TOWN OF MOUNTAIN VILLAGE
GREEN TEAM COMMITTEE SPECIAL MEETING
TUESDAY, SEPTEMBER 22, 2020, 10:00 AM

TO BE HELD REMOTELY VIA GOOGLE MEET:
https://meet.google.com/pub-hofd-evd
(see login details below)
AGENDA

Agenda Item	TOD	Time Requested	Presenter	Type	Title
1	10:00:00		Jett		Call to order
2	10:05:00	::5	Jett	Public Comment	Public Comment on Non-Agenda Items
3	10:10:00	::20	Jett	Worksession	Creation of Department of Sustainability, Climate Action & Resilience
4	10:30:00	::30	Jett	Action	Review and approval of bids for Contract Services
5		::7	Jett		Simple Solar
6		::7	Johansson		Zero Waste
7		::7	Gerona		Eco Action Partners
8		::7	Artale		Lotus Engineering
9	11:00:00		Jett		Adjourn

Log in with GOOGLE MEET

Meeting ID
https://meet.google.com/pub-hofd-evd

Join by phone
(US) +1 470-242-8730
PIN: 647 220 238#

Please note that times are approximate and are subject to change

DATE: September 22, 2020

TO: Green Team & Mountain Village Town Council

FROM: Cath Jett, Green Team Chairperson

SUBJECT: CREATION OF THE DEPARTMENT OF SUSTAINABILITY, CLIMATE ACTION & RESILIENCE

The Green Team recommends to Town Council the creation of a Department of Sustainability, Climate Action & Resilience. This department would be headed by a Director who would report directly to the Town Manager and would require additional staff to develop, present, and manage all aspects of the Town's Environmental Initiatives: - residential, commercial, and municipal.

The responsibility of the department would be to create, measure, promote, and oversee environmental programs for the Town of Mountain Village, it's residents, and guests to achieve goals related to zero waste, greenhouse gas reductions, and to work collaboratively with other municipalities in the region, network with local, state, and federal agencies to implement the most current and effective strategies to meet the Town's goals. Specifically:

- Becoming a carbon-neutral community by 2050 utilizing the 2020 Climate Action Plan provided by Lotus Engineering.
- Reaching zero waste goals as defined in the 2008 Zero Waste Plan by 2025

It has become imperative to create this department because the environmental goals that were previously created are being overlooked.

- In July of 2017, the Green Team was formed to "encourage the Town's community to appreciate and preserve the natural world and to invite and facilitate positive change in the conservation behavior of the community and its members by sharing knowledge and resources and advise the Town Council on matters related to environmental quality."[1]
- It is also a "non-binding" group, which essentially means that none of what the Green Team does requires implementation.
- The Town's internal sustainability initiatives are managed by the Human Resources department, while the Green Team is supported by the Communications and Business Development Department.
- There is a misconception within the Town Council that the Green Team is to act as an employee of the town.
- Eco Action Partners (EAP), the current sub-contractor to help implement Green Initiatives and Behaviors for the Town and to measure the Green House Gas Inventory,

[1] Mountain Village Green Team Bylaws, revised and adopted on December 12, 2019

has been without an Executive Director since December of 2019. The COVID outbreak also affected their ability to create and monitor current programs.

These issues are preventing the Town from moving toward the Zero Waste Goals that were approved by Town Council in 2008. The deadline for these goals is 2025.

The issues have also minimized the ability for the Town to reach its goals of decreasing Green House Gas Emissions by 26% by 2025. This action joined Mountain Village with other Colorado Communities to meet then-Governor John Hickenlooper's initiatives that mirrored the U.S. Climate Alliance's Goals.

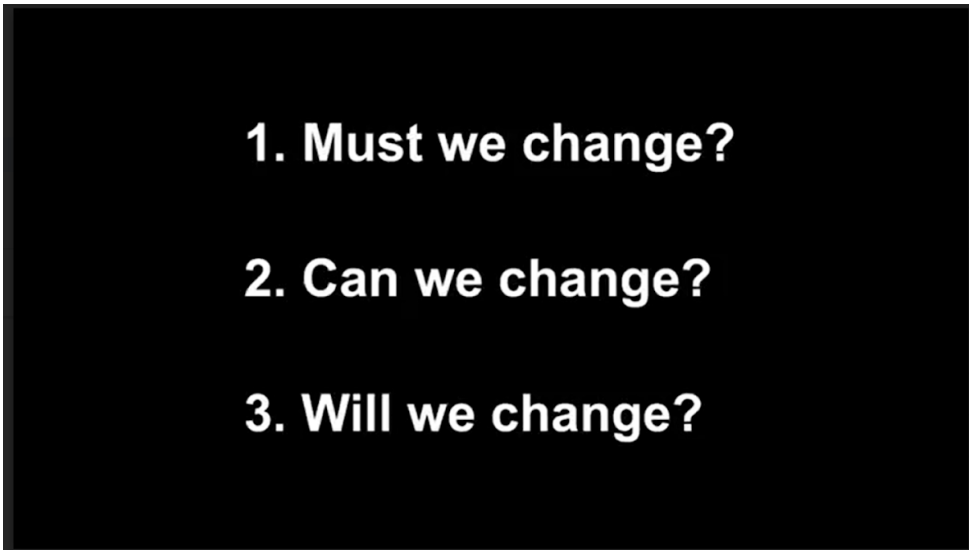
According to the journal "Science", the Colorado River Basin's natural flow has decreased by 20% between 1913 and 2017[2]. This summer, the temperature increased by 2C. The risks of climate change can be significantly reduced by maintaining temperatures below the 2C increase.[3] These changes will continue to impact our region through less snowfall and more severe and increased drought conditions throughout the year. These climate occurrences will impact us all financially - fewer skier days, less desirable golf conditions, more smoke, and haze from nearby fires...the list goes on.

The department could be funded in a variety of ways.

- Reconfiguring the current budget to eliminate subcontractors
- Billing for trash in-house and adding a use fee to trash collection
- Allocating funds that are currently directed toward the HR and Business Development Departments.

While it makes sense to collaborate with other jurisdictions in the reasons, there is a need to take the first step without them until agreements can be reached. We recommend that the position begins on January 1 with current staff and volunteer efforts by the Green Team. We hope that the department will be activated no later than July 1, 2021.

It's time to make a change to save our Town - economically and environmentally - by taking these critical steps.



[2] Science, Vol 367, Issue 6483, 13 March 2020
[3] https://theconversation.com/a-matter-of-degrees-why-2c-warming-is-officially-unsafe-42308

DESCRIPTION: Department of Sustainability, Climate Action & Resilience

JOB TITLE: Director of Sustainability, Climate Action & Resilience

SUPERVISION EXERCISED AND RECEIVED: Position is supervised by the Town Manager. Exercises supervision over departmental staff.

EFFECTIVE DATE: January 2021 with implementation and final hiring by July 1, 2021

FLSA: Exempt

GOALS: To create, measure, promote, and oversee environmental programs for the Town of Mountain Village, it's residents, and guests to achieve goals related to zero waste, greenhouse gas reductions, and to work collaboratively with other municipalities in the region, network with local, state, and federal agencies to implement the most current and effective strategies to meet the Town's goals. Specifically:

1. Becoming a carbon-neutral community by 2050 utilizing the 2020 Climate Action Plan provided by Lotus Engineering.
2. Reaching zero waste goals as defined in the 2008 Zero Waste Plan by 2025

The department will support the following areas of the community in the following ways:

BUSINESS SUSTAINABILITY:

- Create a business sustainability advisory service that provides free technical support to businesses and helps them achieve their sustainability goals
- Create an Energy Impact Offset Program to assist with funding increased local renewable energy while keeping revenue local

DATA TRACKING

- Gathers community greenhouse gas inventory of Mountain Village's greenhouse gas emissions
- Collaboratively works with other jurisdictions to share and analyze local GHG inventory
- Monitors where modeling can be changed to ensure the biggest gain in reductions. Working collaboratively with other government entities to share and model data.

- Create and monitor an open data dashboard, including the GHG inventory, local generation inventory, and waste diversion inventory.

CLIMATE ACTION PLAN

- Responsible for coordinating an overarching Climate Action plan for the Town.
- Develops specific climate management policies and programs that reduce Town government and community greenhouse gas (GHG) emissions.
- Provides assistance, technical expertise, and other resources to Town departments to support them in **the** development of actions and policies related to the Climate Action Plan.
- Monitors energy usage in transportation and buildings.
- Oversees outreach to staff and the general public to communicate about GHG emission inventory and reduction strategies.
- Manages updates to GHG Emissions Inventory and Climate Impact Assessment.
- Manages or assists in the management of GHG reduction projects.

ECOSYSTEMS

- Create an urban wildlife conservation project that aimed to ensure bears, beavers, and other wildlife and humans can safely co-exist.
- Create an eco friendly weed monitoring, pulling, or spraying program on both public and private properties.
- Create a collaborative forestry management plan to assist residents and businesses with creating a multi-species forest, WildLand Urban Interface species management, and pest monitoring
- Create an integrated Pest Management Program which considers life within the ecosystem, working with natural processes to keep populations of all living things, including pests, in balance
- Manage the Farm to Community program which supports sustainable food production practices, equitable access to healthy food, and regional efforts to create a strong and resilient food system for all residents.

ENERGY EFFICIENCY

- Work with the planning department to ensure that building codes are current and energy efficiency programs are considered a priority when building or renovations.
- Work with San Miguel Power provide residents with a cleaner, more efficient, and more comfortable options to heat their homes
- Work with the planning department to manage funds from the Smart Building (REMP) program.
- Manage Solar Grant and Rebate Programs that support residents, businesses, and nonprofits in financing solar power installations at their homes, businesses, and facilities
- Manage outreach to residents to inform them about the Colorado Weatherization Program and promote the statewide Weatherization Day on October 30th of each year.
- Manage outreach to residents to inform them about the state’s Low Income Energy Assistance Program

ELECTRIC VEHICLES

- Develop a program that requires electric vehicle charging stations are part of all new construction and renovations

ZERO WASTE

- Revamp the voluntary single use plastics ban to a single use container ban ordinance.
- Create, monitor, and manage programs and policies to reduce waste in Mountain Village, including the 2008 Zero Waste Plan and the 2020 Lotus Engineering Climate Action Plan.

GENERAL RESPONSIBILITIES:

- Directs and develops enforcement program for town environmental policies
- Monitor progress and provide analysis to the Town Council.
- Perform grant writing and research of available grants for financial assistance with the attainment of environmental goals.
- Obtain rebates and financial assistance for environmental programs.
- Coordinate with private property owners, environmental organizations, and local, state, and federal agencies to acquire necessary permits and ensure compliance with environmental policies and other town regulations.
- Drafts and assists with departmental legal agreements and contracts.
- Directs Town contracts for residential waste and recycling services.
- Responds to public concerns.
- Provide customer service and education to employees, community, and guests regarding departmental policies, initiatives, and programs
- Solicit broad community support and participation in departmental programs and conservation measures;
- Provide information, research, and resources to property owners to assist with town goals.
- Direct and develop departmental communications including website pages, newsletters, press releases for local newspapers, radio news spots.
- Represents Town and protects town interests on internal and external boards and committees such as the San Miguel Watershed Coalition, EcoAction Partners, and the Sneffels Community Energy Board.
- Oversees financial operations of the department to ensure responsibility.
- Directs, controls, and accounts for the expenditure of funds per the annual departmental budget appropriations.
- Prepares and justifies budget estimates, work programs, and supporting data for department functions,
- Establishes and maintains cooperative planning and working relationships with other local agencies,
- Plans and recommends capital improvements.
- Provides leadership and direction to the Manager, Supervisor, and all departmental staff to achieve the strategic goals of the Department of Sustainability, Climate Action & Resilience including guest service and safety.
- Supports honest, open, and clear communication throughout the department.
- Review Department plans and goals and determine resource requirements and deliverables.
- Determines the scope and priorities of projects.
- Develops Department programs and policies to support present and future needs

- Directs the development and implementation of departmental plans, policies, and procedures.
- Directs the managers and staff through appropriate delegation and work supervision,
- Develops goals and priorities, and assigns tasks and projects,
- Meets regularly with staff to discuss and resolve issues,
- Reviews work in progress in order to anticipate problems before they arise,
- Counsels, trains, and coaches staff implements corrective actions when necessary,
- Sees to the career development of staff and evaluates staff performance.
- Ensures staff compliance with departmental policies and procedures.
- Monitors the progress of projects and quality of work performed by staff and contractors, ensures projects are completed promptly and following project specifications, safety requirements, and quality standards.
- Works with other departments to effectively implement coordinated projects,
- Provides input on efforts to improve the level and quality of Town services,
- Participates in identifying efficient operations and funding solutions.

MINIMUM QUALIFICATIONS: Bachelor’s Degree from an accredited school, college or university in Environmental Science and Resource Management, Climate Science, Energy, Physical Science, or related field.

Three (3) years of experience in energy management or climate sustainability including two (2) years of supervisory experience.

Licenses/Certification(s): Valid driver's license may be required.

ENVIRONMENTAL FACTORS:

Work is performed both in a busy office environment and outdoors in the field with exposure to extreme weather conditions. Work may involve prioritizing tasks, competing for demands, performing multiple tasks at once, working with deadlines.

Physical Factors: While performing the duties of this job, the employee may be required to sit for extended periods and may occasionally be required to lift and/or move items weighing up to 50 pounds. Long hours outdoors in the field may also be required.

DATE: September 22, 2020

TO: Green Team Committee Members

FROM: Cath Jett, Chairperson

SUBJECT: REVIEW OF PROPOSALS AND SELECTION OF SERVICES CONTRACTED TO MEET THE TOWN'S CLIMATE ACTION PLAN

At our last meeting, we determined that it would be best to discuss outsourcing some services in order to meet the Town's Climate Action Plan. Attached are proposals for the following programs:
Simple Solar
Zero Waste and Plastic
Eco Action Partners GHG measurement and community-wide services
Lotus Engineering GHG measurements and community-wide services

When reviewing these proposals, please consider if any of the projects listed can be done with staff, Green Team Volunteer hours, another entity, or not at all. Please also consider which ones will allow us to meet our climate action goals in a timely, efficient, and cost-effective manner.

