



**Summit for Recycling
&
Rocky Mountain Composting Symposium**

**Colorado Organics Management
Plan - Sneak Peak & Next Steps**

August 23 - 24, 2022 Aurora, Colorado



Summit for Recycling & Rocky Mountain Composting Symposium

AGENDA

11-11:30 Update from the CDPHE team

Jace Driver, CDPHE - history, intent, update
Lisa Skumatz, SERA - key data highlights

11:30-12 Regulatory focus

Juri Freeman, RRS - looking at other states' regulations
Frank Franciosi, USCC - new USCC model compost rule

12-12:30 Open discussion

Next steps for Colorado Composting Council/Recycle Colorado
Policy steps?

Background

- **Reality** - too much organic waste getting landfilled in Colorado, unequal access
- **Goal** - circular compost economy/system to make best use of organic waste resource
- House bill introduced in 2020 legislative session (COVID-shortened)
- Recycle Colorado requested CDPHE take it on in their workplan for FY21/22
 - Generation, infrastructure, end-market gap analysis
 - Create a plan - infrastructure development, incentivizing use of finished compost



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Background and Plan Aims

August 23 - 24, 2022 Aurora, Colorado



Organics Management Plan Background

- Based on the key components from HB20-1047
- Secured funding from the Recycling Resource Economic Opportunity Program
- Contracted with Tetra Tech, with SERA and RRS as subcontractors
- Project began in August of 2021, slated to be completed August of 2022
- At roughly 40%, organics waste comprises the largest MSW stream currently being landfilled
- Organics can be managed locally

Organics Management Plan Aims

- Identify current areas of generation, processing, and disposition of four organics waste categories (MSW, biosolids, forest waste, agricultural waste)
- Provide a needs and gap analysis
- Cost analysis for organics waste diversion
- Convene stakeholders to gather input on priorities throughout the state
- Regulatory evaluation
- Develop a framework for increasing organics diversion statewide

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(placeholder for Lisa's recorded video)



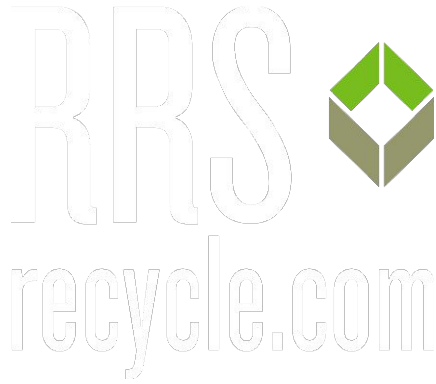
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August 2022

ORGANICS MANAGEMENT PLAN
RECYCLE COLORADO SUMMIT

August 23 - 24, 2022 Aurora, Colorado





Managing change
in a
resource-constrained
world.



