



# Sustainability Office

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## Boulder County Resource Conservation Advisory Board Meeting Minutes – September 28, 2016

### Present:

Darla Arians – Boulder County  
Jack DeBell – CU Recycling  
Holly Hughes – Ward  
Charles Kamenides – Longmont  
Neal Lurie – Center for Resource  
Conservation  
Dan Matsch – Lyons  
Chris Pelletier – Nederland  
Tim Plass – At-Large  
Stephanie Walton – Lafayette  
Mark Persichetti - Louisville  
Suzanne Jones – Eco-Cycle  
Russ Callas – At-Large  
Michael Donovan – At-Large  
Bryce Isaacson – Western Disposal  
Shari Malloy – At-Large

### Active Members Not Present:

Bridget Johnson – Jamestown  
Martin Toth - Superior  
Lisa Morzel – City of Boulder  
Shirley Garcia - Broomfield  
Jeff Stewart – Waste Connections  
Heather Wood – At Large

### RCAB Staff Liaison:

Leigh Cushing – Commissioners'  
Office/Sustainability

### Guests:

Jamie Harkins – City of Boulder  
Anne Peters – Gracestone, Inc  
Kurt Lange – Clear Ecos  
Bradley Dallam – City of Lafayette  
Marcia Crary – Longmont resident

### 1. **Call to Order**

Chair Charles Kamenides called the meeting to order at 4:50 pm

### 2. **Approval of Minutes August 31, 2016**

No changes, minutes were approved 4:52 pm

### 3. **Public Comment –**

- **Nederland** – Composting at town facilities, 1500 lbs recycling in town buildings to date, working on adding a public composting receptacle at town park
- **Lafayette**- Peach Festival in August achieved an 84% diversion rate. Question to group: How do municipalities handle requests for ZW help? (City of Boulder and Boulder County have created zero waste event planning guides to share, Town of Lyons has used this guide to modify for their own residents/events, will share with Stephanie)
- **University of Colorado**– Hosting a group of plastics recyclers, Jack can connect if anyone is looking for high quality recycled-content plastic bags, talk to Jack.
- **Boulder County** – Zero Waste funding applications were released, more information can be found here:

<http://www.bouldercounty.org/env/sustainability/pages/zerowastefunding.aspx> . New format this year will include having all questions submitted in writing and posting formal answers online and electronically, in lieu of hosting a mandatory meeting for all applicants.

- **Longmont** – Have begun signing up residents for curbside compost. First 4500 signups get a free kitchen compost bin. Services are residential only, and do not include MFU's as of now. Signs ups are steady so far, about 200 residents have signed up.
- **Eco-Cycle** - turned 40 last month, 275 people attended the celebration event.
- **CRC** - turns 40 on Nov 16<sup>th</sup>, a celebration invite will be forthcoming

#### **4. Priority Topic: Commissioners Response to Carbon Sequestration Proposal**

Proposal was approved by Commissioners, and they gave the go-ahead to start with Phase 1 (see proposal attached at end of minutes). Phase 1 includes putting together a stakeholders group that will include representation from RCAB, Parks and Open Space, and the CSU Extension Office, among other interested parties. Tim, Dan and Leigh will work on next steps to share at the next RCAB meeting.

#### **5. Special Topic: Infrastructure**

The RCAB Infrastructure working group will reconvene to start looking at potential funding opportunities for a C+D Recycling facility. This has been identified as an immediate need, and opportunities may exist outside of potential Sustainability Tax funding. Leigh will send out an email to see who is interested in participating.

#### **6. Special Topic: Boulder County Comprehensive Plan Solid Waste Element Update**

Anne Peters from Gracestone, Inc. facilitated a discussion on the BCCP Solid Waste Element Update (see notes from discussion below after carbon sequestration proposal). Anne will be working to create a first draft based on suggestions, and RCAB will have more opportunity to weigh in. Leigh and Charles will send an email to recruit interested parties.