For further information, our CAP can be found HERE.

Our Zero Waste Plan can be found HERE.

DATE: September 8, 2020

TO: Green Team Members

FROM: Cath Jett, Chair

SUBJECT: Creation of a Simple Solar Program REVISED

REQUESTED BUDGET AMOUNT: $50,000 + staff time

At their July 16th meeting, the Town Council requested that the Green Team review and revitalize the Residential Solar Incentive program.

After that meeting, I reached out to Councilperson Peter Duprey to discuss what his vision for the program is.

Federal Solar Rebates have been declining over the past few years and in 2022, rebates will be eliminated. In addition, the current administration has placed tariffs on Chinese manufactured goods. Most solar panels currently come from China and a tariff on solar panels was not exempt. However, the cost of solar panels from China has been decreasing thereby offsetting the tariff somewhat.

Mr. Duprey would like to make it as easy as possible for homeowners to take advantage of federal government incentives before they sunset next year. He is also hoping to create an incentive from the town to help kick start the program. We are considering capping the Town's contribution at $50,000.

We are suggesting that the Green Team put together a packet of lenders, installers, Town Applications, rebate applications, and any other pertinent information that would make adding solar "one-stop shopping" for a resident.

The preference would be to waive any TMV application fees for such a project and to continue a specified amount as a residential solar rebate. The council should determine the cap for 2021.

To create a packet it might require creating an RFP process to secure lenders and installers. San Miguel Power has suggested we reach out to the following solar providers:

- Alternative Power Enterprises, Ridgway, 626-9842 www.alternative-power.com
- Cam Electric Inc, Montrose 240-1147 www.montroseelectricalcontractor.com

It would also require working with the Town's Planning Department to manage the program.

For further information, please review the following links.

SMPA Renewable Rebates
The federal solar tax credit: all your questions answered
Alpine Bank Green Lending
NREL PV Watts Calculator

Gmail Cath Jett <cathjett@gmail.com>

Creating a community Solar Rebate Program

Bryce Carter <bcarter@solarunitedneighbors.org> Thu, Sep 17, 2020 at 11:32 AM
To: Cath Jett <cathjett@gmail.com>

Hi Cath,

Thanks for the information and no worries about keeping this to email for now; I get it, these days are pretty crazy for all of us!

Based on your note it seems ultimately the needs are 1) education and outreach to ensure people are aware the tax credit is going down, and 2) any type of catalyst to help grow solar adoption in this time frame.

Let me share a bit more of what Solar United Neighbors provides in terms of a service: we're a vendor-neutral nonprofit that facilitates a solar co-op process, as well as support engagement and advocacy around solar rights and a just energy transition.

The way our solar co-op model works is we provide outreach and education within a community working closely with on-the-ground partners, we invite residents and businesses to become members of the solar co-op for free and with no obligation to go solar, and once we hit about 30 or so members we open up a competitive RFP for solar installers to bid into. Our members form a selection committee that we facilitate, and they ultimately choose which installer to proceed with by comparing their price, warranties, equipment offerings, location, etc. The selected installer provides proposals for each member based on their bid to the solar co-op, and each member can decide whether to move forward or not. Between 20-30% of our members tend to move forward with an installation. The full process is about 6-8 months long, and we ask for $20,000 in funding to implement it, plus we ask the installer for $600 per signed contract (we expect this amount to come from the savings they gain via their overhead by us providing the community outreach and recruitment).

The benefits of this model is that it streamlines the process, educates the community-at-large (we see spikes in solar adoption, even for folks who don't go solar with our program), and because of economies of scale we typically see cost savings. For reference, here are our solar co-op web pages with informative webinars for our Colorado Headwaters Solar Co-op (Grand and Jackson counties) and the Mesa County Co-op. The latter is well on its way to supporting over 50 installs, amounting to over an $1 million community investment.

Per the $50,000, whether or not you think a solar co-op would make sense, there's a couple ways to utilize it. A general rebate is probably easiest, something like $1k per install plus seeing about reducing or eliminating any permit fees / local taxes that might be applicable; when a typical install is between $15,000-$20,000 out of pocket, every little bit could make a difference. You could also set it up so only income-qualifying households can apply for the funding. Or, you could also leverage it for a specific community project, like putting solar on a community center to fill a need while also garnering engagement and media coverage which could build excitement for others. Obviously, there's a lot of opportunity to mix-and-match needs on this.

I know there's a lot to digest there, so I'm happy to answer any questions you have here or by phone. I also attached the presentation I provided Winter Park Town Council the other month and a partner flyer for your reference.

Sincerely,

Bryce

[Quoted text hidden]

2 attachments

SUN Partner Flyer CO.pdf
523K

Winter Park Town Council Presentation 8.4.2020b.pdf
2290K

SOLAR UNITED NEIGHBORS

Co-op Information for Partners

PARTNERING WITH SOLAR UNITED NEIGHBORS TO CREATE A SOLAR CO-OP IN YOUR AREA

Solar United Neighbors and community partners work together to form a solar co-op. Anyone can be a partner, whether it's a municipality, non-profit, a group of neighbors, or some homeowners. Solar United Neighbors provides the technical and administrative support and the community partner promotes the co-op and recruits participants.

General Roles and Responsibilities

SOLAR UNITED NEIGHBORS	COMMUNITY PARTNER
Handles all technical and administrative support for co-op	**Recruits participants for the co-op**
Creates co-op website and administrates sign up process. Responds to technical inquiries	**Work with Solar United Neighbors to develop and implement a media campaign to recruit co-op participants**
Presents at info sessions	**Finds and reserves space for info meeting**
Facilitates RFP process, installer selection,and installer management	**Serves as the 'public face'of the co-op and talks with local media when applicable**
Provides relevant group update and communications during all stages, conduct final assessment and data collection	**Helps direct interest towards future programs or advocacy**

CELEBRATE A SUCCESSFUL CO-OP!

SOLAR UNITED NEIGHBORS

JOIN US!

www.SolarUnitedNeighbors.org

Partner Roles During Each Co-op Phase

Solar co-ops generally require 8-10 months to complete and are divided into four phases. During each phase, the roles and responsibilities of the community partner vary, they but focus on reserving spaces for info sessions and events, recruiting co-op participants, and building public interest in the co-op.

PHASE 1: OUTREACH & PROMOTION OF CO-OP

The community partner works with Solar United Neighbors to create and execute an outreach strategy to drive prospective participants to the co-op website and information sessions. The goal is at least 30 participants signing up for the co-op. Community partners will also identify appropriate media and community venues that will help drive sign-ups and spread the word about the co-op.

PHASE 2: REQUEST FOR PROPOSALS AND BID SELECTION

Once the co-op has at least 30 participants, Solar United Neighbors issues a Request for Proposals (RFP) to area installers for them to bid on the project. Solar United Neighbors will convene a selection committee made up of co-op participants. The committee will select the group's installer. After the co-op selects its installer, the community partner will assist (as appropriate) in creating a media strategy to announce the installer selection and drive further sign ups to grow the group.

PHASE 3: ADDITIONAL RECRUITMENT

Once the co-op's installer is chosen, they will visit each participant's home and provide them with an individualized proposal for a solar system based on the group pricing.

While this is taking place, Solar United Neighbors and the community partner will continue to recruit additional co-op participants to join the group. A successful co-op will have, at minimum, 100 sign ups when it closes.

PHASE 4: ASSESSMENT, CELEBRATION AND ONGOING SUPPORT AND ENGAGEMENT.

Once the sign-up deadline for the co-op passes, Solar United Neighbors will continue to work with co-op participants to ensure they have a positive experience as they sign contracts and have solar systems installed.

The community partner will help plan and implement a celebration party for co-op participants, local elected officials, & any other groups interested in celebrating successful co-ops.

Solar United Neighbors Co-ops

Our co-ops organize 50 to 100 neighbors in a group to go solar together. People love the community approach. Our experts support you through each stage of the solar process. Co-op members leverage bulk-purchasing power to get discounted pricing and a quality installation, while still signing individual contracts that ensure the right system for their home.

Impact of more than 200 co-ops launched nationwide

100,000+
Solar supporters nationwide

5,000
Homes went solar

35
Megawatts installed

$100 Million
Invested directly in solar

1,000+
Jobs created

Some of our current and former co-op partners in Colorado

DENVER PUBLIC HEALTH & ENVIRONMENT

City & County of Denver Sustainable Neighborhood Network

City of Fort Collins

Craig Chamber of Commerce Colorado's Great Northwest

Colorado Latino Forum

Yampa Valley Sustainability Council www.yvsc.org

Wild Goose at the Granary Coffee

CRES Colorado Renewable Energy Society

Sustainable Living Association Powered by Nature

Western Colorado Alliance for Community Action

Colorado C3E

KWSI-LP Radio 100.3 fm

New Energy Colorado

Solar CitiSuns

LoDo District Old. New. Now.

Steamboat Springs Board of Realtors

Alpine Bank

SOLAR UNITED NEIGHBORS

Contact the Colorado Program

Bryce Carter, Colorado Program Director

720-295-3804 bcarter@solarunitedneighbors.org

SOLAR UNITED NEIGHBORS OF COLORADO

Colorado Headwaters Solar Co-op

Town of Winter Park Presentation

August 4, 2020

Bryce Carter, Colorado Program Director

Today's Discussion

- Introduction to Solar United Neighbors
- Solar Co-op process
- Community benefits of a solar co-op
- Update on the Colorado Headwaters Solar Co-op
- Collaboration opportunities
- Questions / Discussion

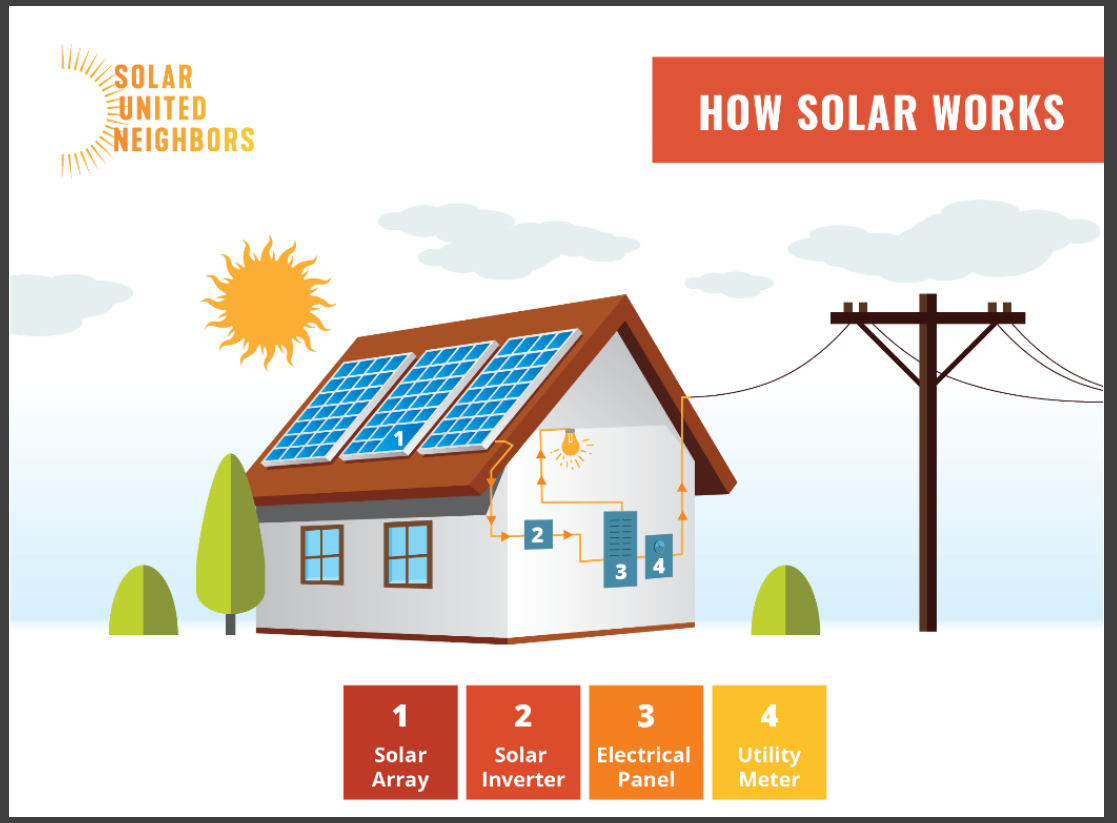
SOLAR UNITED NEIGHBORS OF COLORADO

About Us

- Local movement started in 2007, nonprofit founded in 2011
- Leading solar education and outreach organization
- Nearly 250 solar co-ops with 4,800+ installations
- Community of 150,000 people across the country who are building a clean, equitable energy system with rooftop solar at the cornerstone.

