on biodiesel.

Some parks are experimenting with novel fuel sources beyond electric and biodiesel. In 2021, Grand Teton replaced an older garbage truck with a new truck that runs on compressed natural gas. Compressed natural gas produces far fewer nitrous oxide emissions than gasoline, with the added benefit of being far cheaper on a gallon equivalent basis. Renewable natural gas, such as that produced by swine biogas, can also be mixed into compressed natural gas, further reducing the emission impact.

Overall, the future is bright for alternative fuels in the park system. Both biodiesel and electric offer unique strengths for equipment and vehicle fueling. Choosing which fuel to select depends on the desired use, ease of replacement, and available budget. Transitioning to any type of clean fuel is an important step on NPS's path to net-zero.

Recent Legislation on Materials Management & Environmental Purchasing

2021 is shaping up to be a significant year for waste management and environmental purchasing legislation. Cities and states are passing laws that address material reuse, food waste, plastic pollution, and extended producer responsibility. The federal government is also acting on recycling. The INVEST in America Act, the infrastructure bill backed by President Biden, now includes the RECYCLE Act. It could lead to federal funding for local recycling education and battery recycling.

With the bill passing in the Senate and on its way the House, new funding for recycling could be on the way.

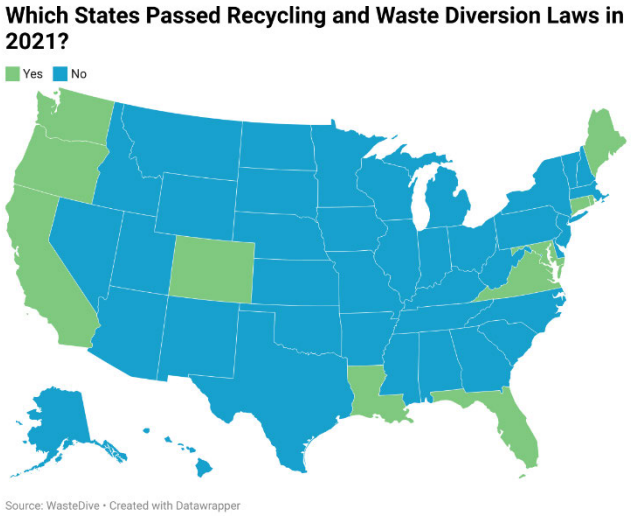
2021 saw cities and states get serious about sustainable material reuse and sourcing. Pittsburgh recently passed a law directing the city to reuse materials from deconstruction projects. Washington state also passed a minimum recycled content bill, which requires plastic items to contain a minimum of 15% recycled content beginning in 2023. Colorado enacted a total ban on single-use plastics and foam takeout containers. It follows similar legislation in Connecticut, Delaware, Maine, New York, and Oregon.

These sustainability laws will impact parks' environmental purchasing and materials management planning. Colorado's ban on single-use plastic bags and foam containers, for example, will require Colorado parks and concessioners to source alternatives. Parks in other states can get ahead of future plastics bans by converting their sourcing programs now to purchase compostable and recycled alternatives. Parks can also act now to improve their waste diversion. As construction and demolition reuse programs become more popular, parks can work with nearby cities to align their construction waste diversion programs with city building reuse and deconstruction projects.

In addition to addressing sustainable materials, states are leading the charge in addressing critical waste issues. In June, Maryland passed a food waste disposal ban. Facilities that produce more than 2 tons of food waste per week are now required to divert that waste away from landfills. Food waste can be directed to food recovery organizations or to composting facilities. Single-use plastics are also under fire. Because single use plastics are often not recycled, California is considering removing the recycling label from plastic products.

Extended Producer Responsibility (EPR) laws are also becoming increasingly popular at the state level. By making manufacturers pay for disposal, EPR laws alleviate the financial burden of waste disposal for municipalities. EPR laws target the producers who create packaging and attributes the cost of packaging disposal and recycling to them. EPR laws generally operate with two different models: the full producer model, which sets the responsibility of waste disposal on the package producer, and the municipal reimbursement model, where municipalities retain control over waste disposal and are reimbursed by producers for hard to recycle materials. Most EPR proposals use the municipal reimbursement model, as it supplements tight municipal recycling budgets. In July and August, Maine and Oregon passed the nation's first Extended Producer Responsibility laws for packaging. Other laws are under consideration in California, Hawaii, Maryland, Massachusetts, New York, and Washington.

The recycling programs at many parks will be impacted by EPR legislation. EPR laws could provide needed funding to local recycling programs in gateway communities. In the Solid Waste Management Database, several parks reported that their recycling and waste diversion efforts were impaired by weak municipal recycling programs. Money from EPR and from the passage of the RECYCLE Act could ease this challenge.



