Mulch may be the not so secret ingredient when it comes to successful landscaping and plant growth.

For nearly 100 years, the benefits of mulch for various applications, such as agriculture and landscaping, have been studied and recognized. While there are numerous types of mulch — including wood chips, stones, straw, cardboard and other paper-based trash, plastic and even carpet — their impact on soil and plant growth appears beyond doubt.


Engels outlines some of the benefits:

“It drastically lessens the water needed for growing plants, cutting the quantity easily in half and often much better than that. It feeds our plants by breaking down into fertile composted materials right where it’s needed. It protects the soil life, helps to prevent erosion and stops the compacting effects of rain. In the winter, it’s warm, and in the summer, it wards off evaporation. Oh, yes, and it’s thwarting off weeds while doing all of this.”

A study by the International Society of Arboriculture compared the effects of wood chip mulch, compost, inorganic fertilizer, compost tea, a commercial biological product and ordinary water on soil quality and tree growth after five years in an urban setting designed to mimic a new development.

Robert Pavlis of Garden Myths summarized the findings: “After five years the total tree mass under wood chips was 170 percent greater than the control trees which received just water. The mass of trees receiving compost were 82 percent higher, and the ones receiving fertilizer were 69 percent higher, than controls. Both compost and fertilizer provided additional nutrients, and helped the trees grow. But neither worked as well as wood chips.”

Pavlis said the study confirmed that wood chip mulch is the best mulch for the garden.

“Over time it loosens compacted soil, adds organic matter, keeps moisture levels up and slowly adds nutrients to the soil,” he said. “Compost woks (sic) too, but it can add too many nutrients to soil. This problem is being seen by more and more organic gardeners who are experiencing very high nutrient levels, even to the point of becoming toxic. You can have too much organic matter.”

Study authors Bryant C. Scharenbroch and Gary W. Watson said “compost topdressings and wood chip mulches should be used as soil management techniques for trees growing in compacted urban soils. This research shows strong evidence that compost topdressings and wood chip mulches are effective and also cost-efficient methods for improving soil quality and stimulating tree growth in compacted urban landscape soils.”

Meantime, Engels praise of mulch echoes an earlier study on the Impact of Mulches on Landscape Plants and the Environment conducted at the Puyallup Research and Extension Center at Washington State University.

“Mulches provide aesthetic, economic and environmental benefits to urban landscapes,” reported Linda Chalker-Scott, associate professor of horticulture and extension specialist at the school. “Mulching is especially useful in the establishment of trees in landscapes that receive minimal care, such as restoration sites. In general, mulches improve soil health, creating healthy populations of plants and associated animals. These biodiverse, stable landscapes are more resistant to stress, are more aesthetically pleasing, require fewer applications of pesticides and fertilizers, and are ultimately more sustainable than those without mulch cover.”

What follows is a summary by the Center for Landscape and Urban Horticulture at the University of California Cooperative Extension of Chalker-Scott’s lengthy study.

— Improved soil moisture
Bare soil exposed to heat, wind, and compaction loses water through evaporation and is less able to absorb irrigation or rainfall. Using mulches, the soil has greater water retention, reduced evaporation, and reduced weeds. One study documented a 35 percent reduction in evaporation when a straw mulch was applied.

Continued on page 3
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There is a wide variety of permeable mulching materials. Organic mulches conserve water more effectively and do not limit soil water infiltration and retention. An appropriate mulch can reduce the need for irrigation and in some landscapes can eliminate irrigation altogether. Coarse organic mulches protect soil water reserves holding water for later release and prevent runoff. Mulch can also protect trees and shrubs from drought stress and cold injury.

<table>
<thead>
<tr>
<th>Reduced soil erosion and compaction</th>
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Mulches protect soils from wind, water, traffic-induced erosion and compaction that directly contribute to root stress and poor plant health. Even adding a thin organic mulch will protect soils. For instance, using a straw mulch, fallen pine needles or wood chips can reduce erosion and overland flow. Using bark or jute on compacted urban soils restores soil aggregation and porosity. It is better to apply mulch before compaction occurs as it is difficult to reverse. Proactive mulching will protect soil integrity.

<table>
<thead>
<tr>
<th>Maintenance of optimal soil temperatures</th>
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Mulches have shown to lower soil temperatures in summer months. Extreme temperatures can kill fine plant roots which can cause stress and root rot. Mulches protect soils from extreme temperatures, either cold or hot. Coarse mulches are more temperature moderating and allow for better water and gas transfer than thick layers of finely textured mulches.

There is an effect of mulch type on surface temperature. Some mulches heat the soil as a function of solar radiation absorption more than bare soils. Increased surface temperature due to pine bark mulch has been shown to cause nearby leaves to lose more water.

<table>
<thead>
<tr>
<th>Increased soil nutrition</th>
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Organic mulches can increase, decrease or have no effect upon nutrient levels depending on mulch type, soil chemistry and particular nutrients of interest. Mulches with relatively high nitrogen content often result in higher yields, but low nitrogen mulches, such as straw, sawdust and bark, can also increase soil fertility and plant nutrition.