- Find out what going solar means for you
- Scale helps lower prices and streamlines process
- Free to participate / no obligation to install
- Community-driven
- Educates & builds confidence

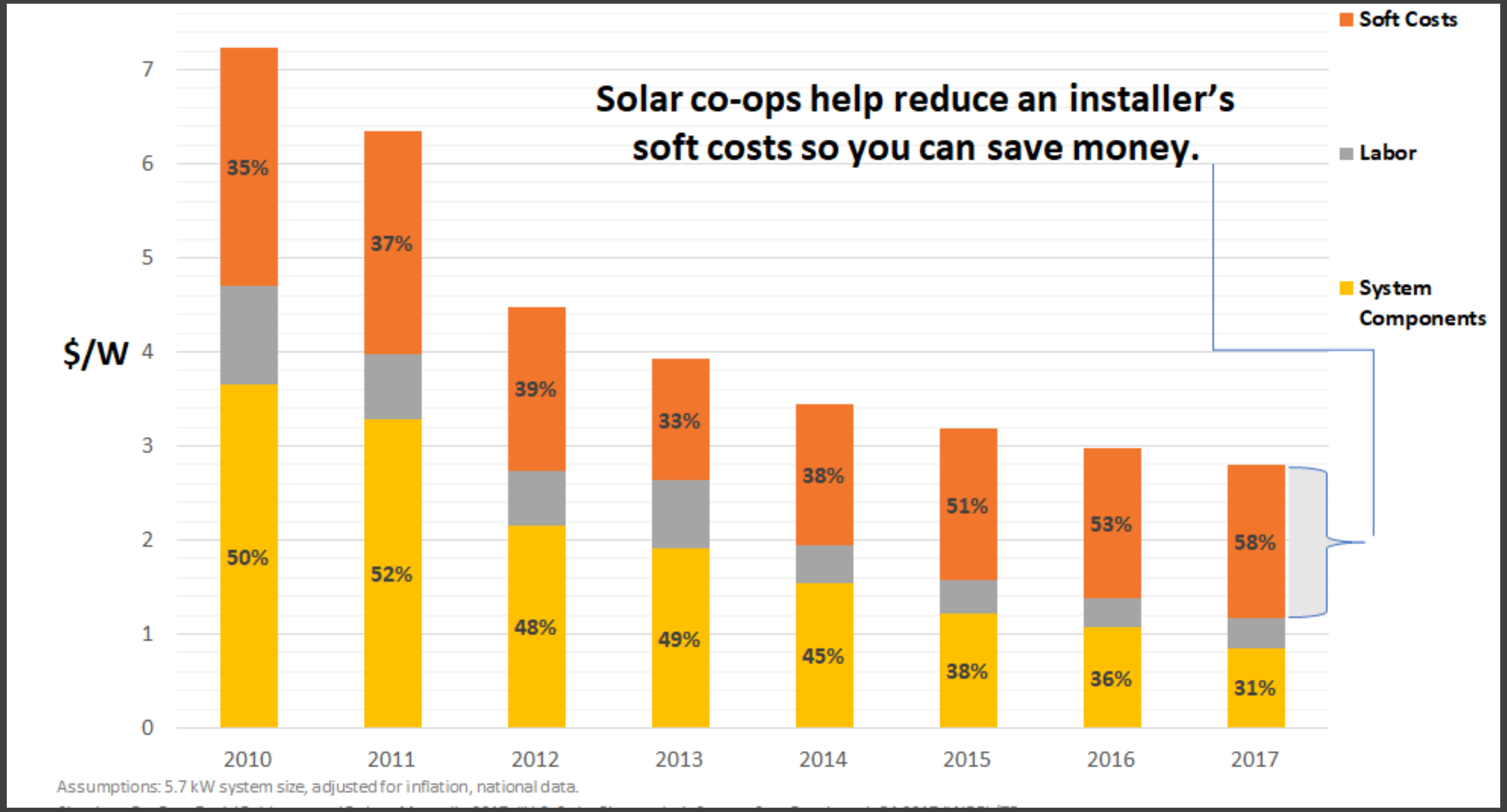
Solar Co-op Model



Solar Information Session / Webinar

Watch our CO Headwaters Solar Co-op presentation
solarunitedneighbors.org/headwaters

SELECTION COMMITTEE: a thorough review of bids


Solar co-ops help reduce an installer's soft costs so you can save money.
Soft Costs
Labor
System Components
$/W
0
1
2
3
4
5
6
7
35%
50%
37%
52%
39%
48%
33%
49%
38%
45%
51%
38%
53%
36%
58%
31%
2010
2011
2012
2013
2014
2015
2016
2017
Assumptions: 5.7 kW system size, adjusted for inflation, national data.

Example Pricing Provided to Members

EXAMPLE PRICING ONLY. ACTUAL SYSTEM SIZE WILL VARY.	4kW	8kW
Regional solar pricing average ($3.00/Watt)	$12,000	$24,000
26% Federal tax credit	-$3,120	-$6,240
Net Cost	$8,880	$17,760
Estimated year 1 electricity savings	$638	$1,276
Estimated year 10 savings (cumulative)	$6,824	$13,648
Estimated lifetime savings (25 years)	$19,152	$38,304
Net Profit*	$10,272	$20,544

Pricing is regional average and not necessarily reflective of available membership rates.

On-bill financing example

Financial Benefits – Financed System

Year 1

- ✓ **Give 20% down payment**
- ✓ **Get all that $ back—and more!**—via Federal Solar Investment Tax Credit (systems installed in 2020 get 26% of the cost back!)

Years 1-10

- ✓ **Earn 10.9 cents per kilowatt hour produced**—that's $600-$900 per year for a typical 4-kilowatt residential rooftop system!
- ✓ **Use those proceeds to repay the solar loan**

Years 10-30

- ✓ **Your system is paid off**
- ✓ Now you **can enjoy solar cashflow** for the rest of the solar installation's life!

SOLAR UNITED NEIGHBORS

On-bill financing example

Financial Benefits – Example

Year 1

- 4 kilowatt system cost: $12,000
- 20% down payment = $2,400
- 26% tax credit = $3,120
- **Money in your pocket: $720**
  ($3,120-$2,400 = $720)

Years 1-10

- Solar payment: $75 / month ($900/year)
- Solar energy production value: $600-$900 per year (@ 10.9 cents per kwh)
- **Annual cost: $0 - $300**

Years 10-30

- Solar payment: $0 (paid off)
- Solar energy production value: $600-$900 per year
- **Savings over remaining 15-20 year system life: $9,000 - $18,000!**

SOLAR UNITED NEIGHBORS

THE DAILY SENTINEL
GRAND JUNCTION, COLORADO

ALSO INSIDE
WHAT'S NEW IN THE CULINARY WORLD OF GABY
FOOD

Monday
June 3, 2019

$1.00

Your community news source since 1893

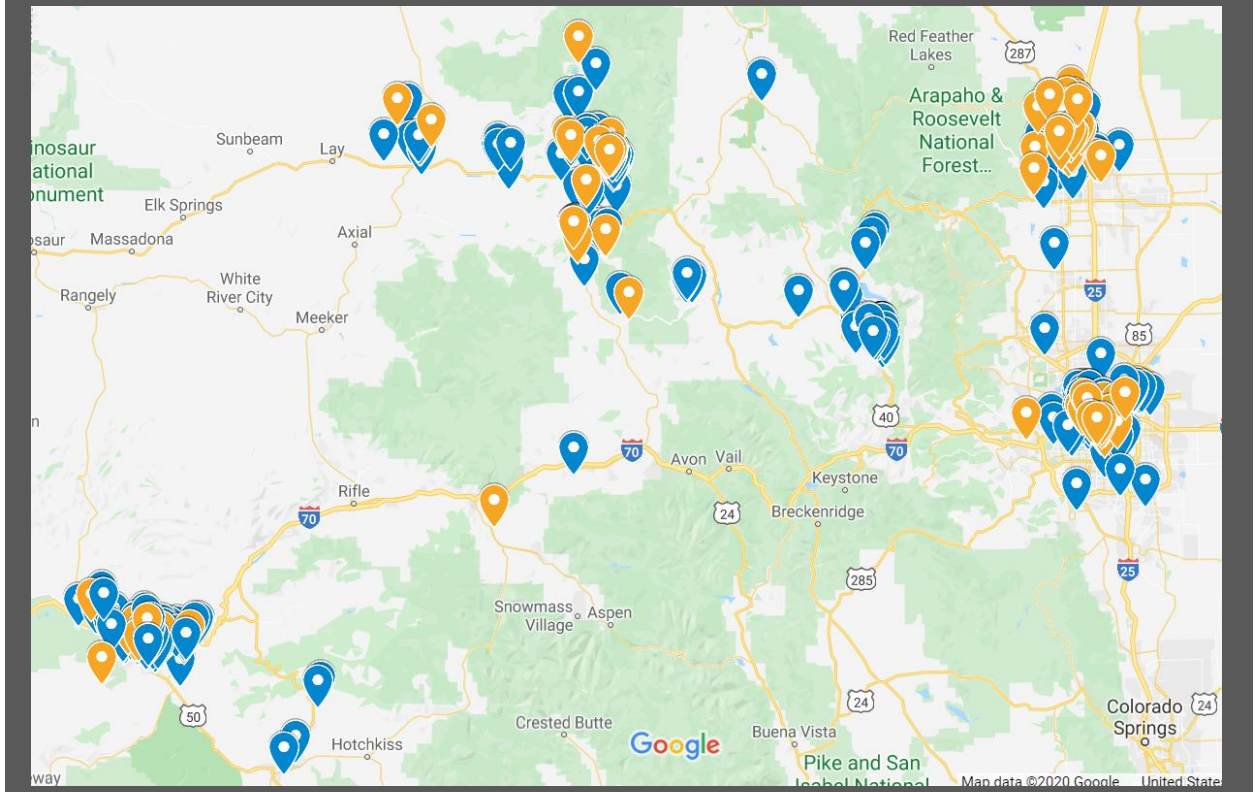
Solar co-op tests interest

Nothing normal about runoff near Lake City

Avalanche debris, heavy snowpack worry residents in rural high country

By DEAN KRAKEL
The Colorado Sun

Colorado Program's impact since launching in 2019



Geomapped members – yellow are those who went under contract.

111
people gone solar with us

808 kW
installed capacity

$2.0 M
invested in local solar projects

13
solar jobs created

4,500+
supporters in 2020

611+
Actions taken by members in 2020

Anticipated Community Benefits

A Community Investment

- 75 members can lead to 20+ installations in the region
- This will result in upward of $600,000 of consumer energy savings over 20 years
- Provides additional economic security for families

Emissions Impact

- 159 metric tons CO2 equivalent per year

Like taking 34.4 passenger vehicles off the road for one year

Resiliency

- Solar, storage, and EV infrastructure helps keep the lights stay on, buildings heated, and vehicles mobile even in the case of major supply interruptions (e.g. mountain communities during 2013 floods)
- Solar provides economic security and bills can get paid

Colorado Headwaters Solar Co-op

- 44 members
- Installer has been selected!
  Announcement pending paperwork
- Launched June 23rd
- Closes September 1st
- Next info session webinar ___
- Steering Committee of 4
- $5,000 challenge match

SOLAR UNITED NEIGHBORS OF COLORADO

Colorado Headwaters Solar Co-op

Thank you to our partners:

GRAND INNOVATORS

GREEN SPACES COWORKING

Grand County, Colorado ECONOMIC DEVELOPMENT

FRASER COLORADO

RE/MAX PEAK TO PEAK

CRES Colorado Renewable Energy Society

CLF Colorado Latino Forum

NEW ENERGY COLORADO

Solar CitiSuns

Opportunities for Collaboration

SOLAR UNITED NEIGHBORS OF COLORADO

TOWN OF winter park

Ongoing collaboration

Council members and town staff are welcome to serve on the Solar Co-op Steering Committee

Become a Solar Co-op member

It's free with no obligation to install; the town can take advantage of the solar co-op pricing

Community outreach and education

Support outreach to community members; collaborate on communications and media outreach

Thank you for having us!

Bryce Carter

Colorado Program Director
Solar United Neighbors
720-295-3804

bcarter@solarunitedneighbors.org

SOLAR UNITED NEIGHBORS

SERA

■ **Consulting to Government & Utilities**
Offices in Silverthorne, CO and Orcas, WA
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Moving Mountain Village's ZW Plan Forward: Developing the Implementation Plan

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Moving Mountain Village's ZW Plan Forward in 20 Steps

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The Town of Mountain Village (MV) has requested proposals to assist the Town implementing their Zero Waste Plan, and providing an Implementation Plan and hands-on implementation support for the ZW Plan.

Project Objective

Clearly identify the most effective steps to implement the 2008 ZW Plan for Mountain Village, with updated approaches where needed. Identify timing, responsibilities, decision points and metrics. Provide hands-on support, monitoring, and direct assistance / support as work progress.

The product from this work mentions an "implementation plan", but the plan is not provided because plans are, in themselves, valuable. Instead, it is important to understand that this document organizes the work for SERA and the committee in the near term, and for the Town for many years going forward. This plan goes beyond the current Plan in that it is not merely conceptual, but is very practical and action-oriented. It explains the order and timing of steps. It details what is to be done, the individual steps required, who is primarily responsible and who needs to be brought in to support the work, what is to be conducted, what is expected as outcomes, specifics on enforcement, timing, funding and time required, and finish dates, and products, among other items. This is far beyond what the ZW plan currently provides and is necessary to clearly answer questions about what the Goal means, and how to actually get there.

In addition to the Plan itself, SERA provides extensive hands-on work and support to get things moving and keep them moving. This includes continued work with the Committee (or staff or others as appropriate), providing direct support including drafting ordinances, drafting educational pieces, finding case studies, identifying case studies, conducting focus groups, etc., as well as continuing to work with the Committee (and Staff and Council, to the extent desired / allowed) to monitor progress and work on "next steps" to keep progress moving forward.

In this document, rather than providing a number of tasks presenting a "process" to develop an implementation plan, we outline 20 key points in the first 12 pages of this document that constitute the core directions of our implementation recommendations – with our rationale for why, with 40 years of practical experience and nationwide knowledge, we think they represent the best approach for MV. These discussions address practical, proven, low risk, straightforward, high-bang approaches that will lead to strong progress as efficiently and effectively, and fiscally-responsibly as possible.

To demonstrate the action-oriented work that will be provided as part of this work, we here clearly outline our products and deliverables comprising our work on the project.

List of Deliverables / Products from SERA proposal for $12K budget.

Task 1: Brainstorming / Kickoff

- Pre: Bulleted summary of 2008 ZW Plan/Recommendations, updated as needed
- Pre: 20 suggestions / observations
- Present: Slides on Potential Phases with Options for Discussion; pros / cons / outline / examples
- Develop during: Discussion notes / feedback
- After: Transcript and Summary bulleted revised list of directions / options / phases that have support
- After: Attend all relevant committee meetings "virtually", with relevant updates prepared
- After: Attend Town Council meetings or work sessions that have the topic on the agenda with updates or briefings or support to committee for same.