ORGANICS
MANAGEMENT



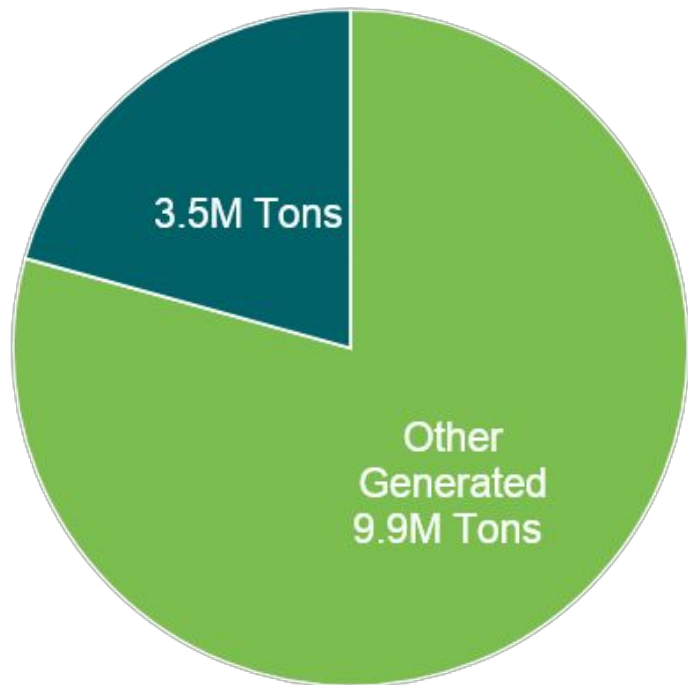
WASTE
RECOVERY



GLOBAL
CORPORATE
SUSTAINABILITY

since 1986

ORGANICS GENERATED, DIVERTED, AND DISPOSED

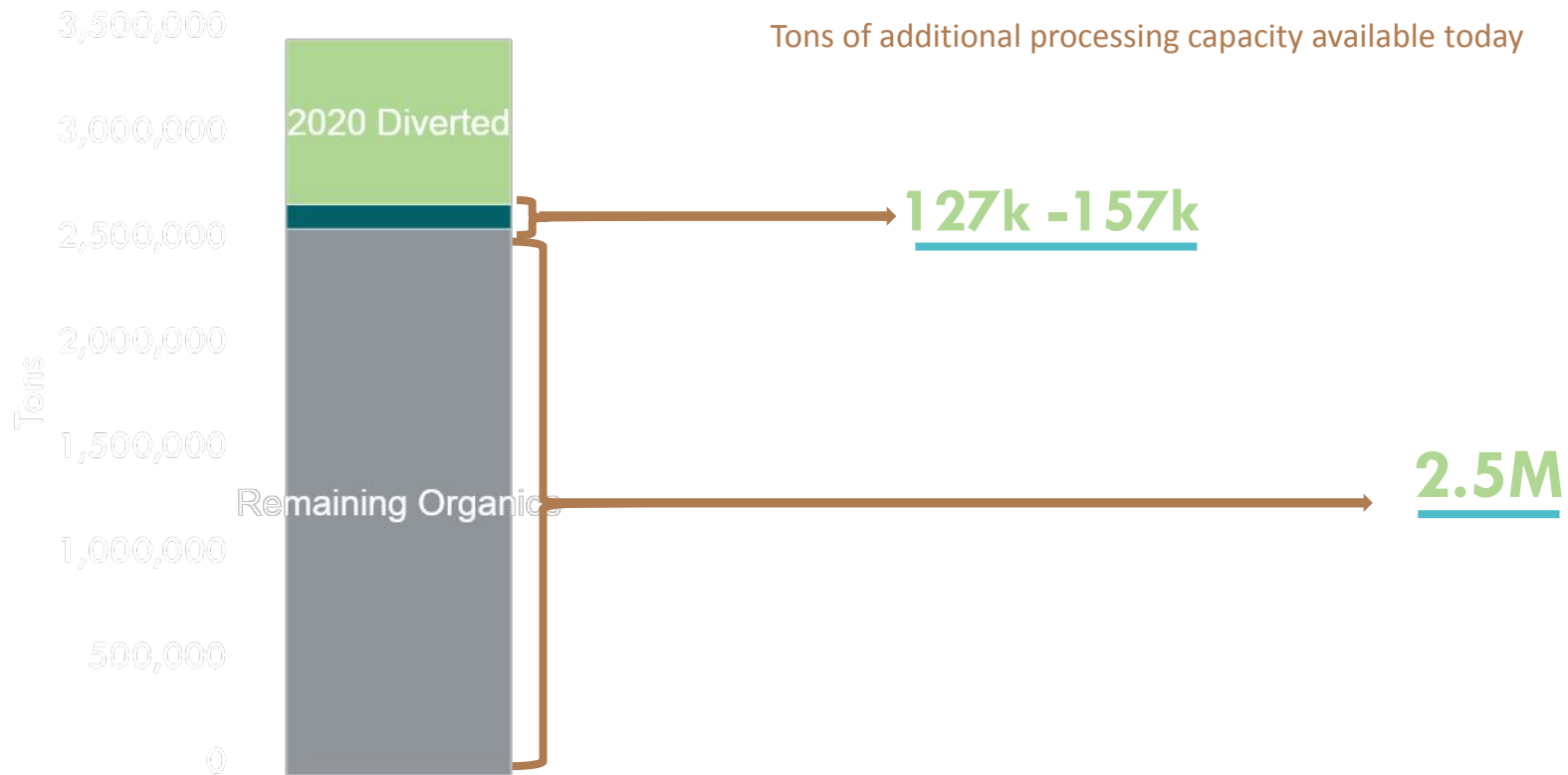


WHAT IS THE ISSUE

- Lack of existing infrastructure is a major barriers to increased organics recovery
- COCC reported that diversion has been hindered by the permitting process
 - Costs
 - Timeline
 - Local siting / permitting
 - Moving from CESQ



TOTAL AVAILABLE COMPOST PROCESSING CAPACITY



A photograph of a young plant seedling with several leaves and a complex root system exposed in dark soil. The background is a light, overcast sky. A teal rectangular box is overlaid on the image, containing the title text.

COLORADO REGULATIONS

REGULATED ORGANICS DIVERSION OPTIONS



COLORADO REGULATIONS

- Regulatory structure and permits are based on the defined feedstock types and amounts.
 - Feedstocks are classified as Type 1, 2, 3, and Agricultural Waste
 - Facilities are classified as Class 1, 2, 3

Class	Material	Size & Regulations	#
(CESQ)	Type 1 and/or Type 2	<ul style="list-style-type: none"> Must register with CDPHE, if operating commercially Up to 100 cubic yard of Type 1 onsite or in process with up to 5 cubic yards of Type 2 If operating commercially, must keep records of feedstock types and quantities, report annually, submit a closure report if ceasing operations and sample / test finished compost 	15
