



Independent coverage of composting, wood recycling and organics management

# Composting News

November 2018

McEntee Media  
Market Intelligence

Volume 27 Number 9

## Florida counties considering biosolids ban

By Ken McEntee

At least three Florida regional planning councils made up of 13 counties have proposed bans on the land application of biosolids, including composted biosolids.

In October, the Treasure Coast Regional Planning Council and the South Florida Regional Planning Council issued a memorandum that suggests that:

- Excess runoff from land-applied biosolids may reach surface waters after rain and increase the occurrence of chronic harmful algal blooms.
- Florida's agricultural crops can be grown profitably without land applying biosolids, which the planning councils call an "inefficient nutrient source."
- There are better ways to manage biosolids than land application for fertilizer. Three particular technologies were presented in June at a meeting of

(See Florida, page 15)



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## Minnesota county to mandate food waste recycling

Hennepin County, Minn. businesses that generate large quantities of food waste will be required to implement food waste recycling by 2020, and cities will be required to offer organics recycling services to residents by 2022. The county's Board of Commissioners approved those requirements this month.

Hennepin County includes the city of Minneapolis.

The board said organic materials make up 30 percent of trash, so recycling food and other organic materials is the biggest opportunity to achieve the county's goals of recycling 75 percent of the county's waste and sending zero waste to landfills by 2030.

Details of the new recycling requirements:

- Businesses that generate large quantities of food waste, such as restaurants, hotels, grocers, residential care facilities and office buildings with dining services,

(See Minnesota, page 17)

## Good year for equipment sales expected

## Survey reveals a strong year for compost sales

By Ken McEntee

An informal survey of compost producers revealed improved or flat sales in 2018 compared to 2017. The non-scientific web-based survey was conducted by *Composting News* at the end of October and represents less than 3 percent of the composting facilities in the U.S.

Respondents also revealed a mixed bag of responses relating to their

relationship with regulators and suggested a strong market for equipment sales next year, particularly for screens/trommels and front end loaders.

(See Survey, page 3)

## Highlights

- n Washington State compost registered organic
- n National compost prices

## Organics

# Washington State compost registered organic

To help local organic farms grow food more economically and sustainably, compost from Washington State University's (WSU) compost facility is now registered as organic by the Washington State Department of Agriculture (WSDA).

Responding to a need for organic compost at WSU's Eggert Family Organic Farm and other Palouse-area farms, the compost facility passed the registration process this year.

Compost helps build long-term fertility of soil and stabilize it to resist



Brad Jaeckel, manager of the WSU Eggert Family Organic Farm, and Rick Finch, manager of WSU Facilities Operations Waste Management, inspect young produce being grown for the first time with WSU organic compost this fall (Seth Truscott-WSU Photo).

erosion, reducing the need for expensive or bulky fertilizers, said Lynne Carpenter-Boggs, professor in the WSU Department of Crop and Soil Sciences.

"A local source of organic registered compost can really help improve yields for local organic food production, improve sustainable nutrient cycling through the WSU community and

support long-term soil health," Carpenter-Boggs said.

WSDA's Organic Program keeps a registry of materials allowed in organic crop production. By following that list, farmers know they are following National Organic Program (NOP) rules. WSDA registration examines every ingredient and process that goes into compost, ensuring it meets organic requirements.

To pass the process, Richard Finch, manager of WSU Facilities Operations Waste Management, documented the source and amount of every feedstock used to make WSU organic compost.

"We had to make sure that unacceptable materials like treated wood or plastics, which sometimes show up as contaminants at the compost yard, would not make their way into the organic recipe," said Carpenter-Boggs. "We also had to meet requirements for sufficient time at hot temperatures to kill pathogens, and had to show that the

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finished compost had low pathogens and metals."

Emily Barber, a 2017 graduate of the WSU organic agriculture program, began the organic registration process as part of an undergraduate internship.

In 1994, WSU was the first university in the nation to build a commercial-scale composting facility. Located on the southeast corner of the Pullman campus, the facility composts more than 10,000 tons of waste every year. About half of compostable waste comes from animal bedding and yard waste, while about 1 percent is food waste. Dining Services generates 227 tons of compostables per year.

Besides now serving organic farms, WSU compost is used in campus greenhouses, on research farms and for campus landscaping.



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## Markets

### Survey

From page 1

The survey was done to get general impressions about the compost markets and the composting business in general.

Asked about compost sales in 2018, 45 percent of the respondents said sales were "a little better" than 2017, while 9 percent said sales were "significantly better." 27 percent said sales were "about the same as 2017. Only 9 percent reported lower sales in 2018, and no respondent reported "significantly lower" sales.

Here are some of the comments offered about factors that impacted sales in 2018:

- Sales were steady. I was happier about market increases and positioning than actual sales. Nice growth.
- Sales were stronger due to some larger projects and new customer sales.