    - If recommended in Brainstorming / kickoff session: 1-2 Zoom focus groups with residents (recruitment outreach from committee or town, directing to SERA phone number). Town provides interested names to SERA and SERA schedules and conducts the zoom focus group meeting(s). Committee members may attend as observers. SERA provides transcript and conclusions / recommendations memo.
    - If recommended in Brainstorming / kickoff session: Pilot CBSM outreach consisting of post card messaging on "recycling better" and suggestions to complete survey monkey questionnaire on knowledge. Can conduct on ½ town with other half as control group, BUT getting statistical sample sizes is very expensive. Recommend instead just conducting the education town-wide. Town mails the postcard / flyers, and outreach is based on knowledge / lessons from pilot tests run around Colorado already. SERA provides text / design for postcard and merges in names and addresses that are provided by Town; Town pays for production and mailing. Recommend committee members consider "oops tagging" option. (SERA will provide design for tags and sampling and inspection and data input instructions and analyzes results).
    - If recommended in Brainstorming / kickoff session: 2nd facilitated meeting (stakeholders or other as designated) but with same information as first kickoff. Transcript and key findings.
    - If recommended in Brainstorming / Kickoff: Town-wide survey regarding Support; SERA provide topic list for review by committee. SERA develops questions and manages survey and produces standard output plus recommendations. Town is responsible for disseminating link for participation
    - If recommended in Brainstorming / Kickoff: SERA provides instructions for set out survey and data entry to be conducted by committee members for data on current program usage; SERA analyzes results.

Task 2: Implementation Plan Early Phases

- SERA prepares plan that includes details on design / implementation of each early-phase strategy for the implementation plan. SERA provides organized stepwise implementation plan with information for each step on timing, who is responsible, who else is involved, actions

needed, expected outcomes, enforcement plan, decision points, end-date. This includes strategies related to metrics / progress reporting and funding.

- SERA drafts first 3-4 strategies for review by committee in a zoom meeting (with SERA in
- attendance); discuss format and content. SERA revises the format / content and completes implementation plan for remainder of early phase strategies and walks through with the committee in a zoom meeting. SERA revises per discussion.
- SERA drafts core parts of Ordinances for Bans, Mandates, PAYT, ABC law, goals, hauler reporting forms and instructions, etc. needed for each phase; assists town / reviews revisions
- SERA attends committee meetings to monitor progress and identify / define / clarify steps needing action by committee, town, other.
- SERA provides graphic to monitor progress on the plan.

- Throughout, in support of on-going progress, we will provide recommended messaging for the website or for Town informational pieces – based on SERA research or national research we are aware of (including single use plastics, less contamination, etc.).
- Throughout, in support of on-going progress, we will provide support looking for grants, and for grant-writing to help fund progress in Mountain Village.
- Throughout, we will provide instructions for work supporting data reporting and metrics, and will conduct / organize reasonable amounts of this work.
- If desired: SERA conducts Single Hauler Contract RFP services / benefits / costs / options discussion with Town council in work session via zoom
- *Optional Support (needs budget) - If desired from 'support': SERA drafts Single Hauler Contract RFP Scope language and pricing form, community provides "notice", and SERA provides list to mail RFP to, drafts responses to Q&A, and leads / informs RFP evaluation process and provides advice to negotiations.*

3: Implementation Plan – Later Phases

- Details on design / implementation of each later-phase strategy for the implementation plan. SERA provides organized stepwise implementation plan with information for each step on timing, who is responsible, who else is involved, actions needed, expected outcomes, enforcement plan, decision points, end-date.
- SERA revised Task 2 plan to incorporate any items needed to integrate with the later phase strategies;
- SERA walks through the plan (Task 3 plus any changes in Task 2 document) with the committee on a zoom meeting. SERA revises per discussion, and provides a complete document to the committee.
- SERA presents or supports presentation of the document to Council for "acceptance" or "adoption".
- SERA drafts core parts of Ordinances for any later phase strategies and/or provides supporting information on how strategies were enacted in other communities (funding, etc.). assists town / reviews revisions
- SERA attends committee meetings to monitor progress and identify / define / clarify steps needing action by committee, town, other.
- SERA provides graphic to monitor progress on the plan.

4: Other On-going Assistance

- *Products: as requested and needed, budget separately estimated. May include attendance at regional meeting zoom meetings, conducting stakeholder group discussions, research on issues, data analyses, etc. Some tradeoffs with existing listed tasks above may be negotiable.*

Budget and Timeline

We provide a simplified budget below. Based on our list of the tasks above, and the detailed deliverables listed at the beginning of the document, we provide the following budget:

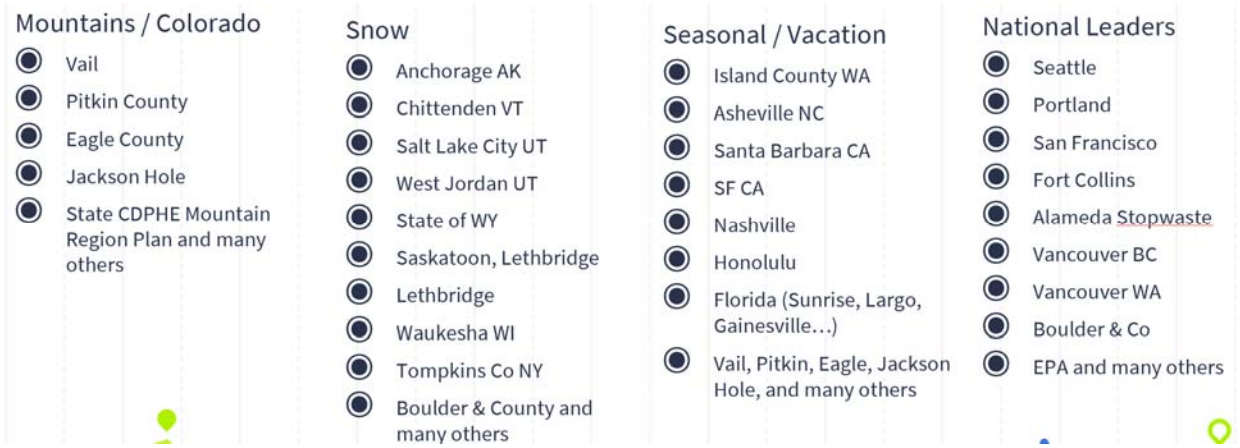
- Task 1: $5,000 (Month 1 for core work)
- Task 2: $4,000 (Months 1-3)
- Task 3: $3,000 (Months 3-4)
- Total: $12,000
- Task 4 and On-going support: hourly at rates: Skumatz and Horton $135; D'Souza $100; Vander Vliet $65.

We understand that this project will take more hours than the "math" of hours times charge rates; SERA is very interested in this work and is willing to provide the work for this discounted price.

However, note that we commit to the products and deliverables mentioned at the beginning of the document that occur within a reasonable time frame (we suggest within 1 year of starting the project). This is a benefit to both parties: it makes sure SERA isn't committed forever to things that are just not moving forward, and it provides an incentive for the Town to keep things moving to get the most done for the fixed contract price.

For Tasks 1-4, we assure Skumatz and Horton will provide at least 67% of the hours on the project.

SERA's Experience in Communities with Similar Challenges



Introduction

Mountain Village has an existing ZW Plan, prepared in 2008, and interest in the objectives has been recently renewed and re-energized. This is reflected in the passage of the zero waste resolutions and single use plastic ban, and the three-Phase Plan. We are pleased to provide this description of the types of very practical assistance SERA can provide in moving Mountain Village (MV) forward to its goal. In this document we very briefly describe our experience and our approach for this assignment.

Because you are trying to make a fast decision, and the proposals are being considered by a committee of volunteers with limited time, we are trying to keep this proposal as succinct as possible. We could provide reams of backup information, but, having been in your shoes[1], we will provide a short document, with an appendix, and with more information on our website www.serainc.com, including our 150 publications beyond our project assignments. Suffice it to say:

- **Experience**: We have 40 years of experience in developing solid waste strategies (programs, policies, incentives) ***AND*** in analyzing their effectiveness. We are based in Colorado, and have conducted work for clients in the mountains, including Vail, Pitkin County, Jackson Hole and others. Our staff has experience as city solid waste utility staff, consultant, non-profit, Colorado town elected official, and city / town advisory committees; and another staffer was a hauler for 34 years. We understand the stakeholders and their perspectives and needs.
- **Staff**: Our staff is practical and hands-on:
    - We have **operations staff** (34 years of experience) that focus on what is feasible
    - We have **economics staff** (40 years of experience) that focus on what strategies are most effective, cost-effective, fundable, and sustainable (both money wise and "green"). We also routinely conduct rate studies and understand how the work must have on-going, defensible funding sources.
- **Data**: Our work is based on real world data demonstrating what has worked in leading communities nationwide and internationally. Our unique, in-house database includes more than 1300 communities with programs / policies / incentives (residential, commercial, public, C&D, and ZW), goals (identifying ZW communities), cost, tonnage, and extensive demographics, helping us find effective approaches and real-world case studies to drill-down on options. *Dr. Skumatz has received 3 nationwide and 1 statewide award from leading associations for her quantitative approach in solid waste and our national leadership.*
- **Project experience:** We have prepared Plans (variously called comprehensive plans, ZW plans, integrated material management plans and other names) at the state level (including Colorado's current plan), county level (Boulder, Nashville/Davidson, Pitkin, Mesa, El Paso), and community level (Seattle, Westminster, Jackson Hole) for 40 years. We have accumulated a library of ordinances, RFPs, case studies, data and analytical results, and other supporting information to assure the implementation in MV is well-supported and gains in efficiencies from our past experience.

[1] *15 years on Colorado Town sustainability advisory committee and previously in another city, and 10 years as a Colorado Town Trustee (Superior).*

SERA's Project Approach and Caveats

In our 40 years of work in the field, SERA's philosophy has been to balance the cutting edge sustainable with the practical – and to learn and leverage from lessons from experience. Our clients have routinely stated they prefer to be on the cutting edge, not the "bleeding edge" (the "first" to implement, with unknown results) – and that is usually a suitable role for a community that has responsibilities to its taxpayers. We are very comfortable with the concept of pushing the boundaries for ZW, but as economists, we understand there is also an optimum. The "80/20" rule is vital for a community to reckon with.

$ and funding

Our plans include funding work, and we find that the last 10% of waste diversion can often cost more than the previous 90% (or close). From a city's point of view, that last 10% is very expensive diversion, and comes with a tradeoff in terms of police protection, clean water, health care, and other tradeoffs. We will not back off from aggressive goals and ZW, but we will also provide our best advice on the relative or incremental effectiveness, timing, risks, and cost effectiveness of options. We will also clearly identify where it is practical for a community to lead in a direction, vs. where it is best to instead, support efforts at a state or national level.[2]

Finally, we recognize our role is to provide recommendations and support, but that the Town and Trustees are responsible for decision-making, staff assignment, and funding.

Our Approach for this Project: *The plan has languished for 12 years, but there is interest now in moving it forward, so our focus will be on developing implementation steps that:*

- *Focus on providing visible progress in as short a time as possible.*
- *Visibly demonstrates the Town's commitment to achieving real and substantial solid waste diversion and progress to ZW*
- *Signals to stakeholders that the landscape is changing, and a new framework and modus operandi is being implemented in Mountain Village,*
- *But that the Plan will be implemented in a way that is as low risk, fair, effective, and cost-effective as possible.*

We have found that, when there is political support, you need to move as quickly as possible. That support can change with an election. The window should not be wasted, and real progress should be demonstrated to those willing to support these initiatives.

Our interest in this project is that we believe you want to move forward, and do not plan on a long, drawn out process that eventually leads to a report that is placed on a shelf. We don't like to waste our time or your money; hence we are providing this proposal to Mountain Village.

[2] *Unfortunately, a manufacturer is not likely to change packaging for products based on MV's desire; however, it would seriously consider this if the State of California wished it, or if Colorado joined California, etc. Spending staff time on activities that doesn't reflect this reality is not likely to be productive.*

Making the MV ZW Plan Work: Twenty Points from Forty Years of Lessons[3]

20 Lessons from 40 years

In addition to the need to make substantial progress quickly to capitalize on support and demonstrate what can be achieved, the following are key elements of our recommended direction for implementing the Plan. We have read the Plan, and our approach to implementing it will vary fairly dramatically from the timelines and order suggested in that plan. Furthermore, if, at any time, the plan's progress is interrupted, you will not be left with "soft" elements that evaporate, showing no meaningful progress. Our discussion is straightforward, and cuts to the chase. We will work with the Committee, Council, advisory groups, or others to discuss as Town needs to refine options and tasks as needed.

1. *Confirm / Get Authorities where you need them*	11. *Other Types of Enforcement Strategies*
2. *PAYT as Core of Incentives*	12. *Walking the Talk*
3. *Move Bans and Mandates Forward*	13. *Diversify Responsibility – and Assign Appropriate Roles*
4. *Follow Vermont's Strategy*	14. *Big Bang / Efforts Focused on Progress, not Analysis Paralysis*
5. *Limit Strong Reliance on Education / Cooperation*	15. *Working on the Longer-term Options*
6. *Money Matters – Diversify*	16. *Prescriptive vs. Performance*
7. *Commercial ABC and Meaningful Enforcement*	17. *Local or Not ("Bigger" Forum)*
8. *C&D Should Come Soon, but Phased*	18. *Hauling – Short Term and Long Term*
9. *Metrics and Consequences are Vital*	19. *Move forward with key strategies that work; study / defer strategies with uncertainties*
10. *Contracts – and Efficiency Considerations*	20. *Progress reporting*

The lessons we have learned on each topic that will affect our approach to the Implementation Plan are detailed below, including a discussion of how it affects MV.

1. **Confirm / Get Authorities where you need them:** We believe MV is a Home Rule Town, which brings a great deal of authority in the areas we need to accomplish in these 20 steps.

    a. **What this means for MV**: We can talk about specifics and limitations in key authorities in the interview or during the Task 1 Kickoff / Brainstorming, and any special steps needed. Many of the early steps can be accomplished with the usual Town authorities in Colorado, and progress does not need to be held up for most of these strategies. *Very early stage.