Class 1	Type 1 (Limited Type 2)	<ul style="list-style-type: none"> Less than 50,000 cubic yards of feedstock onsite (not including finished compost <u>OR</u> Compost SSO and/ or food residuals generated on site with less than 5,000 cubic yards of SSO onsite and composting area less than 2 acres in size Composting at the site of generation or an agricultural zoned property that does not meet the regulatory exemptions for permitting 	11
Class 2	Type 1 & Manure	<ul style="list-style-type: none"> Process Type 1 feedstocks and manure and have less than 50,000 cubic yards onsite at any one time 	3
Class 3	Type 1, 2 and/or 3	<ul style="list-style-type: none"> Can include any feedstock material types Most stringently regulated class in the state 	18

FILLING THE GAP?

CESQ

<100 cuyds, 5 yds of food residuals

*Maintain records,
register, report on
tons*



CLASS 3

All feedstocks,
no volume limit

*EDOP, Certificate
of designation*

A young plant with several green leaves and a complex root system is shown growing out of dark, rich soil. The background is a light, overcast sky. A teal rectangular box is overlaid on the image, containing the text 'REGULATIONS ELSEWHERE' in orange, uppercase letters. A thin orange line is positioned below the text box.

REGULATIONS ELSEWHERE

TIERS AND CLASSES

	CO	MA	MD	MN	WA
TIERS / CLASSES	<ul style="list-style-type: none"> - 3 permitted classes - Exempt - CDA (Ag.) 	<ul style="list-style-type: none"> - Exempt (small and ag.) - General Permit - RCC Permit 	<ul style="list-style-type: none"> - 3 tiers of facilities - Sub-tiers based on volume 	<ul style="list-style-type: none"> - Exempted, permit by rule - 2 tiers of state permitted 	<ul style="list-style-type: none"> - 2 types only; Exempt and Permitted