(See Survey, page 4)



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## Markets

### Survey

From page 1

- We are currently just a hauler. We did a few (single digit numbers) sales of finished compost this year off the books to friends and neighbors, but we are not technically pushing that side of the market yet. Compost sales will be a critical part of our 2019 year, as legislation is changing to allow our facility to legally operate. (Massachusetts respondent)
- We produce about the same amount of compost every year. We sell all of the compost we produce.
- Really wet weather in spring and fall hindered sales. To rainy for people to use compost during typical application times.
- The city gives compost and mulch away at give away sites and through a system where residents can call for free

delivery. (A common theme among Southern California respondents)

- We are introducing a new product to the garden market here in Washington called Sky River Fish Compost. Sales are good and getting better as we enter into the 2019 nursery and landscape season.
- More marketing and market share, high quality product, organic listings, lots of community involvement and promotions. (Florida composter)
- March weather was not great.
- Transportation availability/costs; inclement weather.

The majority of respondents (58 percent) said they expected 2019 sales to be "somewhat better" than 2018, while 17 percent said they anticipate "significantly better" sales. 17 percent expect sales to be about the same in 2019, while 8 percent said they expect slight (4 percent) or significant (4 percent) declines in sales in 2019. None said they expect to go out of business

next year.

The reasons:

- We some larger projects to start in 2019.
- Competition for feedstock will lower production of compost products.
- Officially entering the market in 2019. Sales will be significantly higher due to change in our business, not due to factors such as market demand, global or regional economics.
- More interest in sustainability.
- Hoping for better weather in spring and fall.
- The new California diversion requirements and the new hauler franchise program in Los Angeles is going to flood our region with excess compost as the merchant facilities 100 miles north of Los Angeles ramp up their throughput. We won't be surprised if pricing goes negative.
- More marketing and market share, high quality product, organic listings lots of community involvement and

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promotions.

- We're pretty much maxed out on sales.
- Costs of transportation are increasing.

Asked to name the most daunting challenges facing the composting industry, comments such as the following were cited:

- Plastic contamination, better present at the customer end.
- Plastic contamination – we need ongoing education and messaging regarding contamination in recovered organics.
- Contamination. It's difficult to be price competitive in our region while also being efficient. Being able to charge more for our service is critical to handling more education and sorting labor. When it comes to the finished product, great education and marketing is needed in defining the difference between municipal green waste based compost (fungal dominant) and bacterial dominant composts/soil products made with

additional organic food waste.

- Short term fuel costs. As environmental, political and economic landscapes become more volatile, oil prices will also become more volatile. This can affect the operating margins of the compost industry overnight.
- More focus should be put on alternative methods to combustion engines or at least transitional equipment to allow for industry and its current businesses to withstand massive shifts in our energy and fuel delivery systems.
- Odors concerns. The ever increasing population, which is moving closer to the composting operations, complaining about the odors. We have modified our composting methods to minimize odors for our neighbors. But with a new highway going in next to our compost facility, we may need to change our operations more, which will cost a substantial amount, or soon do away with composting altogether.
- Equipment/maintenance cost.

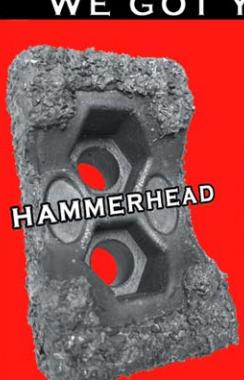
- From a compost sales perspective, having projects include using soil amendments (compost) specified when projects are being written. Also, having specifications that include composted soil amendments that are manufactured to grow vegetation helping to reduce the need for additional synthetic fertilizers.
- Environmental Regulations. Work closely with regulators.
- Permitting and government oversight and competition from anaerobic digestion.
- Storm Water and Air emissions.
- Permitting for new locations – recognize the value of composting. Benefits outweigh the negatives – permits must consider the positives – not just focus on the negative – similar to carbon credits. Removal of contamination from retail and consumer food / recycling waste –

*(See Survey, page 8)*

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# National Compost Prices

The prices listed below are intended to indicate the value of mature compost products sold by compost producers and retailers in noted regions. Prices listed are based on surveys and publicly posted prices.

Your input on published prices is encouraged. Contact Ken McEntee, editor, at (440) 238-6603. Fax: (440) 238-6712. EMail: ken@recycle.cc. Address: 9815 Hazelwood Avenue, Cleveland, OH 44149. Notes on listings.

- Each listing includes a high price obtained, a low price obtained and an average of all prices obtained within a particular market.

- Market areas: Thirteen market areas have been targeted to provide a cross section of compost product markets in

the U.S. Where regions are not identified by a specific city, "Chesapeake" refers to the region stretching between Norfolk, Va. to Baltimore, Md. "Texas" incorporates several major cities in the state. "Northwest" represents the Seattle and Portland, Ore. areas. "SF-Bay" refers to the San Francisco Bay area. SoCal is Southern California, including the Los Angeles and San Diego areas. Denver includes Colorado, Wyoming and Montana.

- "Food waste" compost: This category refers to compost products that include food waste, regional specialties and other feedstocks not specifically covered in other categories.

- Manures: Chicken manures may include other poultry

manures, such as turkey and duck manure. Cow manures may include manures marketed as steer and dairy manure. Horse manure is included in this category as well.

- Absence of a regional listing within a given category indicates not enough information for a valid listing. Additional data will be added as more information is obtained.

- Bulk retail prices do not include municipal operations that give compost away for free.