Authorities

2. **PAYT as Core of Incentives**: Studies have demonstrated Pay as You Throw (PAYT) with embedded recycling is the single most effective and cost-effective residential diversion strategy in the US.[4] The crux of its success is that TRASH PLUS RECYCLING is not more expensive than TRASH ALONE. That needs to be implemented in the commercial sector. The commercial PAYT program implemented in other communities requires that paying for trash service ALSO delivers you recycling containers and service equal to a set ratio of the trash volume. Period. It costs no

PAYT

[3] We ask that you not directly share these strategies with other proposers, and that you not ask about them in the interviews in a way that tips to our approach. We understand documents are generally public, but please don't send it directly. As you know, ideas and knowledge are all consultants have to sell. Thank you for your understanding.

[4] SERA publications, 1996-2014, multiple, with updates, including national and regional EPA manuals. We are widely considered international experts on this topic.

more to recycle. Anyone who implies that businesses will save by implementing new in-house policies, training, goals, bins, or "right-sizing" has not seriously examined a commercial trash bill or recycling charges. The bulk of the cost is the stopping charge; you have to recycle enormous amounts to make up for that fee (especially for small / medium businesses). Implying otherwise lies to the commercial sector.

   a. **What that means for Mountain Village**: MV has PAYT for the residential sector but it is not well-designed. The price incentive is lower than SERA's published work on optimal rate differentials and needs modification.[5] Recycling must be embedded[6], and over time, organics service as well (California's well-known "Fantastic Three", now in place in multiple Colorado communities as well) – culminating in every-other week trash for the most effective and cost-effective service delivery.[7] This can potentially all be achieved quickly through an ordinance. On the commercial side, any hauler operating in the area must be required to implement PAYT commercial as described above.[8] This is a bit of a modification of the suggestion in the Plan, but, if enforced, will go farther than most any other strategy in the laundry list of options presented in the Plan.[9] To continue progress, we recommend periodically increasing the rate incentive to press for better diversion over time and better use of diversion programs. *Early stage.

3. **Move Bans and Mandates Forward**: SERA's research has demonstrated that a Plan that includes a substantial number of bans and mandates, it will deliver 11 to 30 times more tons for the same City budget, than will a plan that does not emphasize these strategies. The big bang, at the lowest cost, is bans and mandates, and so we recommend bringing them out early. They also provide the clearest signal, and are fair. However, they must be enforced. What about "chicken vs. egg"? How can you ban something without a facility to process it? Read on to the next item about Vermont.

   a. **What this means for MV**: A number of the recommendations in the 2008 ZW Plan suggest starting with voluntary approaches, and move toward mandates. We suggest that may not be optimal if the Town wants to change behavior, and reduce the risk of meeting the goal. *Early stage.

4. **Follow Vermont's Strategy**: In SERA's opinion, Vermont solved the "chicken and egg" problem in solid waste. The law requires a phased-in series of bans and mandates (see Figure 1) and we recommend implementation of a very similar ordinance or code change in MV, with similar timing elements. First, mandates for provision of embedded-fee recycling service, and then

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[5] Frankly, the current differentials may not be worth the administrative hassle in terms of the diversion we would expect it to generate, but this is very easily fixed via ordinance.

[6] Meaning it does not have any separate fee, but instead, the costs are included in (or embedded in) the trash rate.

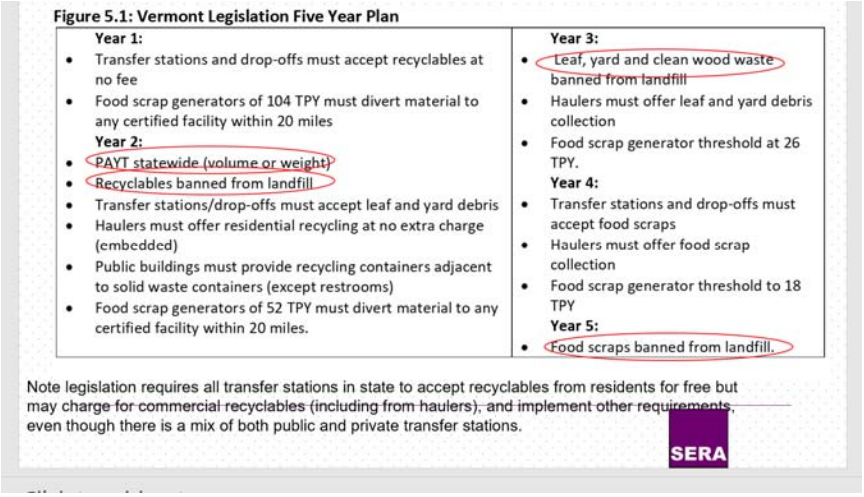
[7] SERA has published sets of "best practices" for PAYT and optimal collection design on the residential and commercial side. We would develop special design recommendations / requirements for MV.

[8] We understand this may run afoul of "screening" requirements to keep containers less of an eyesore. The Town may have to allow a phase in of several years for re-meeting these requirements, and note that some businesses may be able to use 90-gallon containers that may fit in existing screening. SERA is prepared to address the wide range of auxiliary issues that will arise in making implementation recommendations suggested throughout this document.

[9] We may need to conduct work to identify auxiliary changes, like reducing collection of entire strips of businesses, etc.

embedded-fee composting should be required. The law should also immediately announce the phasing-in of bans. This is the vital component that provides clear notice to the private sector: there will be a guaranteed stream of some material (organics, recyclables, C&D) that will need processing to go to market. If a stream is guaranteed, firms interested in getting into that market can then get bond funding because the revenue and material stream is not speculative or "hoped for", it is guaranteed. Bond funding allows construction of the needed facilities. If the City prefers to build facilities, and contract out for operation (a common arrangement), the City can similarly demonstrate guaranteed tons to support that investment.

Figure 1: Vermont's Phased-In Plan



Vermont's Approach

a. **What this means for MV:** Vermont took these materials in a good order; a similar set of bans / mandates should be adopted and enforced in MV. Note that it includes early phases with requirements for service availability and participation, in a progressive way, and with caveats early-on about facility locations and feasibility. Frankly, facing a ban is likely to provide a great deal more motivation toward establishing more robust food recovery programs, for example, than will "do good" initiatives and encouragement. This legislation clearly identifies and confirms the vision of the Council and reconfirm the planned direction clearly for all stakeholders in the area. * Early stage.

5. **Limit Reliance on Education / Outreach, Cooperation-based Strategies[10], and Stakeholder Groups**: Stakeholder groups are beneficial in some ways, but they have common outcomes.[11] Most will back strategies that have keywords like "education", or "cooperate", but will not favor strategies that are mandates or bans. If the Town wants stakeholders to be happy, bans and mandates will not happen – nor will significant or speedy progress. Strategies that actually motivate or require a change in behavior will not receive consensus. Haulers will happily see a

[10] Some haulers user the term "Kumbaya" to encompass strategies that are about "cooperation", "encourage", etc., some of which are present in MV's existing ZW Plan.

[11] Not to be too cynical – we are simplifying to make points clear throughout this document – but stakeholder meetings take a great deal of staff time and elapsed time, and most of the results will be guess-able up-front. Judicious working with individuals may be a better approach. As one example we've worked on, haulers "in general" will hate PAYT; individually, they can be informed on how it works and can be advantageous for them. In general meetings, they will also refuse to speak when WM is in the room, and they are suspicious it is all a ruse to benefit the "big guys".

stakeholder process, as will others that do not want to change. And sadly, our quantitative studies show education programs can change behavior somewhat, but are more expensive per ton diverted than other strategies and cannot be counted on to change behavior over the long haul (even with CBSM[12]).

a. **What this means for MV**: In a number of places in the existing ZW Plan, we saw language suggesting to start with 'cooperation', 'encourage', 'educate', and similar approaches. We find these options tend to result in only small progress, defer real progress, and dissipate momentum. It will also not help get facilities built – a vital part of real progress. We are happy to work with stakeholder groups in any way the Town wants, but we will make suggestions about the enhanced strategies we've used to make these meetings optimally productive (*Appreciative Inquiry*, and other methods). *Early – mid stage.

Money matters

6. **Money Matters - Diversify**: PAYT pays for itself – user fees cover the entire service cost, and the only cost to MV is to enforce the compliance[13]. Mandates and bans are inexpensive for the community, requiring only enforcement. But note, mandates and bans are not inexpensive to generators (businesses, etc.). The new system will cost more out of pocket to businesses than the current system. If the new system with substantial diversion was cheapest, it would be in place now. However, the bans and mandates do not say people can't modify their in-house processes to reduce costs, change waste streams, etc. In fact, they encourage –with consequences and speed – just those behaviors and process changes that the current Plan suggests should come first. Nothing teaches (and maintains) change like economic self-interest. Bans don't force the how, just the what. Each business can identify the cheapest way they can come up with to avoid disposing of recyclables or compost. In economic terms, that leads to social benefit overall. Also, an integrated set of surcharges, fees, and incentives are vital to provide funding for the Town's programs, AND to "juice" the incentive system for the generators. Economics encourages fees for externalities, and that's what non-sustainable resource use represents. Most of the traditional fees / taxes / surcharges used by communities[14] were mentioned in the Plan, and can be used for monitoring, enforcement, and strategy implementation, and programs. We have accumulated examples from communities, as well as their impacts. SERA's study of county (could be community) taxes and surcharges that increased costs of disposal and decreased composting costs led to three-times the uptake of programs in counties with substantial incentives. Landfill surcharges were statistically significant in increasing diversion. A northwest city's implementation of a B&O tax on the commercial sector was successful in gathering funds for environmental programs when they didn't have direct control of tonnages. Generator (or environmental or sustainability) fees are relatively common around the US, and are used to fund services, planning, and other needs.

a. **What this means for MV**: There are many options, but the most complicated part of this is setting fees so they are meaningful. As economists and rates and former city staff

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[12] Community Based Social Marketing (CBSM) is an enhanced outreach technique to achieve behavioral change. We are very experienced int his approach and have taught CBSM workshops across Canada with the originator of the strategy (McKenzie-Mohr).

[13] We will include a detailed enforcement plan in the project; we can't provide everything in the proposal!

[14] Note, these are definitely not unique to ZW towns, and risks are low; various of these strategies are in place in many communities across the country.

– and with staff that were former haulers, SERA is well-positioned to estimate optimal fees. We also bring lessons from leading communities in New York, Oregon, California, Washington, Canada, and elsewhere (some of whom are clients) on ownership and funding options that have been successful. *Early stage and throughout.

7. **ABC and Meaningful Enforcement**: Given the strong recyclability and markets for (most) beverage containers, we suggest early announcement of the ABC (all beverage containers) recycling program for bars and restaurants. This program, well-proven in multiple locations including North Carolina, mandates that any bar or restaurant not implementing active recycling of ABC faces revocation of their liquor license. Compliance is, not unexpectedly, very high. The lesson is, it is effective to piggyback on existing enforcement mechanisms, in ways that are meaningful to the generator.

Effective enforcement

   a. **What this means for MV**: This program is particularly relevant in MV, where bars and restaurants are a significant business sector, and we believe this enforcement method, which we do not believe was included in the original ZW plan, will make the program very effective, increase the diversion from the sector, and increase the amount of beverage containers recovered in the Town. This helps make all the recycling efforts and steps to market more effective and cost effective. *Early to mid-stage.

8. **C&D Should Come Soon, but Phased**: Addressing C&D is vital, especially in a community like MV. What is different about C&D is that you have to catch it as it is happening – at mostly one point in time per building. Nearly all plans (not just ZW plans) work through a hierarchy or phased approach for C&D, awaiting development of a C&D facility.

   a. **What this means for MV**: First, incorporate a C&D ban, crafted to cover key materials, for a periodic of at least 5 years out, as part of the VT-style ban legislation. This paves the way for development of facilities.[15] Then, immediately change building codes to require at-least-equal space for recycling / diversion as it does for trash inside and outside buildings to reduce recycling barriers in new development[16]. Third, require any firm providing trash service to a C&D site to deliver well-labeled recycling bins as well (one combined cost), again, to be in place right away. It is important to make it easier to separate metals, cardboard, and other easy recyclables (and to provide "notice" of changes ahead). Fourth, implement the C&D deposit system that forms the basis of the California success in C&D. This system requires builders / developers / de-constructors to leave a financial deposit when they apply for a permit. They only get their deposit back if they demonstrate they achieved the goal amount of recycling and reuse on their project. It piggybacks on a permit process they already have to go through, and has been very effective.[17] *Early and on-going.

Metrics

[15] *Note, the 2008 ZW Plan suggests implementing a number of strategies, and only putting in a ban after facilities are in place. We believe not putting in a phased-in ban first will lead to an enormous delay in getting a facility "bonded" and built.*

[16] *residential, multifamily, and commercial, new construction and substantial remodels*

[17] *The fees differ by type of project (residential, MF, commercial, and new construction, remodel, deconstruction), and the fees are multiplied times the square-footage of the project. Weight slips are used to demonstrate compliance, with some associated complexities. In the long run, when C&D facilities are developed, their average processing recycling rate can be assigned to projects bringing their material there, usually certified by relevant city / county staff. Again, specifics can be provided if we are successful.*

9. **Metrics and Consequences are Vital**: Success in a ZW Plan cannot be achieved without measurement, and this plan calls 90% the definition of "success". Based on SERA's extensive work in metrics, there are pros and cons to this metric. It is vulnerable to economic cycles, and does not well-measure source reduction. We will work with MV to assess options like Percent Recoverables Remaining[18] (PRR, which is used by several leading communities), or per-capita metrics. In any case, what is measured improves, and numbers are only useful in comparison to other numbers. Therefore, there needs to be a clear baseline, and periodic measurements that track progress to the refined metric for success. The periodic results should be well-advertised town-wide as a progress feedback metric. Beyond the overall metric, the Plan also calls for very extensive reporting requirements for haulers (and presumably, facilities), which will need to be designed with clear report forms, definitions, computations and equivalencies, and frequency requirements. The more these forms focus on information that is already generated as part of hauler business, the more likely the data will be reported and will be reasonable quality. Confidentiality issues were addressed in the ZW plan.

    a. **What this means for MV**: We will work with MV on metrics and a measurement plan, as well as bringing together information from multiple communities to identify the best tonnage reporting forms for haulers, facilities, and other stakeholders. We will discuss pros and cons of Re-Trac and other options for data retention. We will also work with the City to identify how much detail on individual transactions from haulers and/or facilities will be used, and design reporting regulations to support transfer of data in a form that is useful for verification / compliance. Most importantly, the metrics need to be retrospective (how well MV is doing) and prospective (what MV needs to focus on next), and provide defensible justification for enforcement for various actors. PRR for various streams (trash, recycling, organics, etc.) may likely be part of the measurement protocol. SERA is known for its quantitative capabilities and we bring that experience to this part of the assignment. *Early, then on-going.