<table>
<thead>
<tr>
<th>Reduction of salt and pesticide contamination</th>
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In arid landscapes, evaporating water leaves behind salt crusts. Because mulches reduce evaporation, water is left in the soil and salts are diluted. Organic mulches can actively accelerate soil desalinization and help degrade pesticides and other contaminants. Plastic mulches cannot bind ions as organic mulches can and are not effective in this regard.

<table>
<thead>
<tr>
<th>Increased binding of heavy metals</th>
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Organic mulches can be effective in removing heavy metals from landscape and garden soils.

<table>
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<tr>
<th>Improved plant establishment and growth</th>
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Mulches are used to enhance the establishment of many woody and herbaceous species. Mulches improve seed germination and seed survival, enhance root establishment, transplant survival, and increase plant performance. Overall, mulches grow healthier landscape plants requiring less maintenance. The improved water retention created by a mulch allows roots to extend and establish farther beyond the trunk compared to bare soil. Plants thus become more stabilized. Root development is greatest under organic mulches compared to plastic or bare soil. Sheet and film mulches encourage root growth on top of the mulch, injuring plants when removed. Plastic mulches can lead to increased mortality of transplanted material and cause extensive damage to fine root systems. Roots tend to grow into organic mulch layers, and it does not appear to injure the plant to have roots exploring a mulch layer.

<table>
<thead>
<tr>
<th>Reduction of disease</th>
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Mulches will reduce the splashing of rain or irrigation water, which can carry spores of disease organisms to stems and leaves of plants. Populations of beneficial microbes that reduce soil pathogens can be increased with mulches. Mulches can combat disease organisms directly as well.

Some plastic mulches can increase the incidence of disease by exacerbating already poor soil conditions, causing various types of rots.

<table>
<thead>
<tr>
<th>Reduction of weeds</th>
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Using mulches for weed control is highly effective. Mulches can reduce seed germination of many weed species and reduce light, which stresses existing weeds. Coarse materials are more effective than fine textured ones in reducing weeds.

<table>
<thead>
<tr>
<th>Reduced pesticide use</th>
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Mulches reduce weeds, plant stress, and susceptibility to pests and pathogens which translates to reduced use of herbicides, insecticides, and fungicides.

The study by Chalker-Scott also discussed real and perceived problems with mulch. Among them was acidification, which she said scientific studies had disputed. However, she noted, “it’s likely that in artificial conditions, such as nursery production, that woody materials do have an acidifying effect when they are used as part of a potting medium.”

She also said research indicated that there was no evidence that woody mulches caused a nutrient deficiency on plant materials. “To the contrary, many studies have demonstrated that woody mulch materials actually increase nutrient levels in soils and/or associated plant foliage,” she reported.

However, she noted it was not advisable to use high C:N mulches in annual beds or vegetable gardens where the plants did not have deep root systems.

Chalker-Scott also said there was no evidence that organic mulches were “pest magnets.”

“In fact, many of these wood-based mulches are not attractive to pest insects but are actually insect repellent,” she said.

Lyn Gannon, master gardener with the University of California Master Gardener Program in Sonoma County, calls mulch “a gardener’s best friend” and cites many of the benefits listed by Chalker-Scott.

“Overall, using mulch will begin an increasing cycle of growth and productivity in your garden,” Gannon says. “It will foster a vast number of plant partnerships, encouraging diversity in the soil and its environment. This, in turn, will create unique niches which support a growing web of life. In short, mulch improves soil fertility, the cornerstone of all healthy and thriving gardens.”
Supreme Court Allows Fast Tracking of Property Rights Cases

BY DUGGAN FLANAKIN

The U.S. Supreme Court ruled property owners may immediately file suit in federal court to challenge state or local government actions that restrict their property rights, without first going through the state court system. The decision in Knick v. Township of Scott focused on when a taking becomes effective: when the government passes a law or regulation restricting property use, or only later, after fines are threatened or imposed, or financial compensation is denied in state court.

Grave Access

In 2012, Scott Township in Pennsylvania passed an ordinance requiring anyone with a cemetery on their property to open the area to the public during daylight hours. Town officials then found several stones on Rose Mary Knick’s farmland that the town claimed were grave markers. Knick disputed the town’s claim, saying there was no evidence there was a cemetery on her property.

The ordinance required Knick to maintain her property as if it were a public cemetery, including trimming grass and pruning shrubs regularly, and open her land to the public for visitation. Knick faced fines ranging from $300 to $1,200 a day for failing to comply. Township officials refused to compensate Knick for any of these demands.

Knick sued in state court, arguing the cemetery ordinance amounted to a constitutional taking of her private property. The state court rejected her case, ruling it could not hear it until the town actually penalized Knick.

Federal Courts Punted

Instead of waiting to be fined and then starting the state legal process over again, Knick sued in the U.S. District Court for the Middle District of Pennsylvania to enforce her constitutionally protected property rights.

The district court ruled it could not hear Knick’s claim because of a 34-year-old Supreme Court decision in Williamson County Regional Planning Commission v. Hamilton Bank of Johnson City, which held property rights claims against local governments must be adjudicated in state courts before plaintiffs could file a claim in federal court. On appeal, the Third Circuit Court also rejected the case.