	CO	MA	MD	MN	WA
EXEMPTIONS TO STATE PERMIT	<p>< 100 cubic yard of Type 1 onsite or in process with <10 cubic yards of Type 2</p> <p>Backyard composting</p> <p>On-site ag.</p>	<p>Activities located at an agricultural unit</p> <p>Small composting operations not at a residence, composting <20 cy/week or <10 tons/week generated on-site</p> <p><10,000 cy on-site leaf and yard waste</p> <p>Backyard composting</p>	<p>Compost only natural wood</p> <p><5,000 sq ft exemption, allows food and yard waste</p> <p>Composting of mortalities for emergency or governmental ops</p> <p>Backyard composting</p>	<p><120 cubic yards on site at any one time, any material</p> <p>Backyard composting</p>	<p>All organics feedstocks <250 cubic yards on-site, <1,000 cubic yds / year</p> <p>Yard debris, manure, crops <500 cu yds on site, 2,500 cu yds / year</p> <p>Ag. on-farm including yard waste or zoo materials</p> <p>Backyard composting</p>
GENERAL PERMIT (Do not require specific site permit)	N/A	<p><105 tons per week, no more than 30 tons per day of Group 2 organic materials (<i>veg, food, grass, manure, etc.</i>)</p> <p><100 tons / day AD</p>	N/A	Yard waste only composting facilities	N/A

GENERAL PERMIT OR PERMIT BY RULE



- Designed to make it easier to site and grow
- Available in MN and MA
 - MN: Yard Waste only
 - MA: <105 tons / week food or AD <100 tons / day
- Requires min. operating standards, reporting, compliance with local regs.
 - Does not require engineering plan

TAKE AWAYS



- There is a need for additional processing capacity in CO
- Regulations and permitting is a noted barrier
- Gap in in a mid-tier
- Recommend re-visiting regulatory structure



JURI FREEMAN

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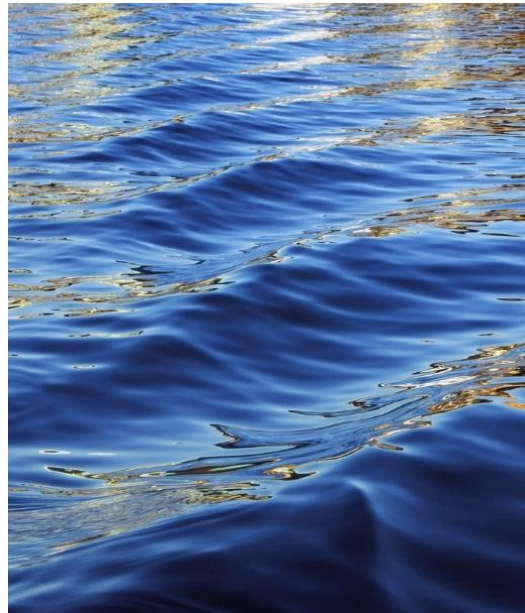
JFREEMAN@RECYCLE.COM