States With New Recycling Laws in 2021. Data Source: WasteDive Policy Tracker

Overall, the landscape of recycling and waste legislation has evolved rapidly over the past year. Parks should strive to stay up to date with local and state level changes that may impact their recycling and environmental purchasing efforts. Parks should also be on the lookout for the EPA's upcoming updated National Recycling Strategy.

Environmental Benefits Calculators: How They Work & How They Can Help

In the summer of 2021, the Northeast Recycling Council and the Northeast Waste Management Officials Association hosted a webinar on environmental benefits calculators. Three speakers spoke about four different calculators, highlighting their uses and benefits.

The environmental benefits calculators emphasize the importance of a comprehensive approach to waste management that includes source reduction, reuse, and recycling.

The following section describes each of the four calculators in more detail.

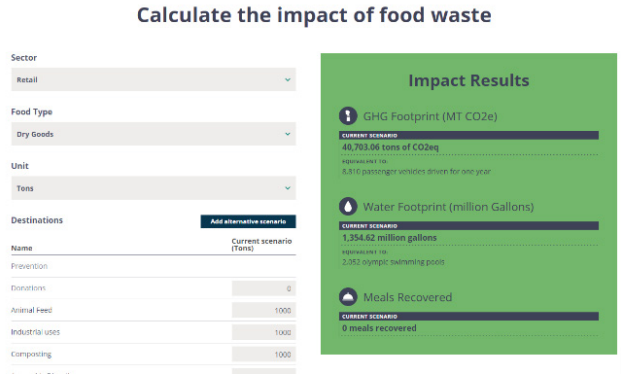
WARM – EPA's Waste Reduction Model (WARM) allows solid waste planners and organizations to calculate and track GHG emissions reductions, energy savings, and economic impacts from different waste management practices. WARM can assess a diverse range of scenarios (i.e., source reduction, recycling, anaerobic digestion, combustion, landfilling, and more) across waste streams and inform decision makers on the most effective potential solutions to implement in their environmental programs.

ReCon – EPA's Recycled Content (ReCon) tool was developed to help companies, government entities, and individuals estimate the environmental impacts from purchasing and/or manufacturing materials with varying degrees of post-consumer recycled content. The tool utilizes user input and WARM data to generate baseline and scenario emissions. Potential emissions reductions are then presented in tons of carbon dioxide saved, gallons of gasoline not consumed, and the equivalent number of cars taken off the road.

ReFed – The ReFed tool, developed by a national nonprofit dedicated to ending food loss and waste across the U.S., was designed to reduce the amount of food sent to landfills as food waste. The ReFed insights engine is a set of four web-based tools that combine datasets, case studies, industry papers, and solution provider inputs to calculate impacts and analyze solutions. The tool is intended to help users prioritize solutions and find solution providers to drive tangible change.

Electronics Environmental Benefits Calculator – The EPA's Electronics Environmental Benefits Calculator (EEBC) tool helps organizations demonstrate and communicate the impact of sustainable electronics procurement decisions. Benefits are calculated using two categories: purchasing and extending product life. The results are presented in concise and usable ways such as energy use reduction, greenhouse gas emissions, solid waste reduction, and cost.

A screenshot of the ReFed Calculator, an environmental benefits calculator used to calculate the impacts of food waste.



Park Successes in 2020

Every year, parks report solid waste management data to the Solid Waste Management Database, a website and database administered by the Department of the Interior (DOI). Data from the Solid Waste Management Database is used by the Office of Management and Budget to evaluate agency progress for the Environmental Stewardship Scorecard, and the National Park Service Green Parks Plan and Green Parks Performance Brief.

What did parks report in 2020? Many parks took steps to improve waste diversion as well as to reduce overall waste generation through environmental purchasing.

Here is a breakdown of park successes, by the numbers:

21 parks reported new or improved recycling programs

- 16 parks increased tracking accuracy
- 10 parks right-sized the number of their collection containers by adding recycling containers and/or removing trash containers
- 6 parks increased park practices to be safer/more efficient
- 4 parks conducted employee education/training
- 3 parks implemented or improved electronics/battery recycling

21 parks took steps to reduce waste & purchase green

- 15 parks improved environmental purchasing programs including bulk purchasing and purchasing only what is needed
- 3 parks installed a water bottle filler installation
- 2 parks implemented new trash free/pack in/pack out policy
- 1 park installed a restroom hand dryer

3 parks reported new or improved composting programs

- 3 parks implemented new waste composting programs

We Want Your Feedback!

Do you have a success story? Are you curious about a new topic?

Please let us know how we can make this newsletter as helpful and meaningful as possible in your efforts to implement and institutionalize green purchasing activities.

Email **Monta_Baskerville@nps.gov** to let us know how we did with this issue and any suggestions of topics or success stories you would like to see covered in the next newsletter.