Supreme Court Overturns Precedent

The U.S. Supreme Court accepted Knick’s appeal and held two hearings on the case.

Writing for the majority in a five to four decision overturning the Williamson precedent, Chief Justice John Roberts said it would be an injustice for Knick and plaintiffs like her to be unable to receive a federal hearing on their property rights claims.

“[A person] cannot go to federal court without going to state court first; but if he goes to state court and loses, his claim will be barred in federal court,” Roberts wrote.

“We now conclude that the state-litigation requirement imposes an unjustifiable burden” on the property owner, Roberts wrote. “Contrary to Williamson County, a property owner has a claim for a violation of the Takings Clause as soon as a government takes his property for public use without paying for it.”

“Williamson County was not just wrong,” Roberts wrote. “Its reasoning was exceptionally ill founded and conflicted with much of our takings jurisprudence.”

‘Full-Fledged Constitutional Status’

The Court’s decision restores property ownership as a fundamental right protected by the Constitution, Roberts writes. “Fidelity to the Takings Clause and our cases construing it requires overruling Williamson County and restoring takings claims to the full-fledged constitutional status the Framers envisioned when they included the Clause among the other protections in the Bill of Rights… The state-litigation requirement relegates the Takings Clause ‘to the status of a poor relation’ among the provisions of the Bill of Rights,” Roberts wrote.

Leveling the Playing Field

Property owners with takings claims often prefer to take their cases to federal court because they may view them as more objective than state courts, which might be influenced by local politics, says J. David Breemer, a senior attorney with the Pacific Legal Foundation, who represented Knick in her federal takings claims. During the second round of oral arguments in January, Associate Justice Samuel Alito accused the local government of seeking “homecourt advantage” in state court. Breemer says, “This decision is a very long time coming for Rose and other property owners who have had federal courtroom doors slammed shut in their faces whenever they seek compensation for a governmental taking of their private property,” Breemer said.

The Supreme Court remanded Knick’s case back to the lower federal court for a decision on the merits of her takings claim.

Holding State Courts Accountable

The Knick decision should help ensure states play fair with takings claims, says Devin Watkins, an attorney with the Competitive Enterprise Institute.

“State court judges are often friendly with the local elected officials, who often are the ones who put them on the bench,” said Watkins. “As such, there is an incentive for judges to give the local officials a break and maybe be less aggressive concerning how much ‘just compensation’ is.

“Federal judges often have never even met the local elected officials and will rule solely based on the law as they see it,” Watkins said. “This creates a competition between federal judges and state judges … encouraging state judges to be fairer.”

Duggan Flanakin (dflanakin@gmail.com) writes from Austin, Texas. This article was reprinted with permission from heartland.org, a product of The Heartland Institute (https://www.heartland.org/news-opinion/news/supreme-court-allows-fast-tracking-of-property-rights-cases).
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U.S. Methane Emissions Much Lower Than Previously Estimated, Study Finds

BY H. STERLING BURNETT

A new study published in the peer-reviewed journal Geophysical Research Letters finds methane emissions from U.S. oil and natural gas production over the past decade are “an order of magnitude lower” than what has been reported by previous studies.

“Based on long-term and well-calibrated measurements, we find that (i) there is no large increase of total methane emissions in the United States in the past decade; (ii) there is a modest increase in oil and gas methane emissions, but this increase is much lower than some previous studies suggest; and (iii) the assumption of a time-constant relationship between methane and ethane emissions has resulted in major overestimation of an oil and gas emissions trend in some previous studies,” the study states.

The study was conducted by researchers from the University of Colorado-Boulder, the National Oceanic and Atmospheric Administration, and the Lawrence Berkeley National Laboratory.

Previous Estimates Error-Prone

The much higher methane emission estimates found in previous studies were caused by errors resulting from using ethane and propane measurements as a stand-in for methane emissions, the study states.

“Although ethane and propane are appropriate indicative tracers for [oil and natural gas] emissions, [methane] trends cannot be accurately estimated from ethane and propane,” the study states. “Thus, any conclusion of a large fossil methane increase in the past decade from studies that have used the constant [overall emission reduction efficiency] assumption is unreliable.”

Confirms EPA Estimates

The results of the Geophysical Research Letters study are bolstered by the U.S. Environmental Protection Agency’s (EPA) 2018 Greenhouse Gas Inventory (GHGI), released in April 2019, which reported greenhouse gas (GHG) emissions in the United States decreased by approximately 0.5 percent from 2016 to 2017. As a result, U.S. GHG emissions are now at their lowest levels since 1992 and only 1.3 percent higher than their 1990 levels.

EPA’s GHGI also reports U.S. methane emissions have declined by 15.8 percent since 1990, and those emissions from petroleum and natural gas systems have decreased by 10.5 percent and 14.2 percent respectively, even as oil production in the United States has increased by 80 percent and natural gas production has increased by 51 percent.