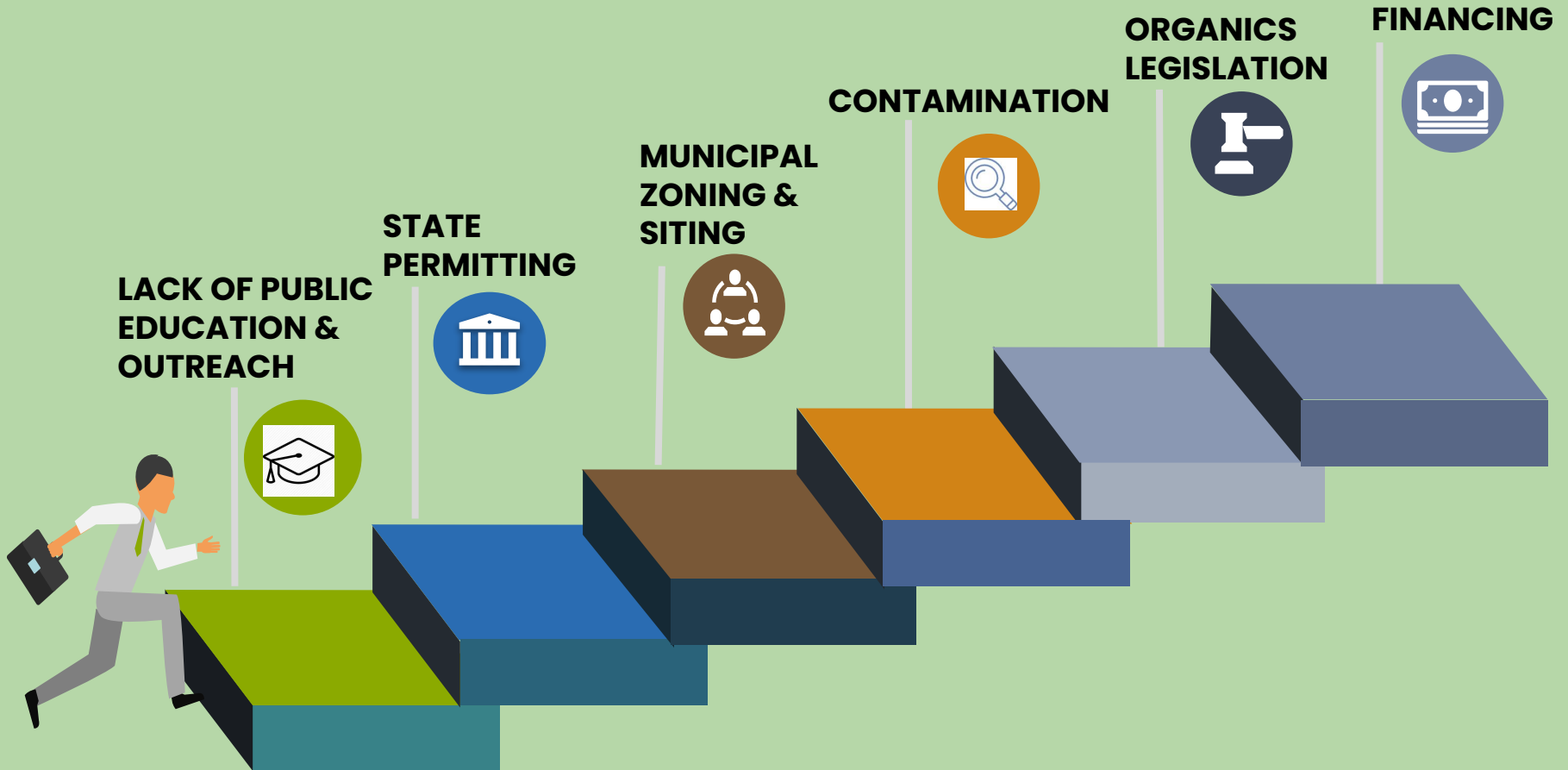
Frank Franciosi
Executive Director



US Composting
Council



HURDLES TO INFRASTRUCTURE GROWTH





LACK OF PUBLIC EDUCATION & OUTREACH

ISSUES:

- No National ad campaigns for composting & compost use

DELIVERABLES:

- Working with corporate leaders and NGO's on a national on a public outreach and education strategy
- CLIF Bar Consumer Survey





STATE PERMITTING

ISSUES:

- Some states have none
- Some states have old rules
- Some states are revising rules
- Model Rules 1.0 is 12 years old

DELIVERABLES:

- Online updated database of States
- Model Composting Rules 2.0
- State Regulator forum