#### **7. Adjournment:** Charles Kamenides called the meeting to a close at 7:00 pm

From: Boulder County Resource Conservation Advisory Board

To: Board of County Commissioners

Date: August 31, 2016

## PROPOSAL TO CREATE A PILOT PROJECT TO ANALYZE CARBON SEQUESTRATION POTENTIAL OF SOILS IN BOULDER COUNTY.

### Whereas:

- Emerging research such as the [Marin Carbon Project](#) points to the practice of carbon sequestration in soils through compost application as a potentially powerful tool to mitigate climate change by absorbing excess carbon from the atmosphere;
- Carbon sequestration in soils is shown to have many co-benefits that can achieve overarching county climate goals such as greenhouse gas reduction, improved soil health, improved crop yields, increased water retention, and restoration of native plant and animal species;
- A “carbon credit” incentive program for land managers to sequester carbon such as the State of California’s’ [Carbon Market](#) can potentially stimulate and fund carbon sequestration practices and create additional sources of income for farmers and ranchers;
- Boulder County and the City of Boulder are uniquely situated to take advantage of such research and incentive models because of their extensive open space holdings in agricultural land, rangeland, and forest land;
- Boulder County soils, like the soils of much of the world, are depleted from their natural levels of soil carbon and organic matter;
- Boulder County adopted a goal of “Zero Waste or darn near” by 2025, and an estimated 40% of the solid waste stream is organic waste;
- Organic waste that is currently sent to landfills or diverted to compost or other organics management facilities outside of the county could be a valuable resource for carbon sequestration projects within the county;
- The existing carbon sequestration research is now at a point that it would benefit from additional trials in a variety of ecosystems and at a larger scale;

**Therefore,** the Boulder County Resource Conservation Advisory Board (RCAB) recommends that the Board Of County Commissioners investigate best options available for Boulder County to participate in and stimulate these exciting and hopeful developments in a Carbon Sequestration in Soils Pilot Program. RCAB sees a potential for two phases to participation.

Phase 1—Carbon Sequestration in Soils Program Design – Determine county goals for carbon sequestration in soils and specific steps to reach those goals, including the application of locally sourced compost to soils. Examine options for participation in the current voluntary carbon market or accessing climate benefit funds to stimulate carbon sequestration practices utilizing publicly owned county lands and leaseholds. Identify opportunities for enhancing the local economy through the pilot project and monetizing the value of the sequestered carbon. Investigate opportunities to further existing research through such a program. Assemble a team of stakeholders including county staff, Parks and Open Space leaseholders, an RCAB representative, members of the scientific and research community, potential funding partners and others.

Phase 2 – Carbon Sequestration Program Implementation. Partner with entities identified in Phase 1 to develop a county-wide carbon credit or climate benefit program. Implement carbon sequestration practices that can be adopted for local cropland, grazed grassland, and forested

land, and secure start-up and ongoing funding from sources such as a County Sustainability Tax, the Colorado Carbon Fund, Natural Resources Conservation Service and others.

It is recognized that crucial to success will be partnership with other entities, particularly to perform scientific trials. Potential partners include:

- Open Space Departments from all Boulder County municipalities;
- Colorado State University and University of Colorado;
- American Carbon Registry;
- Colorado Carbon Fund;
- Carbon sequestration researchers such as David Johnson of the Institute for Sustainable Agricultural Research at New Mexico State University;
- Local farmers and local food advocates;
- CIRES;
- NOAA Earth Systems Research Lab.

### **Further Background**

**Science** – Carbon sequestration potential in soils is yet to be examined rigorously by most land-grant universities. Results from small-scale research extrapolated over an entire region or world-wide show a potential for greatly mitigating the effects of climate change, at a fraction of the cost and risk of other wide-scale carbon mitigation options being discussed such as various geo-engineering schemes. These relatively simple land management practices include one-time compost applications, formulation of fungal-rich compost to be applied as an inoculant, application of biochar, cover-cropping, and no-till practices.

Key to success will be determining what level of scientific rigor is desirable and necessary for a pilot project, and with whom and how to achieve it.

**Local compost and compost markets** – Compost application to soils has been one of the most promising methods for increasing carbon sequestration capacity. Therefore, part of this investigation should be to look at how best to collect and process organics within the county to maximize the benefit of the proposed pilot project, including the creation of high quality compost from food waste.

Currently, only one permitted compost facility exists within Boulder County, owned by a private hauler, and dedicated primarily to serving select yard-waste and food-waste customers. The majority of the county's organic waste is trucked outside of the county to landfills or organics processing facilities. Local government diversion goals and particularly the City of Boulder's new Universal Waste Ordinance are intended to stimulate significantly greater levels of organics diversion from the landfill. Transporting organic material to processing facilities outside of Boulder County incurs both financial and GHG emissions costs that would not be incurred if the organics were managed within the county. Prioritizing localized materials loops, from raw material, to processing facility, to re-use should be given high priority.

## BCCP Solid Waste Element Update: Meeting notes 09/28/2016

**Context:** Boulder County is updating its Comprehensive Plan which helps shape and navigate land use and policy decisions impacting the County's future. The last time Solid Waste was addressed as an element of this plan was 1987 ("Solid Waste Element, SWE"). This project seeks to create a useful and dynamic set of elements that will now be called the Sustainable Materials Management Element (SMME). It is intended that the SMME will be a forward-thinking and useful guidance document, complementing the Boulder County Zero Waste Action Plan and other related documents.