## Bulk Retail (yard)

### Yard waste compost

	Average	High	Low
NE	\$ 32.55	\$ 77.00	\$ 17.50
Chesapeake	\$ 24.50	\$ 30.00	\$ 17.00
SE	\$ 21.88	\$ 29.95	\$ 16.00
Florida	\$ 16.42	\$ 26.00	\$ 10.50
Cleveland	\$ 19.90	\$ 28.00	\$ 12.50
Iowa	\$ 21.57	\$ 53.00	\$ 7.50
Minneapolis	\$ 17.09	\$ 28.00	\$ 8.00
Texas	\$ 29.71	\$ 40.00	\$ 15.00
Denver	\$ 20.31	\$ 31.00	\$ 12.00
Northwest	\$ 24.05	\$ 55.00	\$ 10.00
SF-Bay	\$ 21.92	\$ 30.00	\$ 10.00
SoCal	\$ 14.75	\$ 24.00	\$ 8.00

### Food waste compost

	Average	High	Low
NE	\$ 39.12	\$ 64.00	\$ 17.50
Chesapeake	\$ 23.00	\$ 30.00	\$ 15.00
SE	\$ 28.11	\$ 35.00	\$ 24.00
Florida	\$ 17.50	\$ 22.00	\$ 13.00
Iowa	\$ 25.00	\$ 65.00	\$ 15.00
Minneapolis	\$ 12.33	\$ 16.00	\$ 9.00
Texas	\$ 30.21	\$ 48.95	\$ 15.00
Denver	\$ 15.00	\$ 15.00	\$ 15.00
Northwest	\$ 20.55	\$ 30.00	\$ 15.00
SF-Bay	\$ 23.61	\$ 38.00	\$ 14.00
SoCal	\$ 30.50	\$ 45.00	\$ 16.00

### Leaf humus

	Average	High	Low
NE	\$ 24.98	\$ 30.00	\$ 19.95
Chesapeake	\$ 27.49	\$ 30.00	\$ 23.95
Cleveland	\$ 19.27	\$ 26.00	\$ 8.00

### Composted biosolids

	Average	High	Low
NE	\$ 30.00	\$ 40.00	\$ 20.00
Chesapeake	\$ 24.98	\$ 35.00	\$ 12.00
SE	\$ 12.14	\$ 28.00	\$ 4.00
Florida	\$ 13.14	\$ 22.00	\$ 8.00
Cleveland	\$ 24.77	\$ 30.00	\$ 19.50
Iowa	\$ 12.67	\$ 21.00	\$ 8.00
Texas	\$ 21.28	\$ 30.00	\$ 10.00
Denver	\$ 9.00	\$ 10.00	\$ 7.00
Northwest	\$ 17.91	\$ 26.00	\$ 7.00
SoCal	\$ 13.36	\$ 22.00	\$ 3.50

### Composted chicken manure

	Average	High	Low
NE	\$ 45.00	\$ 50.00	\$ 40.00
Chesapeake	\$ 25.00	\$ 25.00	\$ 25.00
SE	\$ 42.00	\$ 42.00	\$ 42.00
Minneapolis	\$ 17.00	\$ 17.00	\$ 17.00
Texas	\$ 37.23	\$ 47.50	\$ 26.95
Denver	\$ 25.65	\$ 28.00	\$ 24.00
SF-Bay	\$ 16.00	\$ 16.00	\$ 16.00
SoCal	\$ 44.00	\$ 75.00	\$ 27.00

### Composted cow manure

	Average	High	Low
NE	\$ 45.50	\$ 46.00	\$ 45.00
SE	\$ 31.33	\$ 45.00	\$ 12.00
Cleveland	\$ 24.00	\$ 24.00	\$ 24.00
Iowa	\$ 42.00	\$ 60.00	\$ 16.00
Minneapolis	\$ 29.33	\$ 32.00	\$ 26.00
Texas	\$ 29.33	\$ 47.50	\$ 15.00
Denver	\$ 21.71	\$ 30.00	\$ 12.00
Phoenix	\$ 20.00	\$ 20.00	\$ 20.00
Northwest	\$ 23.85	\$ 33.75	\$ 17.45

### Wood waste mulch

	Average	High	Low
NE	\$ 21.35	\$ 38.00	\$ 12.50
Chesapeake	\$ 21.13	\$ 28.00	\$ 12.00
SE	\$ 18.78	\$ 34.95	\$ 12.00
Florida	\$ 17.50	\$ 18.00	\$ 17.00
Cleveland	\$ 25.56	\$ 36.25	\$ 14.00
Iowa	\$ 32.50	\$ 40.00	\$ 25.00
Minneapolis	\$ 26.00	\$ 35.00	\$ 20.00
Texas	\$ 16.19	\$ 27.00	\$ 9.00
Denver	\$ 18.74	\$ 25.00	\$ 12.48
Phoenix	\$ 17.61	\$ 22.95	\$ 10.00
Northwest	\$ 19.00	\$ 35.00	\$ 7.50
SF-Bay	\$ 18.14	\$ 30.00	\$ 8.00
SoCal	\$ 20.50	\$ 50.00	\$ 6.00