Huge Air Quality Improvement

At current levels, neither regulated air pollutants in general nor methane emissions from oil and gas in particular pose any threat to human or environmental health, says Tim Benson, a policy analyst with The Heartland Institute, which publishes Environment & Climate News.

“Overall, air pollution is becoming less and less of a problem over time, with the Texas Public Policy Foundation reporting that from 1970 to 2017 the United States saw aggregate emissions of the six criteria pollutants regulated under the Clean Air Act decline by 75 percent even as population and energy consumption increased, U.S. GDP rose 262 percent, and the vehicle miles traveled increased by 189 percent,” Benson said. “Neither U.S.

Continued on page 9
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air quality nor methane emissions threaten human health or the environment.

“Air quality in the United States has reached a point where tighter standards are no longer necessary,” said Benson. “As a result, rather than wasting billions of taxpayer dollars chasing away the last remaining molecules of methane or regulated pollutants, lawmakers should refrain from passing new legislation and allow air quality to improve even further as technological advancements develop, as has occurred in the oil patch.”

**Industry Clean-Up**

The study confirms industry has taken seriously its responsibility to reduce emissions through improved efficiency, says Gary Stone, executive vice president of engineering at Five States Energy and a policy advisor to The Heartland Institute.

“The results of this research are not surprising, since study after study has shown the oil and gas industry has made great progress in reducing air emissions, resulting in today’s air being cleaner than at any time during the Industrial Age,” Stone said. “One only has to compare old pictures of industrial towns to today to confirm the research.

“The groups claiming otherwise have no scientific basis for their arguments,” said Stone. “Their goal is political and economic control, and an active and burgeoning energy industry goes against their agenda.”

H. Sterling Burnett, Ph.D. (hsburnett@heartland.org) is a research fellow at The Heartland Institute. This article was reprinted with permission from heartland.org, a product of The Heartland Institute (https://www.heartland.org/news-opinion/news/us-methane-emissions-much-lower-than-previously-estimated-study-finds).

**Ohio Compost Community Forms Eleventh Chapter of US Composting Council**

SCC members from the State of Ohio recently affiliated with the US Composting Council as an official state chapter of the USCC. The Ohio Organics Council (OOC) is a 501(c)(6) nonprofit focusing on promoting the composting and organics recycling industry in the State of Ohio.

“We are energized to transition the Organics Recycling Association of Ohio to its status as OOC, a USCC chapter,” said Jason Ziss, president of the OOC. “We have been serving the State of Ohio for many years and believe this affiliation will move the Ohio industry forward even more.”

The group will host its annual conference under its new Chapter flagship, with USCC Executive Director Frank Franciosi as a speaker. The OOC also plans to focus on member recruitment in the coming year.

“We are thrilled to have Ohio composters and affiliates directly associated with us as a chapter,” said Franciosi. “Ohio has had compost infrastructure for a long time and we can work together to get compost use specifications and additional compost capacity to the next level.”

The OCC becomes the eleventh regional chapter of the USCC. The industry is expanding due to increased efforts at removing food scraps from disposal along with traditional yard trimmings. The demand side of the industry is expanding with the growing recognition of the beneficial uses of compost.

For information about the OOC, contact Jason Ziss, President, at 216-986-7019 or jasonz@kurtz-bros.com.
Circuit Court Overturns Montana Clean Water Act Conviction

BY DUGGAN FLANAKIN

A federal court vacated the conviction of a property owner for violations of Section 404 of the Clean Water Act.

Jailed for Property Upgrades

The decision followed an April 2019 U.S. Supreme Court decision allowing the widow of the late Joe Robertson to have her day in court concerning his claim he had been wrongly charged and convicted.

Navy veteran Robertson, then 77, was arrested, charged, and convicted in 2016 for failing to obtain a Section 404 permit from the U.S. Army Corps of Engineers before constructing ponds and a firebreak on his own property. He was sent to prison for 18 months and fined $130,000.

On appeal, his conviction and fine were upheld by the Ninth Circuit Court of Appeals.

Robertson, who appealed this decision to the Supreme Court, died of a stroke while still on parole just a month before the Court issued its ruling in April immediately vacating the Ninth Circuit’s judgment while the latter court reconsidered the case.

The Court also agreed Joe’s widow, Carri, should be allowed to represent his estate in the case before the Ninth Circuit.

In a complete vindication for the late Joe Robertson, the Ninth Circuit Court vacated his conviction on July 10.

Arrested Over a Ditch

In 2013 and 2014, the Robertsons, who operated a small firefighting support truck business, built several ponds to allow them to fill up multiple water trucks to fight wildfires in the area. The U.S. Environmental Protection Agency claimed a small, foot-wide ditch on the property was a federally protected waterway that could not be altered or modified unless the owner received a permit from the government.

EPA argued this even though Robertson’s land was 40 miles from the nearest navigable river. Robertson was convicted of violating the Clean Water Act in 2016.

On appeal, the Ninth Circuit court upheld the lower court’s conviction.

