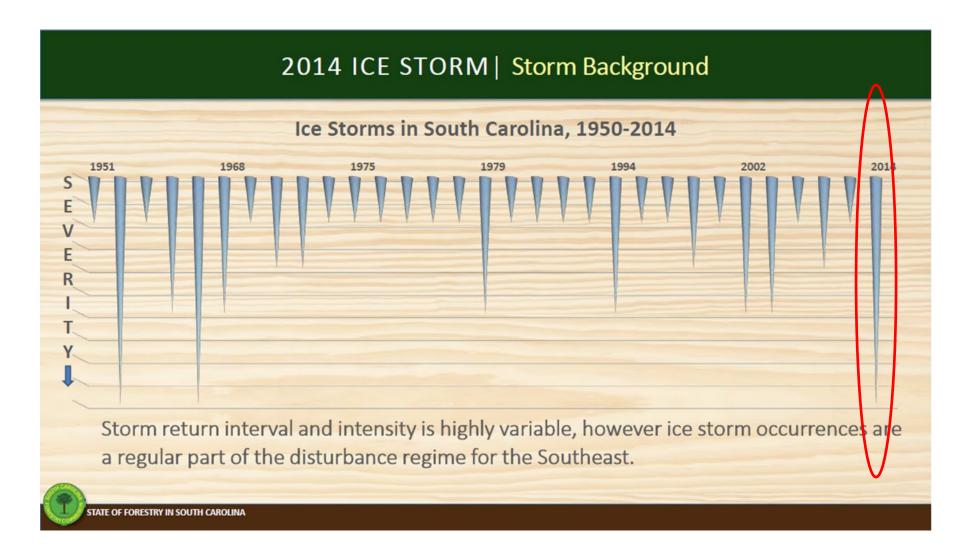
Opportunities for Storm Wood Debris Reuse

Liz Kress Sullivan

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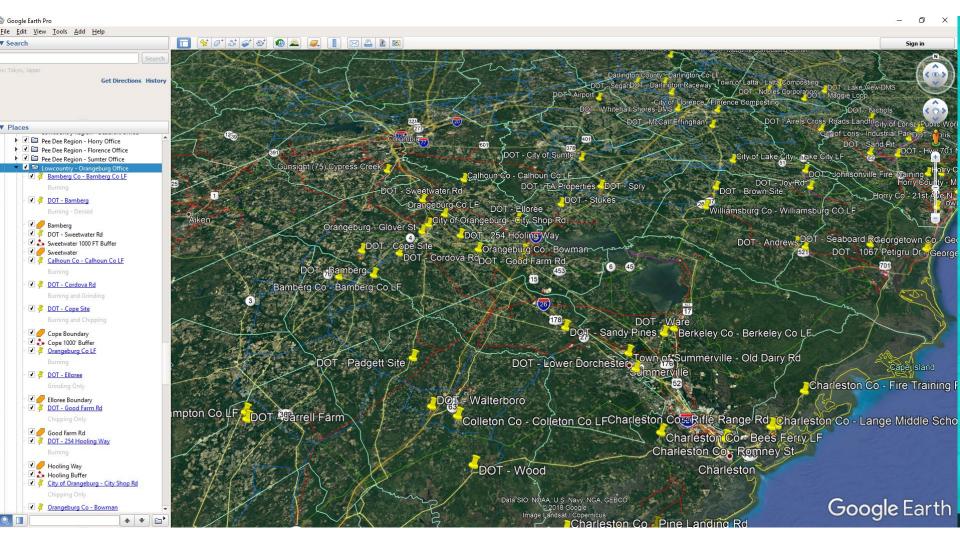
843-442-8869 (cell)

Background



Wood Wastes

- Emergency Response Locations



By the time we were aware of these locations, it was too late. Collections were made without meeting any useful specs. Notice notes: Bamberg Co LF – Burning, Calhoun Co LF – Burning, DOT-Cordova Rd – Burning and Grinding.