### Colored wood mulch

	Average	High	Low
NE	\$ 28.00	\$ 28.00	\$ 28.00
Chesapeake	\$ 28.67	\$ 33.00	\$ 25.00
SE	\$ 27.13	\$ 42.00	\$ 15.00
Florida	\$ 20.33	\$ 22.00	\$ 19.00
Cleveland	\$ 24.87	\$ 28.99	\$ 21.95
Iowa	\$ 30.00	\$ 30.00	\$ 30.00
Minneapolis	\$ 36.80	\$ 49.00	\$ 30.00
Texas	\$ 26.08	\$ 32.50	\$ 18.00
Denver	\$ 33.28	\$ 33.28	\$ 33.28
Northwest	\$ 35.00	\$ 35.00	\$ 35.00
SF-Bay	\$ 34.00	\$ 36.00	\$ 28.00
SoCal	\$ 32.50	\$ 35.00	\$ 30.00

## Bulk wholesale (yard)

### Yard waste compost

	Average	High	Low
NE	\$ 21.50	\$ 48.00	\$ 11.00
Chesapeake	\$ 13.39	\$ 16.00	\$ 8.00
SE	\$ 16.66	\$ 25.00	\$ 8.65
Florida	\$ 9.75	\$ 13.00	\$ 8.00
Cleveland	\$ 12.50	\$ 15.00	\$ 10.00
Iowa	\$ 14.00	\$ 19.00	\$ 8.00
Minneapolis	\$ 12.00	\$ 17.00	\$ 7.00
Texas	\$ 17.25	\$ 24.00	\$ 9.00
Denver	\$ 13.05	\$ 14.10	\$ 12.00
Northwest	\$ 14.79	\$ 35.00	\$ 7.50
SF-Bay	\$ 13.71	\$ 22.00	\$ 7.00
SoCal	\$ 7.33	\$ 10.00	\$ 6.00

### Food waste compost

	Average	High	Low
NE	\$ 25.79	\$ 48.00	\$ 11.00
Chesapeake	\$ 10.50	\$ 15.00	\$ 8.00
SE	\$ 20.65	\$ 30.00	\$ 15.00
Florida	\$ 10.50	\$ 13.00	\$ 8.00
Iowa	\$ 13.40	\$ 20.00	\$ 10.00
Minneapolis	\$ 12.00	\$ 12.00	\$ 12.00
Texas	\$ 17.50	\$ 24.00	\$ 8.50
Denver	\$ 11.33	\$ 15.00	\$ 7.00
Northwest	\$ 17.25	\$ 20.00	\$ 15.00
SF-Bay	\$ 12.67	\$ 26.00	\$ 5.00

### Composted biosolids

	Average	High	Low
NE	\$ 15.33	\$ 20.00	\$ 10.00
Chesapeake	\$ 9.31	\$ 15.00	\$ 5.00
SE	\$ 10.93	\$ 15.00	\$ 5.00
Florida	\$ 10.50	\$ 13.00	\$ 8.00
Texas	\$ 15.99	\$ 20.00	\$ 9.00

### Composted cow manure

	Average	High	Low
NE	\$ 6.87	\$ 8.00	\$ 4.50
Chesapeake	\$ 3.73	\$ 5.49	\$ 2.15
SE	\$ 4.00	\$ 4.00	\$ 4.00
Iowa	\$ 1.99	\$ 1.99	\$ 1.99
Cleveland	\$ 2.45	\$ 2.99	\$ 2.10
Iowa	\$ 3.12	\$ 7.99	\$ 1.50
Texas	\$ 4.25	\$ 6.99	\$ 1.99
Denver	\$ 3.59	\$ 4.75	\$ 1.73
Phoenix	\$ 4.71	\$ 5.99	\$ 2.77
Northwest	\$ 4.29	\$ 5.99	\$ 2.99
SoCal	\$ 5.39	\$ 6.25	\$ 3.90

### Composted cow manure(40#bag)

	Average	High	Low
NE	\$ 6.53	\$ 9.87	\$ 3.85
Chesapeake	\$ 5.97	\$ 7.95	\$ 3.99
SE	\$ 5.16	\$ 6.97	\$ 3.34
Florida	\$ 1.98	\$ 1.99	\$ 1.97
Cleveland	\$ 3.27	\$ 3.99	\$ 2.49
Iowa	\$ 2.18	\$ 2.49	\$ 1.75
Minneapolis	\$ 3.70	\$ 7.00	\$ 1.99
Texas	\$ 4.59	\$ 6.99	\$ 1.99
Phoenix	\$ 2.99	\$ 3.99	\$ 2.49
Northwest	\$ 3.99	\$ 3.99	\$ 3.99
SF-Bay	\$ 7.00	\$ 7.00	\$ 7.00

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## Markets

### Survey

From page 5

educating / requiring consumers to thoroughly separate recyclables. Regulations need to be common sense based.

- Compost Quality – too many low cost low quality composts on the market. Increasing Competition from municipal operations. Improve quality and service – expand marketing.
- Need more legislation to use composted materials.
- Dealing with plastic.
- Regulations.
- 1. State and local policy and regulations on the handling and composting of organic materials; 2. Exclusive franchise agreements that eliminate competitive industry, and diminish decentralized and small-and medium-scale enterprises to capture 100% of landfill diversion capacity; 3.

Regulatory fees and exemptions that are not tiered relative to the scale/size of composting facilities/fertilizer manufacturers.