**Purpose:** This Long List is meant to help inform the dialogue with the public and county staff about what the final content of the SMME will be. It is neither exclusive nor final as of the date at the bottom of this document.

**Note:** *This list is still being generated and as such is not sorted very well yet.*

**1. Foundation components** (*as drawn from the old Solid Waste Element & updated*) – **include intent/theme of waste reduction and diversion into that overarches the specific components; goals; reduce/reuse/recycle hierarchy.**

**Name of Element:** Sustainable Materials Management Element vs. Zero Waste Element; provide some options for group to decide

- 1.1. Environmental – should address environmental protection, regulatory compliance, concern re long-term care, Marshall Landfill Superfund site, HHW, GHG impacts, **reduction of waste stream, diversion goals**
- 1.2. Public Involvement – call for and commitment to public participation; **public education; carrot vs. stick policies**
- 1.3. Governmental Relations – engage and communicate – inter-agency, inter-governmental, and policy work at local, regional, state, & levels to address sustainable materials management policy, including waste reduction, diversion composting & recycling, and solid & hazardous waste issues.
- 1.4. Sustainable Materials Management (SMM) – addresses:
  - 1.4.1. County-owned &/or operated facilities that relate to SMM, including: transfer stations, drop sites, materials recovery facilities
  - 1.4.2. Relationship with and regulation of private and non-profit sector collection, processing, and management of discarded materials
  - 1.4.3. Use of landfills in adjacent counties
  - 1.4.4. Need for intergovernmental agreements
  - 1.4.5. Site acquisition
  - 1.4.6. Performance goals for disposal facilities

- 1.4.7. Need for planning using waste generation, population & land use in context of County goals
- 1.4.8. Financing mechanisms for SMM (user fees; taxes and surcharges; e.g., the old solid waste mill levy was drawn from property tax revenues; etc.)
- 1.4.9. Technical staff and RCAB

**2. Potential new components** (*right now DRAFT long list includes*):

- 2.1. Much of the above SWE, better updated with today's realities & technical knowledge
- 2.2. Ideas culled from benchmarked other communities
  - 2.2.1. Level of Service standards ++
  - 2.2.2. Long-range planning forecasting capacity needs for capital facilities (**existing and planned**), with related capital plan (**esp. C+D facility, debris management site, capital upgrades for existing facilities**) +++
  - 2.2.3. Achieve waste reduction +++++ - **include mandates**
  - 2.2.4. Green building requirements on front-end (in planning & materials acquisition for buildings) ++
    - 2.2.4.1. Support best building longevity
    - 2.2.4.2. Safe deconstruction and recycling at building end-of-life
    - 2.2.4.3. Disincentivize demolition of structures - **make sure wording is specific, alignment between city and county regulations and enforcement**
    - 2.2.4.4. **Include energy efficiency and other "green building" elements (or not; does it belong here, or just make a reference to it?)**
  - 2.2.5. **Strive to achieve sound financial basis - ex. Shingle recycling program; ensure that plan includes projects/programs that go beyond the financial feasibility if there's a true benefit to the community (toxic waste, mattress recycling, etc)**
  - 2.2.6.
  - 2.2.7. Capital improvements programming to meet rural areas' needs (**ex transfer stations; working collaboratively with all municipalities**)
  - 2.2.8. Consider creative funding included but not limited to: **use this as a sidebar, similar to Land Use plan**
    - 2.2.8.1. Tax incentives
    - 2.2.8.2. Public and private grants
    - 2.2.8.3. Land use controls and ordinances
    - 2.2.8.4. Multiple use and joint development practices
    - 2.2.8.5. Fee and less-than-fee acquisition techniques
    - 2.2.8.6. User fees
    - 2.2.8.7. Public/private partnerships
  - 2.2.9. In-depth analysis and evaluation of transfer stations serving BoCo leading to development and implementation of renovation plan for TS systems **vision: to support ZW mission, waste diversion, larger picture rather than operationally-focused. Encouragement of working in a regional capacity, regional solutions and collaborations**
  - 2.2.10. Climate change for SMM - actions and analyses to address: **state this as a goal, tool for measuring success**
    - Mitigation (**reduction**) (e.g., waste prevention & recycling to reduce mining of virgin resources & and emissions from mining & processing)

- Adaptation (e.g., modifying & designing facilities to be more resilient to climate change impacts)
- Carbon footprint of facilities and waste-related strategies & initiatives & related life-cycle analyses
- Sequestration (e.g., using more compost to replenish depleted soils)
- **Transportation (de-centralization?)**
- **Regeneration**