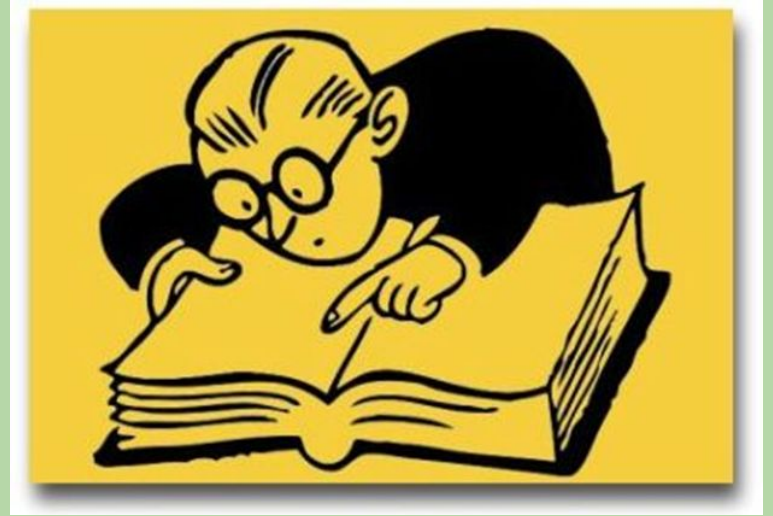
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Model Compost Rules 2.0

Definitions-

- Agricultural composting
- Methods
- Feedstocks
- Composting-USCC/AAPFCO
- Structures
- Certification
- Compostable
- Curing & maturity





Model Compost Rules 2.0

Exemptions-

- Size/Feedstock type
- Backyard Composting
- Ag exemption- volume and frequency
- Yard Trimming Exemption
- Small scale composting





Model Compost Rules 2.0

Product Testing-

- Volume
- Frequency
- Type of Facility
- Parameters
- EPA 503's
- Accredited labs provided
- USCC Seal of Testing Program approved





Model Compost Rules 2.0

Annual Reporting Requirements-

- Number of years permit is in effect
- GPS coordinates
- Tipping fees
- Days and hours of operation
- Method of composting
- Amount feedstocks received by unit
- Breakout of feedstock type
- Compost sold
- Availability of reporting data





Training & Certification-

- Trained operator required
- Curriculum required
- State training provided
- Frequency required
- Number of hours required
- Testing & certification requirements





Model Compost Rules 2.0

Compost Facility Operations Plan-

- Process description
- Operations statement
- Facility layout
- Methods for implementing and monitoring control measures
- Description of emergency provisions
- Capacity, feedstock pile sizes, and storage times
- Operation capacity
- Identification of facility operator
- Proposed site restoration activities
- Odor Impact Minimization Plan





MUNICIPAL ZONING & SITING

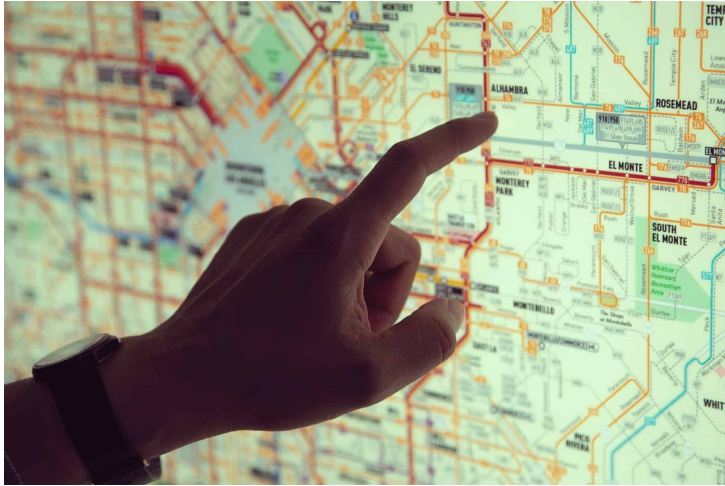
ISSUES:

- No national zoning template
- Difficult to plan out future facilities

DELIVERABLES:

- First National Model Zoning Template
- Vetted by the American Planning Association
- American Public Works Association – Panel Presentation





MODEL ZONING

- Scan of Zoning Ordinances across country
- Look for Best Practices for industry
- Debate and consensus around “forward looking” rules
- Focus: On-farm, Small Site, Large Site