- Contaminants: plastic, glass, metal, herbicides and pesticides. Public education and curb-side inspections.
- Transportation costs of both inbound raw materials and outbound finished goods.
- Dealing with the government.
- Feedstock quality – especially with food waste.
- Competing un-regulated products distributed at no cost, increase mass of compost in marketplace.

Asked to name the most exciting developments that will impact the composting business during the next year or two, respondents offered the following:

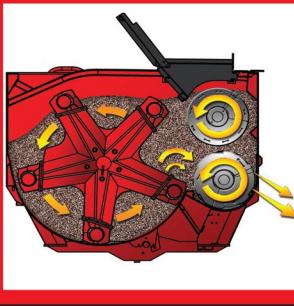
- Climate change goals and the cannabis industry.
- New facilities.
- Hopefully gains in dealing with contamination of feedstock and

finished product.

- Focus on emissions from chemical fertilizers and water pollution.
- IPCC (Intergovernmental Panel on Climate Change) study results on biochar and the attention/research that will now be dedicated to MRT (mean residence time) of atmospheric/terrestrial/deep ocean carbon storage. Basically, more and more folks are taking carbon sequestration seriously. So more and more folks should be taking compost seriously and giving it the value it deserves in both short term and long term impact to our environmental, waste, and agricultural systems.
- More interest in using compost to solve storm water runoff issues.
- Urban gardening and landscaping will improve significantly from the large quantity of low cost (free or negative cost) compost and ground cover.
- The introduction of using activated

(See Survey, page 13)

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Twitter: compostingil  
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Contact: Cary Richardson  
info@midwestbiosystems.com



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 Contact: Rick Cohen  
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## Markets

### Survey

From page 8

biochar in aerated static windrow composting methods.

- Growing food waste diversion.
- Strong retail market for compost.
- Expansion opportunities, public awareness of organic compost and clean water.

Asked to assess their relationships with regulators, composters provided a mixed bag of opinions. Following is a list of statements to which respondents were asked to agree or disagree with. They were able to choose more than one answer, so the total exceeds 100 percent.

- 38%: They are generally helpful to my composting program.
- 23%: Composting operations in my state and municipality are overly regulated.
- 23%: My regulators are fair and easy to work with.

- 19%: They are generally doing a good job of regulating the business.
- 16%: They are generally a hindrance to my composting program.
- 15%: I am satisfied with my state's composting regulations as they are written.
- 15%: My state's composting regulations need to be changed.
- 8%: They are not doing a good job of regulating the business.
- 8%: My regulators are unfair and/or difficult.
- 0%: Composting operations in my state and municipality should be regulated more strictly than they are.

Asked for additional comments, respondents offered the following:

- They are under staffed and over worked like the rest of us.
- The statewide mandates coming from multiple agencies make composting increasingly difficult. These industry specific regulations coupled with other California business regulations make it difficult.

- We just went through legislation changes. While it takes an unbelievable amount of time to rally for change, it has proven to be possible. The policies aren't perfect, but we made a compelling case and they listened. More support is needed from USCC (U.S. Composting Council), USDA and EPA to champion these policy changes to make legislation more realistic. A better job can be done to limit the hazards and "bad actors" in the industry. A better job can also be done to remove the poorly written ordinance that does nothing but hinders innovation and efficiency of local agricultural and waste management systems.

- Public perception of composting companies – Not in my Backyard. Some stormwater regulations can be a bit severe – runoff must be cleaner than water already in the system.
- Land doesn't work with Water. One

*(See Survey, page 14)*

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## Markets

### Survey

From page 13

- division contradicts the other on rules.
- The SCAQMD (Southern California Air Quality Management District) does not promote composting and needs to change its rules for VOC emissions from compost. The high VOC fees of roughly \$1/ton are not fair because the VOC's emitted from compost are not ozone precursors. The RWQCB (Los Angeles Regional Water Quality Control Board) general permit for composting is also very costly and restrictive.
- Too much red tape.
- I feel pretty fortunate to have an open and realistic relationship with my regulators. No issues whatsoever.
- Before hurricane Irma we were the best, had the best relationship with all agencies. After hurricane Irma, everyone forgot who helped them and they wanted to violate while our county

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was still under state of emergency – they are unrealistic, they change the rules to please them and they are on the attack lately – it's not right.

Asked to name the largest challenges in terms of obtaining feedstock for their composting operation, respondents offered the following comments:

- Leachate disposal and obtaining sufficient volumes of wood chips are the biggest issues at this point.
- Carbon sources at fair pricing.
- Biomass power plants.
- Anaerobic digestion and contamination.
- Most facilities in Northern California are at or near full capacity. Feedstock is not a problem.
- Our location- the companies were we receive our feedstock/dry wood are moving out of the area. It is becoming too expensive for them to bring the wood to us.
- Higher prices for clean wood waste, boiler fuel.
- Right now I have no competition,

although some municipalities think they can do it cheaper. They just won't have a product worth selling.