With backing from the Pacific Legal Foundation (PLF), Judicial Watch, and the Allied Educational Foundation (AEF), Robertson appealed his conviction and the $130,000 fine on the grounds it “affirmed illegal agency actions in prosecuting Joseph Robertson based on a misreading of federal law.”

“The Court should take this opportunity to correct the confusion in overbroad interpretations of the Clean Water Act, which have led to unjust prosecutions and federal intrusions into both state authority and individual liberty,” the petitioners argued.

Considered Dirt a ‘Pollutant’

In its filing, Judicial Watch said Robertson’s ditches “were situated on or near a small downhill water flow of about three garden hoses in volume.”

In addition, Robertson’s legal team pointed out, there was no manufacturing or any other industrial activity nearby that could release chemicals or waste into the water, yet under the government’s interpretation of the Clean Water Act “even turning the soil with a shovel can be considered to be releasing a ‘pollutant’ into water.”

Called for Clarification

In their brief, Judicial Watch and AEF said the case involved issues larger than the Robertsons’ personal plight, including the constitutional separation of powers between Congress, the Executive Branch, and the Supreme Court, saying it was the Court itself that introduced confusion into the definitions of “adjacent wetlands,” “point source,” and “navigable waters.”

“It was not foreseen that the judiciary could eventually aid and abet the complete sacrificing of power by one of those two branches, effectively leaving a one-branch government where the founders intended three,” the plaintiffs’ legal brief stated. “When the Court goes too far in reading statutes as broadly assigning sweeping interpretive power to agencies, this allows Congress to give up power altogether and to stop the necessary work of revising and repealing statutes.

“Congress has proven itself either willing to give up those powers or unable to stop itself from doing so, preferring to ask the executive branch to reinterpret or reimagine statutes in ever more creative ways while sparing members of Congress the pain of responsibility for national policy,” the plaintiffs stated. “The Court should not countenance this upending of the constitutional order.”

Achieved a Limited Victory

Although the Supreme Court allowed Joe Robertson’s widow Carri to continue the case on his behalf, the justices did not overturn his conviction, decide whether Robertson’s ditches should have been subjected to Section 404 permitting in the first place, or address the broader issues concerning the separation of powers raised by Robertson’s legal team.

The Court simply remanded the case to the Ninth Circuit for further consideration.

The Supreme Court’s decision, though limited, was a victory for the Robertsons and other property owners, says Tom Fitton, president of Judicial Watch.
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Austin Expands Curbside Composting

Austin, TX — The City of Austin’s recycling and solid waste department, Austin Resource Recovery (ARR), is expanding curbside composting this September, KVUE.com reports.

Austin has committed to a zero waste goal - reducing the amount of trash sent to landfills by 90% - by the year 2040. Curbside composting began with a pilot program in December of 2012, with 7900 homes enrolled. In February of 2014, 6,500 homes were added followed by 38,000 adds in 2017. In September, about 53,000 new homes will be added to the 95,000 customers that are already being serviced by the program. The goal is to add 53,000 homes by September of 2019. All remaining customers, which is approximately 60,000, will be added in 2020, pending approval from Austin City Council.

This summer, the city is holding open house educational events to teach residents about composting and how to separate food scraps.

Florida Company Facing Lawsuit for Irma Debris

North Ft. Myers, FL — Since last month, MW Horticulture Services Recycling has been paying $200 a day in fines for noncompliance with Lee County regulations, but now the company faces a lawsuit for non-removal of large piles of mulch from its facility, according to a NorthFortMeyersNeighbor.com article and Fox4Now.com report.

In July, the Lee County Chief Hearing Examiner denied a request by MW for a one-month extension to the county’s June 6 clean-up deadline, which was issued last October. The examiner ordered fines of $200 a day, retroactive to July 5 until the mulch piles are removed from MW’s site. The debris pile has had several fires, leading to air and water quality issues, according to a statement issued by the county. The commissioners voted in favor of litigation as a last resort to alleviate the safety issues that impact the community. The vote authorizes the County Attorney’s Office to join the Florida Department of Environmental Protection if DEP also files a lawsuit against the business.

After Hurricane Irma, Lee County contractor, Crowder Gulf paid MW Horticulture a total of $479,315 to take in mulched horticulture debris from Lee County at its North Fort Myers and South Fort Myers locations. In October, a Lee County code inspector issued a violation notice, citing the property owner, Minus 40 Technologies, for allowing hazardous mulch piles on the site. MW’s owners said they haven’t been able to sell the mulch off fast enough despite extensions from the County.

Circuit Court Overturns Montana Clean Water Act Conviction

Continued from page 10

“This is a victory against an overreaching government bureaucracy,” Fitton said. “The government should not be allowed to regulate every drop of water in America, and the Supreme Court was right to brush back the radical bureaucrats.”

Received Complete Vindication

Although the time Robertson was imprisoned can never be returned, his criminal record is now clean and his estate does not have to pay the $130,000 fine initially awarded the government.

The ruling was fair and long overdue, says Tony Francois, a PLF senior attorney who worked on behalf of the Robertsons.