Storm debris piles

| Storm Debris Sites Rejected by EDF | | | | | |
|------------------------------------|----------------|------------------------------------------------|------------------------------------------------------|------------------------------------------|----------------------------|
| | Estimated | | | | |
| Site | Volume as Tons | Why Rejected | Contact | Product finally moved to | |
| Summerville | 3,000 | plastics, bottles, paper | Dorchester Co- Matthew Halter 843-832-0070 | unknown | |
| Allendale | 10,000 | plastics, bottles, paper | City of Allendale/ JB Coxwell/ Joe Mold-803-686-1653 | farmers field | |
| Windsor | 5,000 | ground too large, plastics, paper | Al McClaran 864-561-7797 | unknown | |
| Bowman Hwy 210 | 15,000 | ground too large, rubber, plastic, paper | Levin Gaston 352-494-6918 | Sims Bark @ Bowman, SC | |
| Norway | 15,000 | ground too large, plastic, paper | Levin Gaston 352-494-6918 | Sims Bark @ Bowman, SC | |
| Kingstree | 8,000 | plastics, bottles, paper | Curt Causey 843-296-1509 | RockTenn- Florence, SC | |
| City of Orangeburg | 5,000 | plastics, bottles, paper | City of Orangeburg | Council Energy by John Wolston | John's number 803-309-2694 |
| Cross, SC (Berk Co) | 10,000 | ground too large, plastic, paper | Mark Schlievert (Berkeley Co) 843-312-0095 | buried Berkely Co landfill | |
| Berk Co LF site | 10,000 | ground too large, plastic, paper | Mark Schlievert (Berkeley Co) 843-312-0095 | buried Berkely Co landfill | |
| Manning, SC | 5,000 | plastic bags | Clarendon Co Land Fill | GP Alcolu, SC | |
| Aiken | 40,000 | yes, Dan also looked at huge piles here. | Tim Coakley | IP, Augusta and Resolute Augusta | |
| | | (Sav Riv/Ameresco was not able to use it all.) | | | |
| Williston | 5,000 | plastics, bottles, paper - some was clean | Jay Bingham | unknown - Jay did not supply as promised | |
| Total Tons 131,000 | | | | | |
| | | Bottles = water or drink bottles | | | |
| | | bottles - water of drink bottles | | | |

paper = bags, cardboard, etc.
plastics = Walmart bags, black garbage bags
Also an occasional oil container, empty



Would-a, Could-a, Should-a

- Keep plastic bags out of grinder
- Refuse to pick up if in plastic bags
- Refuse to pick up if contained trash of any kind

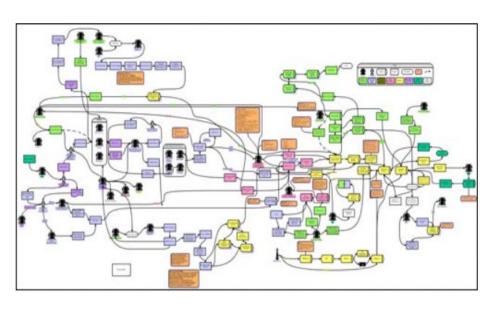
Why not?

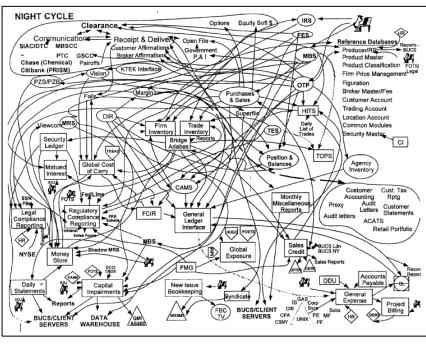
- Get the emergency people (SCDOT in 2014) the specs of nearby plants that could take material
- Have pre-determined list of options for waste wood with specs

Current Responsibility for Vegetative Storm Debris Clean-up

The Contracting

The Specifications





Current Responsibility for Vegetative Storm Debris Clean-up

The Contracting

- DOT has 6 emergency contractors already in place (w/contracts) for Disasters with Significant Amounts of Debris
- Some special agreements exist for other gov't entities to handle the contracts (Charleston, Horry)
- FEMA still pays the bills, <u>as long as all</u> the paperwork is done right
- DOT has contracted with three inspectors to make sure all the paperwork is done right
- Supervision of the contracted clean-up is by local emergency or government designated personnel