- Contamination is the greatest challenge. There is not a problem with supply.
- Cost of transportation. Cost of quality inputs.
- Exclusive franchise agreements for waste management in cities.... they're infringing on our right to make healthy soil and retain access to property we are not treating like "waste." We can't haul material, but also can't charge a tipping fee at the small-scale, community compost facilities. Basically cuts both revenue streams and makes it impossible to scale, invest, and grow our businesses.
- Very limited competition, no problems with access to fish by-products.
- Transportation cost.
- Though we do have competitors for feedstock, and our pricing is fair (not the highest or cheapest), we offer many services of things others don't do and we rise above the rest.
- Anaerobic digesters for food waste.
- Primary issue is with green waste/bulking agent.

Respondents indicated that they operate the following machinery at their facilities:

- 96%: Front end loader
- 85%: Screen/trommel
- 54%: Windrow turner
- 54%: Horizontal grinder
- 38%: Aeration system
- 35%: Bagger
- 31%: Tub grinder
- 23%: Mulch coloring system
- 12%: In-vessel system
- 4%: Blender

Respondents indicated that they plan to acquire the following equipment in 2019:

- 46%: Screen/trommel
- 42%: Front end loader
- 19%: Aeration system (new or upgrade)
- 15%: Compost turner
- 15%: Horizontal grinder
- 8%: Bagger
- 8%: Tub grinder
- 4%: Mulch coloring system
- 4%: In-vessel system

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## Biosolids

### Florida

From page 1

the Treasure Coast Regional Planning Council.

Those two regional planning councils and the Southwest Florida Regional Planning Council have issued resolutions to "increase awareness of biosolids management issues in Florida, prioritize the reduction and eventual elimination of the land application of human wastewater biosolids and establish a pilot projects program for funding new state of the art wastewater technologies to improve recovery and afford more efficient use of human wastewater biosolids."

David Hill, principal of CycleLogic Environmental Marketing and Consultation, said the proposal is working its way through the counties in Florida.

"It would ban the land application of

any and all classes of biosolids, including Class AA compost and pellets," Hill said. "This would have a huge impact on all counties in the state and would kill off the industry within the state. It would also affect producers shipping into the state."

Recycle Florida Today's (RFT) Organic Recycling Committee discussed the matter during a conference call on November 8. Meanwhile, the Florida Department of Environmental Protection (DEP) in June created a Biosolids Technical Advisory Committee (TAC) to evaluate current management practices and potential opportunities for enhancements to better protect Florida's water resources.

"DEP is aware of an increased interest in better understanding the nutrient impacts of the land application of biosolids," the department said.

Since September, the TAC has held three public hearings.

On June 8, 2018, the same day DEP announced the creation of the TAC, the

Treasure Coast Regional Planning Council and the Indian River Lagoon National Estuaries Program sponsored a Regional Biosolids Symposium in Stuart, Fla. to discuss a "better, more sustainable path forward on how we manage and reuse our biosolids resources." The symposium drew 170 attendees, the planning council said.

The planning council is a not-for-profit organization created by local governments to provide planning and technical assistance services and assist in carrying out Florida's growth management programs. Members are Indian River, St. Lucie, Martin and Palm Beach counties and the 51 municipalities in those counties.

According to the Treasure Coast council, Florida's central sewer wastewater treatment facilities produce about 340,000 tons of biosolids annually. About 100,000 dry tons are designated as Class B biosolids, which

(See Florida, page 16)



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## Biosolids

### Florida

From page 1

are treated sewage sludge that meets U.S. EPA guidelines for land application as fertilizer and are allowed to have detectable levels of pathogens.

Another 100,000 dry tons of biosolids are landfilled.

The other 140,000 dry tons of biosolids are processed, dried and composted with yard waste to produce about 200,000 tons of Class AA biosolids that can be distributed and marketed as fertilizer. Class AA biosolids are unregulated and land-applied to pasture lands and, to a lesser extent, on citrus crops.

Together, the planning council said, Class B and Class AA biosolids contribute more than 33 million pounds of total nitrogen and 13.2 million pounds of total phosphorus to Florida's agricultural lands each year.

The council also noted that "many Florida residents are alarmed" about recent water releases from Lake Okeechobee, including threats from the presence of blue-green algae blooms,

Gary Roderick, an environmental consultant and former environmental administrator for DEP's Southeast District, told attendees that "every crop in Florida can be grown economically without the use of biosolids as a fertilizer," and the biosolids provide an inefficient form of fertilization, the Treasure Coast council reported.

During the symposium, three new technologies were introduced:

- Kobe Nagar, senior process engineer at Duke University's Pratt School of Engineering, presented Duke's Supercritical Water Oxidation (SCWO) process, which converts biosolids and hazardous waste into hot water, electricity, carbon dioxide, nitrogen and oxygen.
- Steve Wirtel, vice president of business development for Kore Infrastructure, presented Kore's Advanced Pyrolysis Technology that processed biosolids into methane and hydrogen for power

generation, and creating biochar.

- Peter Janicki, of Janicki Industries, presented the processes of Vapor Recompression Distillation (VRD) and Boiler Technology Electric Generation, which, together, can convert biosolids into electricity and distilled water.

The boilerplate resolutions to prioritize the reduction and eventual elimination of the land application of biosolids were later adopted by at least three planning councils in the state. The resolutions call for collaboration with the Florida Regional Councils Association, the Florida Association of Counties, the Florida League of Cities, the Florida Small County Coalition, DEP and the Florida Department of Agriculture.

