

AGC CELEBRATES AMERICA RECYCLES DAY

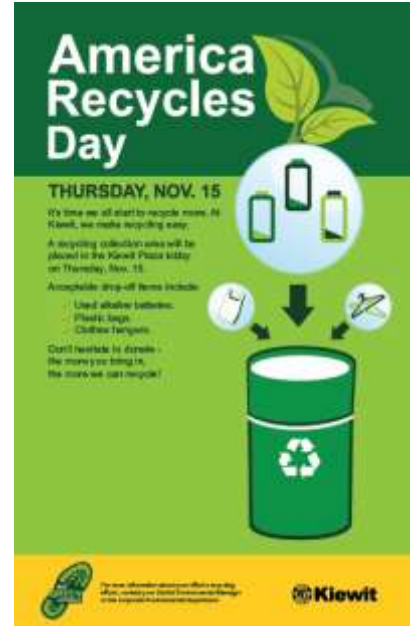
ENVIRONMENTAL FORUM LEADERS HIGHLIGHT THE ENVIRONMENTAL BENEFITS OF RECYCLING ON THE JOB.

With [America Recycles Day](#) coming up on Nov. 15, members of [AGC's Environmental Forum Steering Committee](#) stepped forward to share their achievements and observations on how construction recycling goes much farther and tackles much larger amounts of material than everyday recycling.

[America Recycles Day](#) has helped millions of Americans become better informed about the importance of recycling and using products made from recycled materials. But did you know that new technology, creative thinking, and ongoing concerns for the environment have made recycling just another day on the job at construction sites everywhere? Add your recycling efforts to what some AGC members are doing and you'll discover a whole lot of recycling going on.

More contractors are recycling on site, saving money on landfill fees, new materials, and even wear and tear on trucks taking waste to landfill sites. What is more, converting waste into raw materials through recycling creates jobs, builds more competitive manufacturing industries and adds significantly to the economy, according to the U.S. Environmental Protection Agency.

“ America Recycles Day is Thursday, Nov. 15. This national event gives us a great opportunity to recognize and improve our recycling habits that extends to our projects, our offices and to our homes. ”



Connie Determan, Chairperson, AGC's Environmental Forum Steering Committee; Vice President, Kiewit Corporation



Ames Construction Photo: Stockpiled portable concrete barrier rails from a recently completed Department of Transportation Project in Utah County, Utah.

Ames Construction, Inc.

Ames Construction—a heavy civil and industrial general contractor—recycles thousands of tons of concrete per year through its Western Region Concrete Recycle Program.

The concrete originates from the demolition of road surfaces, curbs, sidewalks, and portable barrier rails. The used concrete material is hauled away from projects within the region to a central location where it is processed into new products or recycled and put back to use nearby.

Often embedded in the concrete are miscellaneous metal components such as rebar, manhole covers and pipes. These metal components are salvaged and segregated and then eventually sent to a metal recycler. Once the metal components have been removed, the concrete is broken down into workable chunks and fed to a jaw crusher. From there the concrete is screened and mixed with rock and/or sand aggregates to produce various final products (e.g., granular borrow).



Ames Construction Photo: Metal is being separated from concrete and also being broken up into smaller workable chunks. Note the stockpile of processed concrete in the background ready for direct use or mixing with rock/sand aggregates.

APAC Missouri and Kansas City

APAC-Missouri, Inc. and APAC-Kansas, Inc. - Kansas City Division supply aggregate materials, hot mix asphalt and concrete; the firm also constructs roads and bridges.



APAC KS-MO Photo: Processing of tear-off shingles for use in asphalt mix.



APAC KS-MO Photo: Tear-off shingles pile prior to processing.

APAC KS-MO has created a shingle recycling program that benefits the company and the environment in several ways—and it is a win-win situation for everyone. Incoming roofing “tear-off” shingles are diverted from construction and demolition (C&D) landfills, reducing the amount of land-filled material. APAC KS-MO provides roofing companies a premium discount to bring in tear-off shingles that are free of contamination—such as wood sheathing, metal flashing and vents or other related trash commonly found in similar loads headed for the landfill. Participating roofers receive discounted pricing on their dump fees and contribute to an important “green construction” process.

The clean shingles are stockpiled in an area on site at APAC KS-MO’s asphalt plants. During the asphalt construction season, APAC KS-MO hires a contract material recycler to move in and grind the tear-off shingles into a fine material that can be incorporated into several asphalt mixes. The recycled and ground shingles have the potential to reduce the A/C (asphalt cement) content in the asphalt mix by as much as 8 percent; therefore, reducing the reliance on premium virgin oil in the mix. The end user of an asphalt mix that incorporates recycled shingles spends less money for a quality product.

Kiewit Corporation

Kiewit Corporation has a wide variety of industry specialties that provide unique opportunities to recycle. Kiewit jobs most frequently recycle steel, concrete, asphalt and used oil. Some projects continue to recycle long after Kiewit has left like the LEED Platinum project, Denver Zoo Asian Tropics Exhibit, where 86 percent of all material is recycled.

On Nov. 15, America Recycles Day, Kiewit will show its support of recycling by collecting batteries, metal clothes hangers and plastic grocery bags. Kiewit employees have been invited to drop these items off at a specified collection site. Separate collection buckets also are available at both the corporate and district offices for depositing used alkaline batteries.



Kiewit Corporation Photo: Work at Denver Zoo Asian Tropics Exhibit.



Kitchell Contractors Photo: Use of loading deck for recycling at Kitchell project.



Kitchell Contractors Photo: Use of loading deck for recycling at Kitchell project.