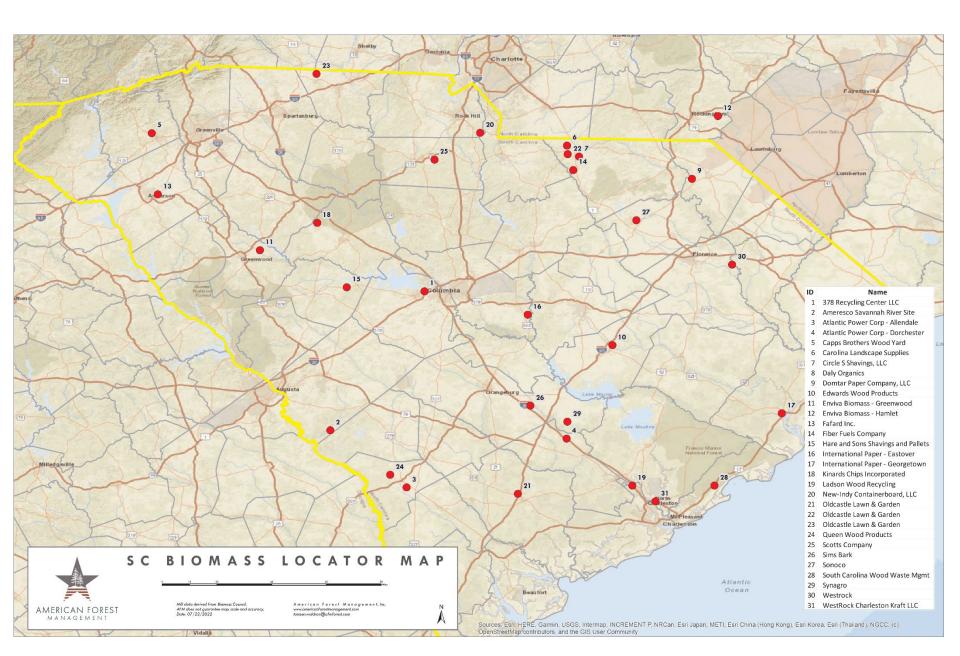
The Specifications

- DOT contract terms have some conflicting guidance on disposal. Terms allow the contractor to sell wood debris and keep the sale income. DOT guidance also states a preference for burning wood debris at collection site, but notes that a DHEC permit must be obtained
- DOT/FEMA guidance stipulates not to include plastic bags or contaminants during collection
- Specifications for grinding are not stated in the contracts that have been executed. Final guidance may come when a disaster occurs and the specific work to be done is determined

SC Biomass Industry

- Includes companies that utilize waste wood and wood residues to produce energy and bio-products.
- Fuel wood users include companies that make electricity and process heat/steam.
- Utilizing abundant fuel wood instead of coal or natural gas is one way to keep new carbon from reaching the atmosphere (i.e., keep it in the ground)
- The jobs from wood fuel use are here in SC, not TX, WY, OK, WV, NM, PA, IL or ND