MODEL ZONING

- **Definitions**
- **Permit Types**
- **Land Uses**

Allowable Composting Uses and Permit Requirements

Permit Types →	A = Allowed by Right		AU = Allowed as Accessory Use		SP = Special Permit (Conditional Use)			N = Use Not Allowed			
Zoning Classification →	Land Use Permit Required by Zoning Classification										
Land Use ↓	Industrial		Residential				Agricultural		Commercial		
	Manufacturing Heavy	Manufacturing Light	Manufacturing General	Rural	1-3 Family	Multi-family	Mixed Use	Manufacturing Supplies and Services	Urban Farming	Food Scraps Generating Establishments	
Large Composting											
Open air - Landscaping residue and similar materials only	A	SP	SP	N	N	N	N	SP	N	SP	
Open air - Other materials according to state permit	A	SP	SP	N	N	N	N	SP	N	SP	
In-vessel systems (materials according to state permit)	A	SP	SP	N	N	N	N	SP	N	SP	
Enclosed building (materials according to state permit)	A	A	A	N	N	N	N	SP	N	SP	
Small Composting											
Open air - Landscaping residue and similar materials only	A	A	A	SP	N	N	N	A	SP	AU	
Open air - Other materials according to state permit	A	A	A	SP	SP	SP	SP	A	SP	AU	
In-vessel systems (materials according to state permit/exemptions)	A	A	A	SP	SP	SP	SP	A	A	AU	
Enclosed building (materials according to state permit/exemptions)	A	A	A	A	SP	SP	SP	A	A	AU	
On Farm Composting											
Open air, In-vessel systems - Materials according to state environmental regulations	N	N	N	N	N	N	N	A	A	N	
Enclosed building - Materials according to state environmental regulations	N	N	N	N	N	N	N	A	A	N	

MODEL ZONING TEMPLATE





CONTAMINATION

ISSUES:

- No national public education & outreach
- Poor source separation
- Added cost to hand sort
- Inconsistent identification of compostable vs. non-compostable

DELIVERABLES:

- 2021 Composter Compostables Summit –Composter’s Tool Kit
- Joint BPI/USCC Stakeholders Group to develop model legislation on labeling & identification of compostables





PBPC Plant Based
Products Council



ORGANIC LEGISLATION

ISSUES:

- No federal funding for Composting infrastructure & research
- Poor relations with USDA & EPA
- State EPR bills

DELIVERABLES:

- The Compost Act
- The Recycling & Composting Accountability Act
- USDA-NRCS Conservation Practice Standard 336 Soil carbon Amendment



ORGANIC LEGISLATION

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FINANCING

ISSUES:

- **Fragmented new industry**
- **Little state or national economic data**
- **No federal funding**
- **No NAICS code**

DELIVERABLES:

- **New "Compost Manufacturing NAICS code **325315****
- **EREF State of Compost Study 2023**
- **Facility financing options white paper**



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Thank You



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Advocate • Connect • Educate • Market





**CAPTURING CARBON
RENEWING SOIL**

COMPOST 2023
USCC Conference & Tradeshow
January 24-27 Ontario, California



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Plan Recommendations and Path Forward

August 23 - 24, 2022 Aurora, Colorado



Organics Management Plan Recommendations

- Focus on residential and commercial food and yard waste recovery
- Utilize existing grants to fund infrastructure development
- Finished product consistency via updated standard
- Regulatory change to alleviate burden for food waste composting
- CDA coordination; work with STAR Program to potentially subsidize compost use, and consider CSU study on STAR Program farms
- Regional policy considerations, from bans to consistent funding sources

Path Forward

- Develop a timeline for implementing actionable plan elements
- Work with stakeholders to provide guidance and assistance in achieving local/regional goals
- Continued support of organics infrastructure development through state grant programs
- Explore end market development opportunities (CDOT, Ag, municipal buyback)
- Potential legislation?

References

- [State-by-state small compost facility permitting rules](#) (SELC)
- [Maryland](#) “Tier 2-small” <10,000 cubic yards finished compost/year
- [Washington](#) tiers starting at 1000 cubic yards/year
- New Hampshire Permit by Notification if following ILSR best practices is additional step between conditionally exempt and Tier 2 small ([BioCycle Brief](#))