### 2.3. Current ideas for more components (from RCAB et al) – sample zero waste infrastructure & strategies:

#### 2.3.1. Statement of commitment to waste hierarchy to inform Planning decisions

- 2.3.1.1. Reduce, reuse, recycle – before disposal – to help prioritize infrastructure and policies +++
- 2.3.1.2. Evaluate facilities and programs with land use impact on cost effectiveness & also on: +++
  - GHG reduction
  - Jobs creation
  - Reducing toxics
  - Social value to the community
  - Alignment with circular economy principles & practices, e.g.,
    - Asset management
    - Collaborative consumption
    - Products designed for longevity
    - Performance/service systems and incentivized returns
    - Economic vitality for resiliency
    - **Extended Producer Responsibility**

#### 2.3.2. Funding mechanisms

- 2.3.2.1. Sustainability tax (**move to creative funding**)

#### 2.3.3. Various types of materials processing & diversion:

- 2.3.3.1. Composting & organics management
  - Publicly-owned, widely accessible composting facility
  - Related operations for organics diversion
  - On-farm composting
  - Food waste management & issues
  - **Biogas**
  - **Marijuana organic waste**
  - **Biomass/Wood waste/Biochar**
- 2.3.3.2. C&D facility growth
- 2.3.3.3. Developing local secondary processing and end market options for recyclable materials; **encourage forward-thinking technology, emerging materials**
- 2.3.3.4. Reuse, repurposing, repair facilities & services
- 2.3.3.5. Minimize transportation and build SMM infrastructure in County to get GHG etc. benefits as well as for job creation

- 2.3.3.6. **Hard-to-recycle materials**
- 2.3.4. Current County Materials-Management Operations
  - 2.3.4.1. County transfer station (TS) matters
    - Management of mountain TS/recycle service
    - TS expansion
  - 2.3.4.2. MRF operations
    - Adding new materials
    - Operational efficiencies
  - 2.3.4.3. **HMMF**
  - 2.3.4.4. **Drop-off centers**
  - 2.3.4.5. **County-Owned Facilities and Properties**
  - 2.3.5. Need for industrial-zoned properties (Land Use issues) – objective is to lay the groundwork to get the facility, Land Use takes the role of zoning; recognizing this is an issue that need some potential amendments to land use codes
  - 2.3.6. Policy work – More policy needs to be added/explore. Rename to Advocacy
    - 2.3.6.1. Engagement with product stewardship policy work at local, regional, state, and/or national level
    - 2.3.6.2. Advocacy
  - 2.3.7. Planning for long-range sustainable materials management
    - 2.3.7.1. E.g., what are lifespans of landfills BoCo uses?
    - 2.3.7.2. Measure diversion and waste reduction progress – This should be a priority, will inform what's working/what's not, and help prioritize
      - 2.3.7.2.1. Track and standardize metrics across jurisdictions (e.g., use of ReTRac)
      - 2.3.7.3.
  - 2.3.8. Zero waste education, events, and incentives
    - 2.3.8.1. County delivering services to unincorporated residents, businesses that allows them to pursue a ZW lifestyle
    - 2.3.8.2. Facilitate collaboration with municipalities and other players on infrastructure and programs
  - 2.3.9. Sustainability Matching Grant program
  - 2.3.10. County's own Purchasing to support SMM
    - 2.3.10.1. Recycle content
    - 2.3.10.2. Require suppliers of goods & services to have Green Seal, zero waste, ISO14001, R2/e-Stewards, and other green certifications
    - 2.3.10.3. Reduce hazardous materials used by county through substitution
    - 2.3.10.4. Life cycle analysis of goods & services purchased by County

**Open House input:**

- **Include metrics of success**

## Documents and resources referenced in creating the Long List

“Boulder County Comprehensive Plan: Goals, Policies, & Maps: Solid Waste Element,” as Amended, December 16, 1987.

“Boulder County Comprehensive Plan Update: Guiding Principles,” approved by Planning Commission 8 – 0 on January 18, 2012.

*Boulder County Zero Waste Action Plan, 2010*

“The Circular Economy Isn’t the Waste Business as Usual,” Eric Lombardi, August 18, 2016.

Solid Waste Element Case Studies – Key Findings from review of 3 peer SW Comp Plan Elements: Jefferson County WA; Multnomah County OR; King County WA, prepared summer 2016.

*CO Integrated Solid Waste & Materials Management Plan*, prepared for CO Department of Public Health & Environment, by Burns & McDonnell and SERA, June 2016.