10. **Contracts – Threats for Hauler Cooperation, and very Efficiency Considerations from Implementing Contracts**: Most of the hauler-related requirements suggested above are achievable through ordinances. However, haulers may push back at Council meetings; they did in other projects we've conducted in the Mountains. If they balk, MV has the right to consider contracting for service, and putting the desired service and rate requirements in as contract performance requirements. Contracting for residential service is straightforward and not uncomment; however, in other states, contracts have been implemented for commercial collection as well. This could be considered / researched. Contracted or districted service (which is a form of contracting) can be efficient and effective options.[19] Importantly, it reduces overlap of hauler routes, reduces vehicle miles traveled (VMT) and emissions, better-integrates programs, and simplifies / unifies outreach, etc. Single contracts tend to lead to lowest costs for generators because of economies of scale, fewer VMT, administrative savings, back-up equipment efficiencies, etc.

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[18] Percent Recoverables Remaining, used by a number of communities in California, looks at a simplified waste composition of the stream to identify how much of the remaining material is still recoverable / divertible. The method has numerous advantages over some traditional metrics.

[19] SERA has successfully run service contracting projects in multiple communities, including communities in Colorado.

a. **What this means for MV**: The Plan calls for possible contracts. This is very effective, but can be timed based on how cooperative the haulers are. The vast majority of benefits can be achieved from ordinances, but holding out contracting as an option very much under consideration can be an effective incentive for hauler cooperation. Figure 2 demonstrates some of the tradeoffs among options, which we can discuss with MV. Commercial contracting can be investigated. *Mid-stage.

Figure 2: Demonstrating Tradeoffs Associated with Some Types of Options

IF PRIMARY GOAL IS…	License	Ordi-nance	Ordinance w/recyc & containers	Contract w/2+ hauler	Contract w/1 hauler	Muni
Fewer miles driven / fewer trucks on streets			Maybe	Good	Best	Best
Lower trash rates for citizens				Good	Best	Best
Easier / cheaper access to recycling			Good	Good	Best	Best
Cleaner col'n / less mess			Good	Good	Best	Best
Minimum extra staff work	Best	Best	Best			
Most recycling (more w/ PAYT)			Best	Best	Best	Best
Minimize hauler complaints	Best	Best	Good			
Minimize citizen disruption	Best	Best	Good			

11. **Enhanced Enforcement Options**: SERA research finds several communities and states have used "shame" as a compliance motivator. A state named names for firms that brought waste into transfer stations that exceeded the percent of recyclables allowed during their periodic checks (including some non-profits and firms with "do good" reputations). Another state required cities that did not reach recycling goals to take out full page ads in newspapers explaining to their residents that they did not meet goals. A city used the want ads to name residents that should come down and collect their "lost" illegal dumping.

    a. **What this means for MV**: Options exist, have been used, and suitable options can be developed / considered if needed. Enforcement is key; if no retribution occurs, violators will lead to violations by those who were following the rules because it is generally cheaper. *Mid-stage.

12. **Walking the Talk**: The Plan includes steps to implement aggressive ZW options in Town buildings, operations, and events. This is important, and the visibility is important. However, some processes that seem easy are often hard. Changing procurement to encourage recyclability and life-cycle costing / end of life considerations (key to sustainability) requires significant attention and hands-on work to change specifications to remove barriers, and research to expand eligible bidder lists. Furthermore, SERA studies have found that recycling in public spaces (especially parks, trails, and downtown) are extremely expensive[20] and problematic; contamination, even in the best cities, generally makes the diverted materials unrecyclable in real life.

[20] BigBelly™ solar compactors can make it a bit more cost-effective, but cannot, alone, address contamination.

a. **What this means for MV**: Town efforts will be visible and important but may contribute only marginally to overall tonnage diversion. However, it will help the Town understand some of the barriers and opportunities first hand, and will mean coordinating with stakeholders to accomplish program implementation. Tonnage diversion will be meaningful, but are not expected to "move the needle" much by itself. The Town will need to use the very best design work if it wants successful parks / trails / public recycling. *Early and on-going.

Diversification

13. **Diversify Responsibility – and Assign Appropriate Roles**: If all responsibility for progress in ZW falls on haulers – or any one or two players -- the initiative will not be well integrated or leveraged across the town actors, and will be fatally flawed. One united lobbying effort to the state legislature can undo its foundations. Diversified responsibilities multiply the efforts, knowledge, behaviors, and ultimately, effects. Furthermore, no one agent is responsible for the problem – it carries through up and down the chain of extraction, production, consumption, and management of the remains. Elements of the programs, incentives, and policies should hit at as many levels of actors as possible so all stakeholders feel everyone is taking on a fair share. So, in the early phases, some responsibility – and enforcement, must fall on generators, some on haulers, some on facilities, etc. In the longer run, producers must be brought into the picture through EPR and other strategies.[21] In the near term, assignment of roles requires some sensitivity and common sense. Assigning haulers responsibility for customers actually recycling, or for contamination will lead to push back. They see their role as providing a convenient, safe, trouble-free service, and fear scolding customers will push them to other service providers; they are therefore, unlikely to be reliable as "enforcers". The Town needs to assign roles with success in mind, and the Town may have to be an enforcer, hiring appropriate staff in a number of cases.

    a. **What this means for MV**: To make progress successfully, MV needs to identify strategies that affect multiple actors, and assign appropriate roles, with a willingness for the Town to take on responsibilities, directly or indirectly. The plan outlined does so to a significant degree. *Consider at all stages.

No analysis paralysis

14. **Big Bang / Efforts Focused on Progress, not Analysis Paralysis**: The strategies suggested here focus on providing key changes right up-front, to show progress and signal the direction Town wants to go. We do not suggest significant new studies or analysis up front, because, frankly, the Town does not need a detailed waste composition study to know that a town with the business mix MV has will have a very significant share of organics and needs and organics program. Very few communities differ from the same main three streams for attention: recycling, organics, and C&D. Most lack processing facilities for one or more materials; MV has more deficits than some. In all communities it is true that having local markets for compost and glass are ideal; they are heavy, bulky, low value materials and long transport kills their market value.

    a. **What this means for MV**: The special barriers and issues in MV are likely three-fold: second homes, seasonal rentals and seasonal populations; significant festivals and public events; and distance from facilities and markets, with winter hauling irregularities a somewhat complicating issue. These are the special issues we need to plan around,

[21] *But realistically, these likely require cooperation / action on a state, multi-state, or national level.*

and they were somewhat, but not fully addressed in the ZW Plan.[22] These topics can be addressed and incorporated into the design of the strategies implemented. Attacking some of these issues (e.g. facilities) in a regional context will be helpful and should be pursued, but progress not held up. Part of the plan for success is based on "require bans / mandates / changes, and the supporting infrastructure will (be able to) follow". *Consideration early stage, but in-depth mid-stage.

15. **Working on the Longer-term Options**: Cooperative and encouragement-type strategies at multiple levels are mentioned throughout the ZW plan, and are necessary to achieve a change in the underlying framework for solid waste toward broader sustainability. However, it is substantially easier to get the attention of generators and haulers if the underlying system has already begun to telegraph significant changes to the existing system. On items that will take a long time to implement (negotiated "cooperative" strategies, etc.), we suggest initiating conversations fairly early, and letting them carry out in parallel as the planned strategies continue to be implemented in MV. Moving forward to develop momentum is valuable, and makes cooperative projects seem like they are leveraging on success, not inaction.

    a. **What this means for MV**: On items with longer processes – including regional cooperation -- it may be useful to prepare a presentation for use with staff or council from neighboring communities. The presentation would outline the Plan and early implementation steps, the gaps, schedule for strategies, and the range of (especially) longer-term strategies in the 2008 ZW Plan that are most effectively addressed on a regional basis. Emphasizing commitment behind the goals and directions is essential. *Start early, but more efforts Mid-stage and on-going.

16. **Prescriptive vs. Performance**: In general, setting percentage or generation goals (performance goal) is better than prescribing the exact steps that must be used to achieve goals. That lets firms, generators, and haulers innovate within their capabilities, and reach the goals at lowest costs to them, which is socially optimal. If sector goals are set (X% residential, Y% commercial), or if MV works with other cities in the County toward ZW, it may be useful to examine setting goals in a way that is performance, with prescriptive (checklist of strategies) as a fallback. That was the approach taken by some states; communities had goals, and if they didn't reach them, the state provided a checklist of prescriptive next steps they must implement – or states (or transfer to generators) could simply demonstrate implementation and enforcement of an aggressive list of prescriptive steps to be considered in compliance.

    a. **What this means for MV**: We will work with MV to identify interim goals for sectors and actors, considering options for performance vs. prescriptive designs, or a combination. *Early and on-going.

What make sense at local levels

17. **Local vs. Not**: As mentioned before, although the ZW Plan talks about trying to encourage producers to reduce packaging, etc. MV is not a large market presence to any producers (except perhaps in the limited area of ski equipment).

[22] *Recommendations on the order of 'encourage businesses using recycled materials to locate in town' is not really addressing the issue in a very practical way.*

a. **What this means for MV**: We will likely recommend support for larger market players (California, Oregon, etc.) or working with national associations to try to foster change, rather than significant local or regional efforts per the Plan. If Ski industry support can be achieved, this might be more worth pursuing. *Discuss early, pick up mid/later stages.

18. **Hauling – Short Term and Long Term:** The cost and uncertainties associated with shipping to facilities and market is a significant barrier to recycling in MV. Net revenues will always be higher in the Front Range, and recycling in the mountains will be relatively more expensive. In the near term, user fees will rise to incorporate these hauling costs, but with programs and incentives ramping up, economies of scale may lead to more efficient transfer and hauling and mitigate high costs to some degree. In the longer term, the development of local processing facilities will allow more efficient hauling of baled materials to markets, improving economics. Developing these facilities as regional facilities, with even larger volumes from multiple communities can help even more. Some remote locations have developed special hauling arrangements, especially when products come into the community, but mostly return empty (which may mimic MV's situation). A former client, Anchorage, established ALPAR, a non-profit that was able to coordinate donated backhaul space in trucks.

    a. **What this means for MV**: Per the 2008 Plan, attention to location / services / sizing for efficiency in transfer stations will be an important element of this plan. We are not certain of the density in some areas of the town. Drop-offs, co-location with transfer stations, and consideration of integrating services from regional "hub and spoke" options may be appropriate to examine as part of the revised MV system. Expanded private facilities, or public facilities, or public / private partnerships may be appropriate. *Discuss early and look for opportunities; consider throughout.

Move Forward

19. **Move forward with key strategies that work; study / defer strategies with uncertainties:** Rather than letting the perfect be the enemy of the good, we tend to recommend that the Town move forward with key strategies, even if not all gaps or opportunities will be addressed up-front. Specifically, that can mean implementing PAYT for residential (up to 4-plex) and commercial buildings, but deferring implementation in large multi-family (MF) buildings. We recognize these buildings exist and are important in MV, but leading communities have been trying to identify successful strategies for large multistory MFs for more than 20 years. We know many that have shown some promise, but holding up for historically difficult sectors will cripple progress in MV. We also mentioned parks / trails as a difficult sector, although there are at least "best practices" developed for these settings.

    a. **What this means for MV**: Begin implementing the strategies addressed in this list of 20. In the meantime, we will start working with MV to consider best options for large MF. In the kickoff, we will discuss the range of strategies that have been unsuccessful ("recycling champions", bounties, hauler incentives), and those with some promise (from the US and international options. *Note early; pick up in mid-and later stages.

20. **Progress reporting:** We recommend developing a quarterly report monitoring tons, costs, cost-effectiveness, greenhouse gas (GHG) impacts, funding, and progress toward the goal. This effort will provide feedback to staff, council, committees and other stakeholders, and identify status and issues. It will track the town's path along an economic "supply curve" toward and the

diversion from landfilling. Furthermore, there is nothing like good, regular (succinct) reporting to keep up support from decisionmakers / council.

a. **What this means for MV**: We can work with MV to set up an Excel™ workbook template, and the points of data collection, measurement, and calculations needed to produce a succinct but meaningful reporting document that is linked to the stages of the Plan and next steps. These metrics will feed into the Implementation Plan, setting up decision points and triggers for actions to address problems and gaps in the strategies in the Implementation Plan. *Set up early, refine mid, and carry-out throughout.

SERA's Draft Template for the Mountain Village Implementation Plan (IP) for Discussion

Figure 3 shows the basic template for the Implementation Plan (IP), to be adjusted and modified during the project assignment. We believe it addresses most of the key elements needed for effective Implementation of the Plan, laid out clearly with references to other sections as needed.

Figure 3: Outline of Content for Implementation Plan Entries

Step #	Phase & Date Start / End	Strategy step	Actions to be taken (bullets)	Responsible parties (primary)	Coordi-nation with	Funding / Time expectations / level of effort	What it needs in place before it can happen	What is expected as outcomes: incl. tonnage impact, costs	Decision points / markers for remedial actions

Brief Task Descriptions

Our tasks include a reliance on presentations and briefings. We find everyone is pressed for time, and documents are best understood when they can be walked through. In addition, immediate feedback on the work makes sure progress continues apace, without waiting 2 weeks for any feedback, and 2 more weeks for revisions, and so on. We still allow / encourage written feedback, but usually about 90% of the feedback comes from group discussions, because it spurs thoughts by others in the group, and because confusions can be addressed in real time. Written follow-up comments are also encouraged at all stages (within 1-2 weeks where possible).

Task 1: Brainstorming and Briefing(s)

Interactive Discussion

Objective: Develop a shared understanding of the ZW Plan, desired implementation timeline, and the directions for the Implementation Plan.