SC Users of Wood Debris



Details for Users 1-15

| Current Facilities th | at Utilize Bi | omass - 7-22-22 | 2 | | | | | | | |
|---------------------------------------|----------------------------------|-----------------------------------------|-----------------|-------|--------------------------------------------|---------------------|-----------|-------------------------|--------------|----------------------------------------|
| Name | | Address | | | County | Contact #1 | | | | |
| 1 378 Recycling Center LLC | Shavings & Mulch | 5009 Sunset Blvd | Lexington | 29072 | Lexington | Karson | C orley | 0 wner | 803-513-0982 | N /A |
| 2 Ameresco Savannah River Site | Biomass Energy | Burma Road Bldg 705-4G | Jackson | 29831 | A ike n | Jon | Puckett | Procurement Manager | 803-393-1001 | jpuckett@ameresco.com |
| 3 Atlantic Power Corp - Allendale | Biomass Energy | 307 Airport Loop | F airfax | 29827 | A lle nd a le | C harlie | Pierce | Manager | 843-560-6790 | cpierce@atlanticpower.com |
| 4 Atlantic Power Corp - Dorchester | Biomass Energy | 609 Seven Mile Road | Harleyville | 29448 | D orches ter | C harlie | Pierce | Manager | 843-560-6790 | cpierce@atlanticpower.com |
| 5 Capps Brothers Wood Yard | C hip m ill | E non Church Road, E asley, SC 29640 | Landrum | 29356 | G re e n ville | Frank | Capps | President | 864-457-2325 | capps brothers @winds tream . net |
| 6 Carolina Landscape Supplies | Shavings & Mulch | 232 Market Road | P age land | 29728 | C hesterfield | Michael | P lyle r | 0 wner | 843-672-7300 | arbor@shtc.net |
| 7 Circle S Shavings, LLC | Shavings & Mulch | 1201 Sims Road | Pageland | 29728 | C hesterfield | R ic ky | G riffin | P lant Manager | 843-672-7133 | ric kygriffin@circle-s-ranch.us |
| 8 Daly Organics | Mulch, soil amendments | 1465 Bellinger Hill R d | Hardeeville | 29927 | Jasper | Madison or James | D aly | O wners | 912-421-8507 | Madison@daly-organics.com |
| 9 Domtar Paper Company, LLC | Pulp and Paper | 585 W illamette Road | B ennetts ville | 29512 | Marlboro | Scott | Smearman | Procurement Manager | 843-479-6531 | s c o tt.s m e arm an@dom tar.c o m |
| 10 E dwards Wood Products | | 3467 Highway 301 N | Manning | 29102 | C larendon | Ben | Jordan | Gen Mgr | 803-473-4868 | benjordan@ewpi.com |
| 11 Enviva Biomass - Greenwood | Biomass Energy | 200 E nviva W ay | Greenwood | 29646 | G reenwood | Joe | Hammond | C om m odity Manager | 864-377-5888 | joseph.hammond@envivabio mass.com |
| 12 Enviva Biomass - Hamlet | Biomass Energy | 1125 NC -177 | Hamlet.NC | 28345 | Richmond Co NC (near Marlboro Co SC) | | Rogers | C om m odity Manager | 910-557-2964 | chad.rogers@envivabiomass com |
| 13 Fafard Inc. | Soil amendments, potting soil | 1471 Amity Road | Anderson | 29621 | Anderson | R ic ky | Laws | P It Manager | 864-224-7989 | N /A |
| 14 Fiber Fuels Company | Shavings & Mulch | 755 W . Armory Road | J effers on | 29718 | C hesterfield | Chance | Underhill | Vice President | 843-658-3960 | chance@fiber-fuels.com |
| 15 Hare and Sons Shavings and Pallets | Shavings & Mulch | 2631 Columbia Hwy | Batesburg | 29006 | S a lu da | John | Hare | 0 wner | 803-622-6440 | lois hare @yahoo.com |