Duggan Flanakin (dflanakin@gmail.com) writes from Austin, Texas. This article was reprinted with permission from heartland.org, a product of The Heartland Institute (https://www.heartland.org/_template-assets/documents/newsletter-issues/August%202019%20Environmental%20and%20Climate%20News.pdf).

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Wood Waste to Power is Growing in Georgia

Albany, GA — The Atlanta-based Southern Company utility, Georgia Power, is making efficient use of the leftover wood from the state’s logging operations, according to a Bioenergy-news.com article.

The company’s Exelon Green Energy plant in Albany, Georgia has been generating power for a nearby Proctor and Gamble manufacturing facility since 2017. Georgia Power acquired rights to 942 megawatts of power from Exelon in 2007, and Exelon subsidiary Constellation built the 50-megawatt biomass renewable energy plant in partnership with Procter & Gamble (P&G). Constellation owns and operates the plant, which supplies 100% of the steam used to run the P&G facility, which makes Bounty paper towels and Charmin toilet paper.

The Albany plant uses low-grade wood waste including woodchips, discarded treetops, limbs, branches, crop residuals, such as pecan shells and peanut hulls, and mill waste, such as sawdust - material that would have otherwise gone to landfill.

The forest industry sees biomass as an intermediate solution for greening energy, and is calling for small biomass plants, scattered around the state. The Georgia Forestry Association, an industry group, is calling for more power plants around the state that burn biomass, saying it’s good use for leftover wood, cleaner than coal, and renewable more trees can be planted. But environmental advocates, such as the Dogwood Alliance, have raised objections to biomass, saying it is not a renewable form of energy because it leads to a long-term loss of carbon exchange that forests provide.

According to its website, Georgia Power has more than 330 megawatts of power purchase agreements with various Biomass Proxy Qualified Facilities, some under contract for more than 30 years.

The ICAW 2020 Poster Contest Call For Entries

The International Compost Awareness Week Committee invites YOU to get involved in ICAW 2020. We’re looking for anyone interested in participating in our 18th Annual Poster Contest. The winning poster will be used to promote International Compost Awareness Week, May 3-9, 2020. The poster theme is Soil Loves Compost.

The contest runs from September 1 until November 1, 2019 and is open to anyone who wishes to share their artistic creativity to promote this year’s theme. The winning poster will serve as the promotional piece to share in the United States the 2020 International Compost Awareness Week theme (ICAW is celebrated in other countries, some using a different theme). We invite EVERYONE, to join in the fun - whether or not you have celebrated or been involved in ICAW in the past, we want you to participate this year. This international contest is open to anyone ten years old and up.

It’s easy to enter! Here’s how it works: The poster contest winner will have his/her poster reproduced and distributed to thousands nationwide. It will be the official 2020 International Compost Awareness Week poster and featured on the CCREF website as well as on the US Composting Council website too. The winning “poster artist” will have his/her name posted on the CCREF website and will be included on all print material and in any press releases in association with our annual ICAW celebration.

The successful poster winner will receive a $500 prize. The contest is open to anyone from 10 years old to adult. There are 3 contest divisions: grades 3-7, grades 8-12, and college – adult. The best from each division will be entered into the final contest. The winning design will be chosen by the end of November.

The ICAW 2020 Poster Contest application form will be available online starting September 1st. The contest continues until end of day, November 1, 2019. Please read the rules carefully before you enter and make sure your poster has everything it needs.

For questions, please send an email to info@compostfoundation.org.
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EPA Reforms How It Calculates Cost-Benefit Analyses

BY BONNER R. COHEN

Continuing the Trump administration’s overhaul of how executive agencies arrive at their regulatory decisions, Environmental Protection Agency (EPA) Administrator Andrew Wheeler issued new instructions for how the agency conducts cost-benefit analyses of environmental regulations.

In a two-page memo to EPA officials, Wheeler said “the agency should ensure that its regulatory decisions are rooted in sound, transparent, and consistent approaches to benefits and costs.”

Rectifying Inconsistencies

Although consideration of benefits and costs has long been an integral part of regulatory decision-making at the agency, the departments and offices have not used standardized or consistent methods of accounting for or comparing costs and benefits, Wheeler stated.

“[B]enefits and costs have historically been treated differently depending on the media office and the underlying authority,” Wheeler wrote in his May 21 memo. “This has resulted in various concepts of benefits, costs, and other factors that may be considered.

“This memorandum will initiate an effort to rectify these inconsistencies through statute-specific actions,” said Wheeler.

Improving Quality, Transparency

Wheeler’s memo instructs the assistant administrators of EPA’s offices of Air and Radiation, Chemical Safety and Pollution Prevention, Land and Emergency Management, and Water to institute reforms outlining how cost-benefit considerations will be applied in areas in need of greater clarity, transparency, and consistency.

EPA’s agency-wide overhaul also includes yet-unspecified revisions to key methodological and modeling choices, assumptions, uncertainties, and contexts used in the cost and benefit calculations underlying regulatory actions across the different departments.

Critics of the agency have long raised concerns about the validity of projections of, for example, the number of premature deaths prevented by lowering the allowable amounts of various regulated criteria air pollutants, Wheeler noted in his memo. EPA’s reform is intended to standardize and improve the quality and transparency of such estimates.