Discussion and Steps: In this task we will conduct at least one zoom-type briefing of the Plan, with the purpose of understanding the depth of support for the ZW Plan, and how aggressive the Implementation Plan (IP) should be. This drives the design of the Implementation Plan. Our main steps include:

- SERA will prepare a short, bullet-style or tabular annotated inventory of the ZW Plan's recommendations, including suggestions and modifications. We will ask for feedback from MV

about known change and updates, especially to the availability of programs or facilities, or cooperative agreements with other communities.

- SERA will prepare slides to guide one or more briefings / discussions with one or more groups in MV, including the advisory committee and staff, and perhaps a higher-level discussion with Council, at MV's discretion.[23] We will discuss and brainstorm around the ZW Plan, and its key elements, updates, and refinements. We will discuss SERA's general outline and considerations for the Implementation Plan (IP), discussed in this proposal. We will conduct a brainstorming discussion around the Plan and considerations / directions for the Implementation Plan. We will look for feedback that identifies general support or refinements in the indicated directions, general timing, and aggressiveness. Written follow-up comments are also encouraged.
- SERA will bring a refined template, with initial sample Implementation Steps, for discussion with MV. The goal is to create a "living document" for the IP, and we will present options from other locations. We will take suggestions on the content and layout.
- We will request information on stakeholders (individuals, haulers, recyclers, non-profits, facilities, communities, etc.) in the community / region, contact names, data sources, and other background information and reports that will assist in preparing the Implementation Plan.
- We will confirm who may be considered as responsible actors to rely on for carrying out elements of the Implementation Plan.
- We will also confirm reporting authorities, schedule, budget, and administration items.

Deliverables: As mentioned at beginning of document.

Task 2: Prepare Early Period "Big Bang" Detailed Implementation Plan (IP) Document

Objective: Prepare a draft of the Early Phase of the Implementation Plan for discuss, feedback, refinement.

Draft Plan

The purpose of this task is to review a draft document of a subset of steps, to identify if its content and detail meets the expectations and needs of MV. After review, we will complete a revised draft covering the early steps of the Plan.

- SERA will prepare a draft IP for initial steps of the Plan, including "Big Bang" strategies, metrics development, and initial funding strategies. Note that this will likely involve calls and quick discussions with committee or staff to answer questions on some elements.
- Send plan, and conduct a meeting to present the draft to MV and take comments and suggestions on approaches, level of detail, and other content that will make the document most useful to MV.
- Prepare a revised draft, including all "Early" steps in the Plan. Present and discuss edits with MV.
- Prepare a near-final Plan, allowing for refinements hat may be suggested in Task 3, and allow for insertion of preparatory steps identified as Task 3 is conducted.

Deliverables: As mentioned at beginning of document.

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[23] Note, we are not certain if the client is the committee, staff, or other, but we are happy to work to provide input to committee or staff and have them take responsibility with council, or SERA will be happy to serve as the "outside expert". Any of these roles can work. We refer just to MV in our discussion, with the points of contact to be discussed in our interview.

Task 3: Prepare Phase 2 Detailed Implementation Plan Document

Objective: Prepare second part of the IP, covering mid and later stages of the Implementation Steps.

SERA will prepare a draft of the second portion of the Implementation 1Plan.

- SERA will prepare a draft IP for mid and later steps of the Plan, including addressing cooperative strategies, additional funding issues, issues related to facilities, later steps and refinements of "big bang" strategies. Again, this may involve calls and quick discussions with committee or staff to answer questions on some elements.
- Send Draft to MV, and conduct a meeting to present the draft to MV and take comments and suggestions on missing elements, ideas, other stakeholders, and other content for these strategies.
- Prepare a revised draft of this section, and return to the Task 2 draft and revise it to insert early preparatory steps that might have been omitted that set up IP steps developed in Task 3.
- Send to MV for review, and hold a meeting for discussion. Written comments are taken after any presentations as well.
- Prepare final IP for MV incorporating comments. Prepare in a format that is consistent with "living document" characteristics that were discussed and agreed in Task 1.

Deliverables: As mentioned at beginning of document.

Task 1-3: Integrated Support - Monitoring, Ordinances, Enforcement, Updates, and Support for Early Steps

Objective: Provide technical support for the early stages of the Implementation Plan.
SERA will provide documents, information, and support to get the IP up and running. and other support that will lead to successful implementation of the ZW Plan for MV. This work will be conducted early on, and throughout the contract period. The documents and support we envision includes:

- working with MV to provide data monitoring plan and protocols, and reporting forms for haulers and facilities, based on successful forms elsewhere
- specific recommended language for needed Ordinances,
- calculations of estimated costs to city and generators from various strategies as needed
- assistance on authorities that might be needed,
- Input on best and feasible enforcement strategies
- talking points to support council and staff,
- Inputs to RFPs, or process management,
- case studies to illustrate successful approaches elsewhere,
- Periodic review of progress along the IP expectations, and suggestions for realignment
- initial template for the on-going tracking document, and Excel workbooks for tracking and data collection
- Oher support as needed.

Deliverables: As mentioned at beginning of document.

Task 4: On-going Support – On Call / As-Needed

SERA will supply support on an on-call / as-needed basis at the rates of Skumatz and Horton $135; D'Souza $100; Vander Vliet $65.

Budget and Timeline

We provide a simplified budget below. Based on our list of the tasks above, and the detailed deliverables listed at the beginning of the document, we provide the following budget:

- Task 1: $5,000 (Month 1 for core work)
- Task 2: $4,000 (Months 1-3)
- Task 3: $3,000 (Months 3-4)
- Total: $12,000
- Task 4 and On-going support: hourly at rates: Skumatz and Horton $135; D'Souza $100; Vander Vliet $65.

We understand that this project will take more hours than the "math" of hours times charge rates; however, we commit to the products and deliverables mentioned at the beginning of the document that occur within a reasonable time frame (we suggest within 1 year of starting the project). This is a benefit to both parties: it makes sure SERA isn't committed forever to things that are just not moving forward, and it provides an incentive for the Town to keep things moving to get the most done for the fixed contract price.
For Tasks 1-3, we assure Skumatz and Horton will provide at least 67% of the hours on the project.

APPENDIX A – SERA Project Experience

***SERA in brief**: WBE, established 1990, S-Corp since 1995, 4 employees, Offices in the Boulder and Seattle areas, 300+ projects, 300+ publications, presentations at more than 150 conferences, www.serainc.com,* ***Principal / Contact**: Dr. Lisa A. Skumatz, 360-261-3069, skumatz@serainc.com*

SERA is a **WBE**, and is currently certified in **NY, CA, IL, OR** and by the nationwide certification agency, **WBENC.**

Skumatz Economic Research Associates (SERA) is a small boutique firm with nationally-recognized expertise in program / policy design, quantitative evaluation, and creative / actionable analysis work in recycling / solid waste integrated materials management, energy efficiency, and sustainability. The firm (a WBE) was established in 1990 and in that time, SERA has conducted more than 200 project assignments in the US and internationally, and has published extensively on our project research.

SERA's staff includes staff with extensive hands-on experience in solid waste – including former City staff (36 years of experience), hauler management staff (34 years), and analysis staff (most with 9 or more years of nationwide project experience). Our staff include economics, statistics, accounting, environment, business, and other backgrounds; their experience includes evaluation, planning, program assessment, surveys and statistics, quantitative research, policy analysis and operations work. This mix assures we provide recommendations that balance best-strategies, cost-effectiveness, consider all perspectives / stakeholders, and have real-world implementability.

SERA's focus is to identify best practices generally, and tailored well-suited strategies for individual clients. SERA has a reputation for quantitative, data-based research, and for developing creative approaches to find practical (and affordable) methods to quantify complex or hard-to-measure impacts. Data collection is a key element distinguishing our work. This includes: generator surveys, stakeholder and city interviews, set out surveys, waste characterization studies, and other primary data collection. Our unique in-house data base of information from 1,300 communities / counties nationwide provides us with ready information on programs / policies, collection and processing, demographics, tonnages, cost, rates, funding, outreach, and other data in place nationwide. These data have been used for case studies, program leads, and quantitative information on impacts and costs for clients. In-house tools supporting our work include:

- "Comp-Plan-in-a-Box" - a tool that identifies highest-scoring residential, commercial, MF, ZW, and C&D programs for first-cut at programs for clients (and other applications).
- "WDAM / Waste Comp Proxy" – a tool that estimates tonnages and costs for waste diversion strategies, and fills in tailored waste projections and waste compositions for clients lacking these data.
- "PAYT-All" – a tool for modeling PAYT feasibility, design, and rates, with contributing elements for projecting tonnage effects, subscription shifts, and effects from alternative rate design assumptions. Residential and commercial PAYT rates are computed.
- Residential & Commercial Curbside Collection Cost Model – a tool that allows us to model the collection costs under varied assumptions for costs, hauler vs. city, trash / recycling/ organics combinations, and other variations, for both residential and commercial collection.
- Facilities Cost Model (MRFs and Compost) – a model estimating capital and operating costs for MRFs (dump & pick, small manual, small automated, medium, large, and mega plants), and organics processing facilities.
- Community Database – containing detailed solid waste programs/policies, tonnage, cost, and demographic data from 1,300 communities nationwide.
- National network of SMEs (Subject Matter Experts) including cities that provide municipal service and others with contracts, national experts and brokers for markets expertise, operators of hub and spoke recycling systems, and many others.

This inventory of tools, white papers, and previous research that provides significant savings and benefits to this project.

Key skills areas include: ***program / policy*** *feasibility, planning & evaluation in trash, recycling, and yard and food waste (organics);* ***commercial*** *& residential strategy development and evaluation;* ***social marketing / behavioral*** *program development and evaluation;* ***data*** *collection and analysis (statistical analysis, surveys, set outs, characterization, case studies); facility analysis; rate studies and* ***PAYT;*** ***integrated plans;*** *stakeholder & public* ***meetings facilitation;*** *cost* ***modeling*** *(collection, processing);* ***service procurement****, and* ***cost-effectiveness*** *work, measurement / metrics /* ***benchmarking*** *assignments, and facilitation.*

Relevant SERA Projects include:

PROGRAM ANALYSIS, ZW / WP / COMPREHENSIVE PLANS	SUSTAINABILITY
Sustainability Plans / Comprehensive / Zero Waste / Plans City of Nashville/Davidson Co, State of CO, State of CT, Anchorage AK, Boulder County CO, Boulder CO, Mesa County	**Job creation / "green jobs" measurement**: Colorado CDPHE, CAFR, EPA headquarters, EPA 9, Boulder County CO, Arlington County VA, Chittenden County VT

CO, El Paso County, Westminster CO, Salt Lake City UT, Minnesota SWMCB, Pitkin County CO, Alameda County CA, Jackson Hole, others

Program and Policy Analysis including impacts / costs / bet practices / benchmarking EPA, Mass OEOA, NSDA, Steel Recycling, National Recycling Coalition, ABA, AF&PA, Dart, Waste Management, Insinkerator, NEMA / TRC, Coalition of 15 cities / counties in CA, State of NC, State of MN, Oregon WPLG, Arlington County VA, Chittenden Solid Waste Management District VT, King County WA, Alameda StopWaste CA, Seattle WA, Westminster CO, Boulder CO, Boulder County CO, many others

Commercial sector studies Minnesota SWMCB (three projects), Santa Barbara, Mecklenburg County NC, Alameda County StopWaste, San Jose, Anchorage, Ecocycle, Boulder, Washington County OR, Snohomish County OR, Metro Vancouver BC, others

Detailed forecasting / modeling / waste stream analysis Seattle WA, State of CT, Alameda StopWaste CA (multiple assignments), Boulder CO (multiple), Snohomish County WA (2 assignments), Pitkin County CO, Mesa County CO, Kitsap County WA, Thurston County WA, Boulder County, Portland Metro OR (multiple projects), Chittenden SWMD VT, Arlington County VA, Oregon WPLG, Metro Vancouver BC, San Jose CA, Honolulu HI, Oregon, Austin TX, private client (multiple) many others.

Leading Communities / Best Practices Metro Vancouver BC (three projects), Lethbridge AB, Alameda StopWaste (two projects), Colorado CDPHE (two projects), King County WA, City/County San Francisco, Minnesota SWMCB, Colorado, EPA5, EPA9, Private Clients (three).

POLICY ANALYSIS: MARKETS/DEVELOPMENT, PRODUCT STEWARDSHIP, HHW

Product stewardship / ADFs: NEMA, California DTSC, Product Stewardship Institute, Alameda StopWaste, Boulder, Boulder County, Reason Foundation, private client

Markets Analysis State of CT, Loveland/Fort Collins, Portland Metro OR (multiple projects), Anchorage, Ecocycle, City of Boulder, Boulder County, Alameda County, UC-Boulder, AF&PA, NYSERDA, King County WA, Honolulu, Bonneville Power Administration, Western Disposal

Hazardous waste analyses Portland Metro OR, Seattle WA, Seattle/King County WA, Alameda Stopwaste CA, California DTSC

Single stream studies AF&PA, Vancouver BC, private client (multiple), Longmont, others.

FUNDING OPTIONS, RATES, AND PAYT ASSIGNMENTS

Funding alternatives State of CO, State of CT, Portland Metro, Alameda Stopwaste CA, San Jose CA, Washington Clean Washington Center, Denver CO, Akron OH, Seattle WA,

Pay as you Throw/PAYT studies & rates EPA 10, EPA 9, EPA headquarters, States of Ohio, California, Illinois, Iowa, Wyoming; Asheville NC, Seattle, Arlington County VA, Loveland CO, Fort Collins CO, Chittenden Solid Waste Management District VT, King County WA, Sunrise FL, Vail CO, Eagle County CO, Largo FL, Knox County TN, Cincinnati OH, Anchorage AK, Jackson Hole WY, Pasadena CA, West Jordan UT, Chandler AZ, Native American workshop; many others

Hauler / Collection / PAYT Studies USEPA, Edgewater CO, Lethbridge AB, Westminster CO, AF&PA, private client, State of

GHG / Environmental / emissions impact estimation Seattle, Colorado CDPHE, Boulder County, EPA, Larimer County, Loveland

EDUCATION / OUTREACH / SOCIAL MARKETING/BEHAVIOR

Education, behavioral, and social marketing program measurement and analysis Iowa DNR, Colorado CDPHE, CIEE – California Institute for Energy and Environment, Center for Environmental Technology / CET, Tompkins County NY, Alliance to Save Energy, Resource Recycling, Boulder County, Alameda StopWaste, NW Regional Technical Forum, others

METRICS AND HARD TO MEASURE IMPACTS

Metrics Development / Measurement: Portland Metro, Seattle, Oregon DEQ, Alameda StopWaste, Fort Collins CO, Longmont CO, Nashville TN, State of Colorado CDPHPE, others.