Details for Users 16-31

| 16 International Paper - Eastover | Pulp and Paper | 4001 McCords Ferry Road | E astover | 29044 | R ic hland | Michael | W alker | Fiber Supply Manager | 803-353-7678 | m ichael.walker@ipaper.com |
|--------------------------------------------|---------------------------|-------------------------------------------------|--------------|-------|----------------|----------|-------------|-------------------------|---------------|---------------------------------------|
| 17 International Paper - Georgetown | Pulp and Paper | 1515 Bourne Street | Georgetown | 29440 | G eorgetown | J us tin | D e m ite r | Fiber Supply Manager | 843-520-5609 | jus tin.dem iter@ipaper.com |
| 18 Kinards Chips Incorporated | C hip m ill | 28026 Highway 76 | K in ards | 29355 | Newberry | Jessie | Lusti | W ood Buyer | 843-729-7596 | Jessiel@thepricecompanies. com |
| 19 Ladson Wood Recycling | | 9421 Highway 78 | Ladson | 29456 | D orches ter | C hip | Keller | 0 w ner | 843-67 0-4500 | chips_chippers@hotmail.com |
| 20 New-Indy Containerboard, LLC | Pulp and Paper | 5300 Cureton Ferry Road | Catawba | 29704 | York | Frazier | Baldwin | Procurement Manager | 803-981-8375 | fraz ier.baldw in@new - indycb.com |
| 21 O Idcastle Lawn & Garden | Shavings & Mulch | 372 Upchurch Lane | W alterboro | 29488 | C olle to n | John | Bigelow | Procurement Manager | 843-584-1150 | dean.sparks@oldcastle.com |
| 22 O Idcastle Lawn & Garden | Shavings & Mulch | 1332 High Point Church Road | Pageland | 29728 | C hes terfield | D avid | 0 liver | Procurement Manager | 863-226-8336 | david.oliver@oldcastle.com |
| 23 _{O Idcastle Lawn & Garden} | Shavings & Mulch | 773 Buck Shoals Road | G a ffn e y | 29728 | C herokee | D avid | 0 liver | Procurement Manager | 843-672-5553 | gerald.catoe@oldcastleapg.c om |
| Queen Wood Products | Horse bedding | 1900 Appleton Road | Allendale | 29810 | A lle n d a le | Michael | Mathis | 0 wner | 803-584-4777 | queen@barnwellsc.com |
| 25 Scotts Company | Mulch, Soil Amendments | 1489 Beltline Road | C hester | 29706 | C hester | Ken | Bradford | Plant Manager | 803-581-4511 | http://www.scotts.com |
| 26 Sims Bark | Mulch | 172 Arista R d | Bowman | 29018 | O rangeburg | | | | 803-829-1200 | |
| 27 Sonoco | Pulp and Paper | 1 North 2nd Street | Harts ville | 29550 | D arlington | T im | Kirven | Procurement Manager | 843-307-0302 | tim o thy.kirven@sonoco.com |
| 28 South Carolina Wood Waste Mgmt | Lumber and Mulch | 6245 Highway 17 | Awendaw | 29429 | C harles to n | | | | 843-343-8267 | |
| 29 Synagro | S o il Additives | Boyer R d | Harle yville | 29448 | D orches ter | Matthew | T a b is z | Bus Dev Mgt | 443-248-3827 | m tabis z @SYNAGRO.com |
| 30 W estrock | Pulp and Paper | 7320 Mill Road | F lorence | 29502 | F lorence | Tom | Lassiter | Procurement Manager | 843-667-6252 | tom.lassiter@westrock.com |
| 31 W estR ock C harleston Kraft LLC | Pulp and Paper | 5600 Virginia Avenue, North Charleston 29406 | C harles ton | 29423 | C harles ton | J im | Avent | Procurement Manager | 843-560-0124 | james.avent@westrock.com |

SC Forestry Industry

- South Carolina's forest industry contributes
 \$21.2 billion to the state's economy
- Of all the state's industries, it is ranked #1 in jobs (98,000!), #2 in labor income, and #3 in direct economic output
- 63% of SC is forested -13 million acres
- 87% of this forested land is privately held
 - So, what does this mean to you?

SC Forestry Industry

- Private landowners need a little income to hold forests and not develop them
- Using the unmerchantable wood and residues from logging allows the land to be replanted in trees, and quickly
- Using trees and replanting them will keep the land in forests
- Wood used in products is sequestered carbon

Wood Fiber Value Chain

Lowest 24 ft. Market unmerchantable (30%) Value Pulp/fuel 24 ft. low-grade lumber (30%) 24 ft. saw logs (30%) **\$\$\$** Highest Market 8 ft., saw logs/veneer (10%) Value

Stored or Sequestered Carbon

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Stored or Sequestered Carbon

Stored or Sequestered Carbon

What to do, and Why?

- Ask your emergency team how this option can be evaluated BEFORE the next storm event
- Meet with the two or three nearest wood debris users (within 50 miles) to discuss this
- Ask your FEMA inspector to look for adherence to the rules about contamination, and quality – not just paperwork.
- Why? support South Carolina business, save money, and choose to improve the environment.

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