Kitchell Contractors

Kitchell Contractors is a large general contractor with many different specialties—including the construction of hospitals, schools, casinos, alternative energy projects, commercial development, custom homes, as well as many other types of projects. Kitchell's environmental commitment stems from its award-winning Construction Environmental Management Program (CEMP). All projects are held to the standards set forth in Kitchell's CEMP, and recycling, reuse and waste minimization are all mandatory elements of that program. Kitchell requires its job team to recycle a minimum of 50 percent of all (non-hazardous) construction waste on all projects. For any project seeking certification under the LEED® (Leadership in Energy and Environmental Design) green building rating system, Kitchell requires the job team to meet a 75 percent recycling rate—but the company encourages the team to strive to achieve an extra “Innovation in Design” LEED point by recycling 95 percent or more of all project waste.



Lane Construction Corporation Photo: Water is recycled at Occoquan, VA shop where the recycling equipment washing station keeps the fleet lean and clean while being green. Zero discharge is accomplished with an evaporation technique.

At its Phoenix Children's Hospital project, Kitchell built a raised loading deck with a recessed storage area for trash and recycling dumpsters. The tops of the dumpsters were at the level of the loading deck, thereby making it easy to fill them with generated waste material. Subcontractors were required to separate recyclable materials into the clearly labeled dumpsters, which were constantly monitored for cross-contamination. Contamination of one steel stud in the drywall or wood dumpster would result in the rejection of a 6-ton load at the recycler, so monitoring was critical. This project successfully recycled over 75 percent of its materials.

The Lane Construction Corporation

The Lane Construction Corporation is a heavy civil contractor and, with its affiliates, also produces hot- and warm-mix asphalt, precast concrete and mines aggregate. The firm conserves resources at many of its facilities and projects through water treatment and recycling methods. Prior to re-use, Lane treats its equipment wash water by using clarifying agents for sediment, an oil water separator for oils, and a large carbon filter for other residual pollutants. Equipment wash pads are typically designed with a stormwater bypass feature, which prevents storm and process water from comingling. This feature also eliminates the need for a roof. In addition to minimizing discharges to the environment, a water re-use system (like the ones that Lane uses) minimizes the required maintenance of the company's fleet—keeping Lane lean and clean while being green.



Lane Construction Corporation Photo: Prior to re-use, equipment wash water is treated using clarifying agents for sediment, an oil water separator for oils, and a large carbon filter for other residual pollutants.



Ranger Construction Industries Photo: Asphalt plant showing piles of RAP, a recycled wash water system (left foreground, silver tank) and a recycled oil burner fuel tank (right central area).

At concrete operations with slip form paving, Lane delivers concrete via dump trucks from an onsite plant. It is imperative to clean out the bed of the trucks in between loads. To minimize water usage and discharge, reuse is Lane's preference and pH/ acidic water is controlled through CO₂ or alkaline injection when necessary.

Lane increasingly uses recycled ingredients to manufacture construction material. Technology developments have brought improvements and expanded further use of Recycled Asphalt Pavement (RAP) in asphalt mixes. Similarly, Lane also uses Recycled Asphalt Shingles (RAS) in its asphalt mixes due to its high asphalt cement content. Furthermore, Lane uses Recycled Fuel Oil (RFO) as a reusable fuel source during the manufacturing process. All of these materials that Lane now recycles were once considered waste products that had to be disposed of in the landfills. Lane's increased use of recycled ingredients will continue to decrease the company's demand on virgin material.

Ranger Construction Industries, Inc.

Ranger Construction Industries, Inc., a heavy and highway, site and asphalt paving contractor based in West Palm Beach, FL, has multiple facilities from central to south Florida. All of Ranger's facilities are set up to recycle oil that is generated by the preventative maintenance activities performed at its shops. Depending upon the facility, Ranger recycles between 2,000 and 5,000 gallons of oil per year. Ranger also purchases on-spec recycled oil for use as a fuel at its asphalt plants. Ranger's shops also recycle their used oil filters and washer solvents (about 1,000 gallons per year) and have antifreeze recycling equipment so they can refurbish that product for reuse in their fleets.

In addition, each of Ranger's shops has a scrap metal bin for recycling of scrap metal and other metal parts that can no longer be used. Ranger's building maintenance supervisor manages all mercury containing devices and lamps; they go out for recycling as well. Some of Ranger's facilities have "cardboard only" bins where the local waste management company is providing such a service. The office and IT staff at Ranger get involved in recycling by making sure that printer and copy toner cartridges are collected for recycling.

Ranger's largest impact on recycling, though, is the use of Recycled Asphalt Pavement (RAP). Ranger's standard asphalt paving materials contain about 35 percent RAP, which helps to reduce the volume of virgin aggregate and liquid asphalt necessary to produce new paving mixtures. Ranger's seven facilities use an estimated range of between 30,000 and 110,000 tons of RAP each year. In the past, this material was taken to a landfill.



Ranger Construction Industries Photo: Close-up of the burner fuel tank. Ranger sends out used oil for re-processing and then purchases filtered and tested used oil ensuring it meets the regulatory requirements. Ranger uses that product as a fuel for drying aggregate prior to mixing with liquid asphalt to produce paving mixtures. This facility burns about 300,000-500,000 gallons of recycled oil each year.



Ranger Construction Industries Photo: Used oil collection tank and antifreeze recycling machine.

Environmental



AGC encourages more members to join its [Environmental Forum](#) and its movement to raise awareness and educate the public on the benefits of recycling. **Share your recycling success with AGC by emailing Melinda Tomaino, Director of Green Construction, at tomainom@agc.org.**