Hill, during the RFT conference call on November 15, said the proposal to eliminate the land application of biosolids is "shooting at the wrong enemy."

Darren Midlane, vice president of Harvest Quest, said the elimination of biosolids on agricultural lands would result in increased use of chemical fertilizer, which is more polluting than biosolids.

"The amount of water soluble phosphorous and nitrogen in biosolids is actually a fraction of any of the materials out there," Midlane said. "There's actually less water soluble phosphorous in biosolids than in yard waste. A lot of that has to do with the fact that they use iron in the wastewater treatment process, which binds the phosphorus so it is not water soluble."

Midlane described the claims made by the planning councils as "misinformation."

"There were some alternative technologies that were touted at that (symposium), all of which are about 10 times more expensive than what we do presently," Midlane said. "They are prototypes; not proven."

Participants on the RFT conference call noted that Lee County, a member of the Southwest Florida Regional Planning Council, currently operates one of the largest biosolids composting facilities in the state.

## Food waste

### Minnesota

From page 1

must implement food waste recycling by January 1, 2020. This requirement applies to businesses in the covered sectors that generate one ton of trash or more per week or contract for weekly collection of eight or more cubic yards of trash. This threshold was selected because large generators of organics are likely to break even or even save money when implementing food waste recycling.

• Cities must make organics recycling service available to all households with curbside recycling service (single-family and dwellings up to four units) by January 1, 2022. Cities of the fourth class (those with a population of 10,000 or less) can choose not to make curbside organics recycling service available to residents but must provide at least one organics recycling drop-off site by January 1, 2022.

• Multifamily properties must provide recycling education to residents, offer adequate service for the collection of recyclables (and organics if offered), increase service levels if insufficient, provide recycling containers in common areas where trash is being collected, and label waste containers.

• In addition to meeting state recycling requirements, businesses must offer adequate service for the collection of recyclables, increase service levels if insufficient and label containers.

The county will have the authority to enforce these requirements, including the ability to issue warnings or citations for noncompliance. Businesses and multifamily properties would be given the opportunity to comply before the county would take enforcement action.

The commissioners' action revises the country's recycling ordinance, which was adopted in 1986 to create residential curbside recycling programs.

"Organic materials are a resource, not waste," said Mike Opat, chairman of the

*(See Minnesota, page 18)*

## Food waste

### Minnesota

From page 17

county's Public Works Committee. "This is the next step in the evolution of how we deal with our garbage."

## Diversion

# Colorado generated record trash in 2017

**C**olorado generated a record 9.3 million tons of waste in 2017 while the state's recycling rate remained at 12 percent, well below the national average of 35 percent according to the second annual State of Recycling in Colorado report coordinated by Eco-Cycle and CoPIRG.

The report, released this month, offers recently elected Gov. Jared Polis four recommendations to reverse Colorado's upward trash trend, including setting recycling and composting goals for state agencies, hiring a statewide recycling coordinator and aggressively pursuing ways to attract new recycling businesses. The goal is to foster a circular economy where glass, bottles, cans and other recyclable materials stay in Colorado and are remanufactured into new products in a much more environmentally sustainable way.

"Colorado's low recycling rate comes as a shock to most people who think of us as a green state," said Kate Bailey, Eco-Cycle's director of research and policy and the report's lead author. "The truth is, 95 percent of what we throw away could have been recycled or composted. With strong state leadership, Colorado is well-positioned to move forward quickly to realize the environmental and economic benefits of increased recycling. Increasing our recycling rate statewide is one of the fastest, easiest steps we can take to reduce carbon pollution."

One suggested way to attract new recycling businesses is to launch a recycling market development initiative. Most of the paper, metal and plastics collected for recycling in Colorado are currently shipped out of state or out of the country. Another suggestion is to create a statewide waste diversion funding task force to study and recommend ways to increase funding for reduction, reuse, recycling and remanufacturing.

Colorado collects a small fee of \$0.46 per ton of waste sent to landfills and uses the money to support recycling programs.

"We are far behind other states such as Ohio and Wisconsin, which allocate between \$2 and \$7 per ton to recycling," the report said. "Colorado's rate is insufficient to achieve statewide recycling goals. The task force should make recommendations to the Governor and the legislature by January 1st, 2020.

John Lair, president and CEO of Momentum Recycling, said his company built a new state-of-the-art glass recycling facility in Broomfield, Colo. because of the market opportunity.

"Colorado was only recycling 6 percent of its glass when our bottle-to-bottle glass recycling facility opened," Lair said. "Now we're recycling 23 percent and if the state aggressively expands its recycling efforts, we could be recycling 50 percent in a few years' time."

Like last year, this year's State of Recycling in Colorado report breaks down recycling rates city-by-city and county-by-county. Unfortunately, only 27 cities and 30 counties are collecting data to report, which leaves considerable room for improvement.

Some tidbits from the report include:

- Longmont had the biggest improvements in its rates from last year, thanks to a new curbside composting program to collect food scraps and yard debris from residents.
- The city of Fort Collins diverts nearly 70 percent of its industrial waste, including wood waste, scrap metal, concrete and asphalt, which was a big reason why it has the best recycling rate overall (55 percent) when you

include residential, industrial and commercial recycling.