‘More Good Than Harm’

EPA should impose new regulations only when they will produce net benefits, says Daren Bakst, a senior research fellow at The Heritage Foundation.

“EPA’s regulations should do more good than harm, a sentiment the agency has not always embraced historically,” said Bakst. “The agency issues some of the costliest regulations in U.S. history, affecting all our lives, yet it has often issued regulations without quantifying any benefits from limiting targeted pollutants.

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Ohio Reports Sudden Oak Death Cases

Columbus, OH — In July, the Ohio Department of Agriculture reported that the pathogen that causes Sudden Oak Death disease was found on rhododendron and lilac plants shipped to Walmart and Rural King stores in the state.

The agency said in a news release that approximately 1,600 rhododendron plants from the infected nursery were shipped to Ohio retailers and at least 17 other states.

The pathogen, *Phytophthora ramorum*, harms oak, other tree species and woody ornamentals like rhododendron, Viburnum and Pieris. Signs of the disease can include leaf spots, shoot dieback and cankers (dead wood material) on the trunk, which can lead eventually to the death of the tree or plant.

Sudden Oak Death can be difficult to diagnose because symptoms are similar to infections from fungi or insects and other conditions. The disease has devastated oak trees in California and Oregon and can be spread by splashing rainwater on the spores of a diseased plant.

The pathogen does not readily produce spores or spread naturally under dry conditions and is not common in urban or suburban areas where native vegetation has largely been removed. However, the state is encouraging people to help prevent it from taking off. Ohio Division of Plant Health officials urges anyone who purchased rhododendron or lilac plants from Walmart or Rural King between March and May to dispose or destroy them. This can be done by double-bagging (including the root ball) in heavy duty trash bags before disposing. Plants may be destroyed by burning or deep burial. They should not be composted.

In addition, garden tools used on infected plants must be sanitized with bleach or 91% or higher alcohol before they are used again.

To report infected plants, contact the Ohio Department of Agriculture's Division of Plant Health by email at plantpest@agri.ohio.gov or call 614-728-6400.

Connecticut Towns Launch Plans for Composting Facility

Groton, CT — SCRRRA, the Southeastern Connecticut Resource Recovery Authority, is studying the feasibility of establishing a regional composting operation and is looking for potential sites that would be suitable, according to a report in TheDay.com.

The city of Groton has taken the lead on the project, with its Conservation Commission suggesting the feasibility of hosting the composting operation. Other towns in the region that have expressed interest are North Stonington, Montville, Ledyard and Preston.

The Groton Town Council has tasked staff to work with SCRRRA on looking for a potential site. The initial concept is to build a facility that would accept food scraps from major producers in the region and compost them using wood chips from transfer stations. Eventually, the program would expand to residential customers though curbside pickup or transfer station drop-off. Since odors are a common concern with composting, the council is looking into the static aerated pile method, which has bunkers and pipes that force air into the pile. The method is considered to be easily controlled and efficient, and odors are effectively contained.

Ideally, the facility would be located in an agricultural area near a major highway with proximity to major food scrap producers in the region. Under Connecticut law, major producers of food scraps located within 20 miles of a composting facility are required to recycle that material to a facility.

The state Department of Energy and Environmental Protection (DEEP) has met with SCRRRA and would work with SCRRRA to determine which environmental regulations would apply and to ensure SCRRRA applies for the proper permits. DEEP would then evaluate the applications and issue the permits.
Beetles and Other Bugs Help with Biological Control of Invasive Plants

Litchfield Hills, CT — Scientists have been testing the appetites of imported leaf-eating beetles and weevils as a way of removing invasive plants that choke out natives and hamper reforestation efforts in many states.

According to a bulletin by the Connecticut Invasive Plant Working Group, two leaf-eating beetle species, Galerucella calmariensis and G. pusilla, are very effective at killing purple loosestrife, which is found commonly along right of ways and wet areas. The beetles defoliate the plant, leaving behind dried out skeleton of the leaves impairing its ability to photosynthesize.

Two weevils are part of the arsenal against purple loosestrife, as well. Hylobius transversovittatus spends its whole life attacking the entire plant, cycling from larval through adult life stages repeatedly. Another weevil, Nanophyes marmoratus, attacks the flowers and newly developing leaves. By preventing normal flower development, the plant’s seed production is limited.

The U.S. Forest Service has been employing another imported weevil (R. latipes) that feeds exclusively on mile-a-minute vine (MAM), a fast-growing plant that proliferates on reforestation sites, quickly overwhelming and killing out-planted seedlings, as well as preventing regeneration of native species. The adult R. latipes lays eggs on leaves, stems and buds, then the larvae bore into the stems at the nodes and feed internally.

The federal government soon may permit horticulturalists to release a Japanese insect that munches exclusively on Japanese knot weed — the bamboo-like plant that grows in thick groves, especially along streams and rivers. The species forms monospecific thickets of plants 2 to 4 meters tall. In these areas, native vegetation is all but eliminated. In the Pacific Northwest the encroachment of Japanese knotweed is causing concern because it creates problems in salmon restoration efforts.

Kansas Compost Site Closed After Repeated Illegal Dumping

El Dorado, KS — Although the Butler County landfill outside Wichita is only 6 miles away, people have been illegally dumping all manner of other materials at the county’s compost drop-off site in El Dorado, KAKE.com reports.

The situation became so bad the city shut down the site for most of July, and police began patrolling the area, writing tickets for illegal dumping. A ticket for dumping can start at $150.

The El Dorado City Manager told reporters the city has given dumpers chance after chance to follow the rules. Even posting enhanced warning signage didn’t deter dumpers from getting rid of old sinks, toilets, mattresses and other refuse at the site. The closure has been an inconvenience to landscapers and yard maintenance services, who have had to .

Open 7 days a week, the site was intended for residents to dispose of yard waste and then pick up compost and mulch for their yards in one trip.

S. Carolina County Diverts 40 Million Pounds of Food and Yard Waste From Landfill in 3 Years

Pelzer, SC — Tons of compostable food waste from large-scale generators such as the Michelin, Adidas and Miliken plants and schools in Greenville County, South Carolina, and residents are helping to keep organics out of the Twin Chimney’s landfill, reports FoxCarolina.com.

Food waste is collected by Compost House and composted by Atlas Organic, which operated at the county landfill. Besides the Compost House curbside pickup, residents can drop off food scraps and other compostable waste for free at the Enoree Residential Waste and Recycling Center.

Atlas mixes the food waste with mulched yard waste at a 1-1 ratio. Pipes of oxygen underneath the mixed piles keep the mixture aerated. Once the pieces break down into compost, a large sifter filters out items that need more time, and any contamination.

The state Department of Health and Environmental Control (DHEC) requires the mixture to reach 131 degrees for three days in a row in order to meet agency health standards. The higher temperature allows recycling of cooked meats, and “certified compostable” cups and utensils.
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Arizona Clear-Out and Ponderosa Pine Reforestation Project Enters Next Phase

The United States Forest Service has issued an RFP for a massive initiative to thin Arizona forests to reduce wildfire damage, reports AZBigMedia.com. The RFP calls for awarding contracts to companies to mechanically thin 605,000 to 818,000 acres of forests in Northern Arizona. The Forest Service plans to spend $550 million over the next 20 years on reforestation under 4FRI, covering 2.4-million-acres on the Apache-Sitgreaves, Coconino, Kaibab and Tonto national forests.

The 4FRI project is a collaborative effort between the Forest Service, U.S. Bureau of Reclamation, Arizona Commerce Authority, Arizona Department of Forestry, Salt River Project, and private organizations to protect Arizona citizens, structures, natural areas, streams and lakes from high-intensity wildfires.

Since 2010, the Forest Service and the other 4FRI stakeholders have spent more than $220 million in reforestation in the region in the initial project phase. The 4FRI Stakeholder Group includes members of local, county, and state governments, environmental groups, organizations, institutions, and industry representatives and continues to grow.

The second 4FRI phase is expected to create hundreds of new jobs and tax revenue for rural communities in the region. The plan calls for harvesting, processing, and selling wood products from the clear-out, as well as a call for developing the state's biomass industry. Currently, the only biomass facility in the state is NovoBio, located in Snowflake.

Last year, the Arizona Corporation Commission approved a measure to attract more biomass capacity, and this July a presolicitation notice was issued to alert qualified vendors. The Forest Service RFP is available to small and large businesses that submit proposals that are "sustainable, innovative, feasible, and cost-effective to increase the pace of the scale of forest restoration."

California Dairy Biogas Facility Completed

Pixley, CA — A newly completed manure-to-natural gas facility in California's Central Valley is predicted to be the largest dairy biogas operation in the U.S. when it begins operations in about six months, according to a Bioenergy-News.com article.

The facility's anaerobic digester captures methane (biogas) from cow manure piped in from area dairy farms and turns it into fuel for vehicles. The project is a joint venture between Calgren Dairy Fuels and Southern California Gas (SoCalGas). A Calgren official says that eventually, the facility will process manure from 75,000 cows, preventing about 130,000 tons of greenhouse gas from entering the atmosphere annually, the equivalent of taking more than 25,000 passenger cars off the road for a year.

Calgren takes in manure from four large dairies now but plans to partner with eight additional dairy farms by the end of 2019. The high-quality renewable natural gas (RNG) produced at the plant is injected into the SoCalGas pipeline system, allowing Calgren to supply RNG to existing compressed natural gas (CNG) refueling facilities. This has the potential to be delivered to customers for fueling low-emissions buses and trucks, as well as generating clean electricity and heating homes and businesses.

In July, SoCalGas presented Calgren with a $5 million incentive check authorized by the California Public Utilities Commission (CPUC) to support the development of renewable energy projects. A 2016 law requires 40% of methane from the state's landfills and dairies to be captured, with provisions to deliver that energy to customers. Earlier this year, SoCalGas' committed to replace 20% of its traditional natural gas supply with renewable natural gas (RNG) by 2030.

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