- Vail Honeywagon opened the first commercial compost facility in Eagle County in 2017.
- Leading Colorado cities have two things in common: they provide curbside residential recycling automatically alongside trash collection so residents don't have to call and ask for it; and they offer curbside pick-up or convenient drop-off programs for yard debris, such as leaves and branches.

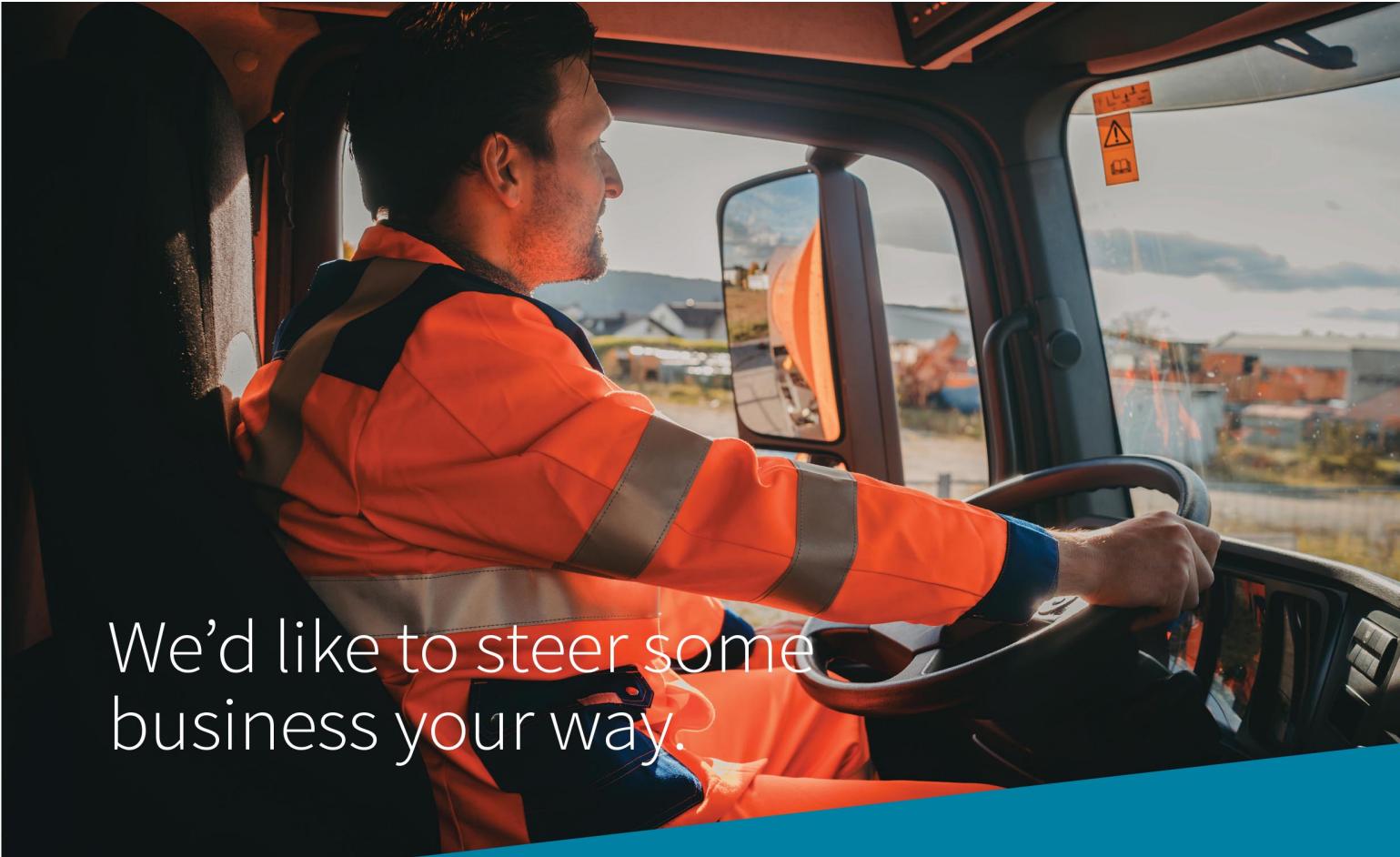
## Grants

# Virginia prisons get composting grants

**T**he U.S. Department of Agriculture (USDA) has awarded the Virginia Department of Corrections (DOC) \$88,700 in technical assistance grant funding through its waste management initiative to improve planning and management of solid waste in rural areas. USDA specifically targeted projects that plan to establish composting programs and emphasize food-waste diversion from landfills.

DOC will use the funds to establish a part-time position responsible for planning, developing and implementing compost programs at 18 prison sites with adjacent farms. The position will work collaboratively with the Environmental Services and Agribusiness units, as well as facility staff, to support the growth of composting programs at these sites. In addition, select DOC staff will attend training to become certified compost operators in order to continue the oversight of this program once the grant period ends.

In 2017, VADOC facilities produced more than 16,400 tons of waste costing the agency nearly one million dollars in landfill fees. This program aims to reduce the amount of landfilled waste in the target facilities, improve the condition of soil nutrients and ultimately save agency resources.



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