Triple Bottom Line / Benefit Cost Lethbridge AB, Nashville, State of CA, City of Seattle, Fort Collins CO, Longmont CO, Colorado CDPHE.

Statistics and measurement / hard to measure (HTM) effects (education, waste reduction, jobs, "denominators", etc. Alameda Stopwaste, Seattle, Portland Metro, Iowa DNR, NRDC, State of MD, State of NY, State of Illinois, State of Colorado, State of RI, EPA headquarters, NSDA, State of MN, California DTSC / NEMA, Seattle WA, Snohomish County WA (2 assignments), Hauler King County, Oregon WPLG, Metro Vancouver BC, private client (multiple) many others.

DATA COLLECTION – WASTE COMP, SET OUT SURVEYS, RES & COMMERCIAL SURVEYS

Waste sorts / set out surveys Broomfield, Boulder, Longmont CO, Boulder County, Fort Collins, Superior, San Francisco, UC-Boulder, Snohomish County, Cincinnati, Anchorage, Gainesville, Alachua County, Oak Park, others.

Commercial surveys / interviews / on-sites Mecklenburg County NC, Santa Barbara, City and County of Denver, Minnesota SWMCB, Westminster CO, Boulder, Boulder County, Pitkin County, Mesa County, Superior CO, Seattle, California DTSC/NEMA, Vail CO, Edgewater CO, Anchorage, Oregon DEQ, Washington County OR, State of Wyoming, Product Stewardship Institute, others

Residential surveys / interviews Westminster CO, Boulder, Boulder County, Asheville NC, Pitkin County, Mesa County, Superior CO, Edgewater CO, Fort Collins, Longmont CO, California DTSC, Santa Clarita CA, West Jordan UT, Anchorage, many others.

TRAINING / FACILITATION / STAKEHOLDER MEETINGS

Workshops / Webinars / Manuals / Train the Trainer / Facilitations EPA headquarters, EPA10, EPA 9, EPA8, EPA5, States of California, Ohio, Wyoming, Iowa, Colorado CDPHE, Coalition of Northeastern Governors / CONEG, National Recycling Coalition / Pennsylvania Markets Commission, University of Wisconsin Extension, Southern States Energy Board, Ball, Canadian MOE, Boulder County, Massachusetts OEOA, ABA, others

Facilitation, Public Meetings National Recycling Coalition / Regional Markets Meeting series, State of Colorado CDPHE (3 projects), Colorado National Guard, State of CO, Fort Collins CO, Westminster CO, Anchorage, Jackson Hole WY, Santa Clarita CA, Massachusetts EOEA, Pitkin County CO, other.

CO, State of CT, Alameda StopWaste, El Paso County CO, Minnesota SWMCB.
Rate studies – Residential Boulder CO, Asheville NC, Anchorage AK, Jackson Hole WY, Summit County CO, Porterville CA, San Jose, Santa Clarita CA, Berkeley CA, West Jordan UT, Austin TX, Kauai HI, Arlington County VA, Sacramento & County CA, Cincinnati OH, Pasadena CA, Seattle WA, Chandler AZ, many others
Rate studies – Commercial & facility Island County WA, Kitsap County, Santa Barbara CA, Seattle WA, Portland Metro OR, Morgan Hill / Gilroy CA, UC-Boulder, San Jose CA, Largo FL, others

FOOD WASTE / ORGANICS

Yard waste, composting, food waste studies, EPA 5, Nashville / Davidson County, Colorado CDPHE, State of IL non-profit, Training for USCC, Boulder, Longmont CO, Arlington County VA, Chittenden, VT, Dept. of Energy, Seattle, Santa Barbara, King County, Boulder County, Anchorage, private client.

COST / FACILITY MODELING

Detailed Recycling & Composting Processing Facility Cost / Profitability Models; Disposal options State of CO, Private client, NYC, Resource Recycling, Pitkin County, Private hauler, Akron / Summit County, others
Collection Model / Efficiencies Lethbridge, Longmont CO, Asheville NC, Private client, State of CT, State of CO, others.
Transfer station studies Portland Metro OR (2 projects), Largo FL, Seattle WA, private client, Anchorage AK, Pitkin County CO

COLLECTION PROCUREMENT, TESTIMONY

Service / franchise / contract options, RFPs, Ordinances Littleton CO, Golden CO, Edgewater CO, Sheridan CO, Denver CO, Boulder County, Boulder, Louisville CO, Broomfield CO, Eastown PA, West Jordan UT, Waukesha County WI.
Testimony / Legislative support King County, Colorado E-waste Task Force, Toronto Ontario, Commonwealth of Massachusetts, Iowa DNR, State of California, GA legislature, FL legislature, WUTC, ALEC, NCSL

Biographies for SERA Staff.

Note, 2-page abbreviated resumes are included in Appendix B.

Dr. Lisa Skumatz, Principal, SERA: Lisa brings more than *36 years of experience* in solid waste policy and program design, evaluation, and modeling. For 28 years, Lisa has been Principal of SERA, a research and consulting firm that specializes in solid waste and resource conservation work. Lisa is widely known for her "data focus" in solid waste. She gathers real-world data and analyzes it to identify defensible and transferable lessons about ***program performance, costs, appropriateness, and best practices*** – and uses the information to develop locally-appropriate / tailored strategies for clients. She has developed ***detailed models –*** based in real-world practice – for residential and commercial collection, transportation and transfer, recycling processing and compost facilities, used to identify appropriate technologies***, costs of program*** or policy changes, and ***efficiencies and profitability in operation***. Her focus is best practices and quantitative policy and program work to identify effective and cost-effective sustainability initiatives at the local, regional, national, and international level. Lisa's expertise includes: integrated solid waste management planning, pay-as-you-throw (PAYT), source reduction, zero waste, funding, social marketing***,*** outreach, organics, ***collection and processing modeling***, job and economic impacts, ***benefit-cost*** and TBL analysis, and other topics.

Lisa was also the primary` author of **CDPHE's current Integrated Materials Management Plan**, built integrated planning and forecasting models, and detailed rate and cost estimation and funding options work. Lisa recently completed working on Chittenden's waste forecast / scenario analysis model, and Nashville/Davidson County's ***Solid Waste Master Plan update***– adding to previous modeling / scenario / plans work for Colorado, Oregon, Iowa, Massachusetts, and Connecticut. Integrated solid waste management plans at the local level include projects for Anchorage, Boulder and Mesa Counties in CO, Jackson Hole, King County WA, Pitkin County CO, Seattle WA, and similar work for Minnesota SWMCB and Dakota County. These projects included ***tonnage forecasting, program and policy development*** (including zero waste)***, cost and funding, stakeholder engagement, and implementation plans***. Lisa is the national expert in PAYT and has conducted work helping hundreds of communities as well as national, regional, and state work in PAYT (OH, CA, IL, IA, WY, and others). She has conducted state-of-the-art work in social marketing and outreach programs (including a "how-to" manual and tools); organics and food scraps programs (including a manual for EPA and work for IL, MN, CO, Chittenden VT, Philadelphia, Arlington VA, and other clients); and expertise in successful commercial strategies.

Lisa assembled and maintains the largest database of community data (more than 1,000 communities), a database she has updated every 2-4 years since 1994. Lisa and her work are widely respected in the US and internationally – reflected in her project assignments but also in her unique distinction of winning two national-level lifetime achievement awards from SWANA and the National Recycling Coalition and appointments/elections to numerous boards and panels. She has also published 150 papers and articles.

Lisa's Previous Experience:

- Skumatz has been in the industry 40 years and is well-recognized as an authority in best practices and practical solid waste strategies, measurement / tracking, and funding. My roles in the industry have included:
- 4 years with an international consulting firm doing solid waste program development, analysis, rates, and comprehensive plans for clients across the US. She developed PAYT manuals for EPA and multiple states nationwide, worked on comprehensive plans

- 5 years conducting analytical evaluations of sustainability initiatives for a US national laboratory, and 3 years working for an energy utility on energy efficiently / conservation initiatives and market research work.
- 3 years working for Seattle Solid Waste Utility doing rates, planning, evaluation / measurement / improvement, and tracking work. Especially relevant, she was responsible for the City's PAYT rate study, was a key contributor in developing the first comprehensive plan, assisted in contracting of collection service, developed tonnage forecasts and tracking documents, worked on the documents needed to get bonding for new facilities, and conducting hands-on work to improve the efficiency of the practical work to improve transfer station operations, and processes, and funding options for the hazardous waste plan.
- at the state level, and worked on programs and rates with cities and counties across the US. She also co-taught CBSM workshops across Canada, and ran and evaluated a field pilot for an innovative PAYT enhancement, as well as conducting evaluations of broader sustainability initiatives.
- In 1994, she founded SERA, and has provided a range of solid waste consulting projects at the city / county / state / federal level, with a focus on rates, comprehensive plans, and program / policy planning and evaluation.

Gary Horton, Senior Associated Consultant, SERA: Gary, an associated consultant with SERA, is a seasoned solid waste professional with 34 years of experience working for a leading Colorado ***waste hauler providing*** residential and commercial garbage and diversion services (***trash, recycling, and organics and food waste***). Gary's experience was as President and had responsibility for rates, accounting, and policy for a Residential and Commercial hauler in the Front Range. This involved collection of trash, recycling and organics, a transfer station, developing and operating a composting site, and evolving various routing and low-level sorting / picking procedures for high value materials. He implemented contracted PAYT collection in concert with multiple communities in the Front Range. He also helped Boulder County develop reporting documents, and advised on legislation / regulations to balance information needs with hauler feasibility. With SERA, he has helped develop collection, MRF, hauling, and composting models, designed programs and integrated plans for communities, and developed detailed implementation plans. He managed introduction of ***innovative programs***, transition to a CNG fleet, and has overseen operation of landfills, processing of commercial recyclables, dump-and-pick operations, and ***processing*** of residential and commercial compost. His expertise in ***performance statistics and costing*** is exceptional, and he understands program design and delivery from "soup to nuts". He is an expert in the design and implementation of PAYT, including roll-out, rate design, and the special requirements to successfully conduct PAYT under contract in communities. He brings extra credibility with haulers, and ensures recommendations are as 'unburdensome' as possible to haulers. He brings expertise in tonnage reporting and estimation at the local level.

Gary has developed ***detailed models*** of MRF processing, residential and commercial ***collection services***, and ***organics processing***. He recently completed work developing ***cost models*** for collection and processing for the Colorado State Integrated Materials Management Plan. He has worked recently on a number of SERA projects including:

- Westminster's municipal collection costs and efficiencies / options model
- Lethbridge recycling collection and service procurement optimization
- Connecticut Solid Waste Management Plan
- Colorado CDPHE Integrated Materials Management Plan
- PAYT options in Asheville NC
- MRF cost and operations options for private client

Dana D'Souza – Ms. D'Souza is the Senior Analyst with SERA, Inc. and has conducted ***research on nearly every aspect of solid waste*** and recycling systems. With SERA, she has more than a decade of detailed experience with ***data collection***, interviews**, benchmarking**, and customer ***survey design*** and ***outreach*** on solid waste topics. She has conducted program review, case study, interviews with solid waste program staff across the country, including data on program design, *costs, infrastructure, and diversion*. She has collected data on the wide variety of recycling and solid waste programs across the US – ***including recycling, yard waste, food scraps and source reduction***, electronics, single stream recycling, education / outreach programs, and others. She is currently working on a grant project researching innovative trends in contamination mitigation that involves gathering and analyzing community recycling processing contracts and price changes, and reviewing program and material changes due to the recycling market downturn.

She has 12 years of experience studying programs across the US, Canada and overseas – including detailed work on PAYT, recycling, organics (including mandates, opt-in/opt-out, and enforcement). She has interviewed hundreds of communities on residential and commercial programs and best practices, and manages SERA's database of 1300 programs across North America.

For several projects, Dana has looked at impacts of recycling and composting programs on GHG reductions including the use of the EPA WARM model. She has worked on several EPA projects specifically looking at food waste developing "Best Practices" and was a participant of the Region 8 Food 911 project. She led a statewide analysis of the economic and environmental impacts of organics diversion providing recommendations on food waste reduction, inter-city programs, farming impacts and solutions, and community diversion programs. For this and a Colorado project, she conducted a composting market analysis and feasibility study.

She has extensive experience in ***social marketing and behavioral programs***, including work for Colorado CDPHE, Philadelphia, and others. She has conducted surveys to ***identify recycling behaviors*** and practices for businesses in Minnesota, Canada, and North Carolina. She has her degree in International Business from San Diego State University and served on her community's Town Board for 6 years and acted as liaison for the Regional Council of Governments.

Consultant, SERA. Ms. Vander Vliet has strong quantitative and data collection skills, and an excellent inter-personal approach to help gain residential program and survey participation. She has conducted work for SERA including research on outreach and education on-line, over the phone, and in the field. Most recently she has worked our Sustainability Behavior Change project through data collection of recycling set out rates and weights and residential behavior changes. She is comfortable working with large data and has been updating a SERA national database. She has a background in science and research and has a background of working in community code enforcement with extensive public interaction. This, combined with her background in data collection and research, provides Ann with a unique skillset suited to research in public policy, outreach, and behavior.
Education: MS entomology, Washington State University, Pullman WA (2013); BS Zoology, Colorado State University, Fort Collins CO (2008); Previous employment: Graduate and Undergraduate Research Assistant (2005-08, 2008-11), Peninsula Humane Society (2018-19), Las Cruces NM Police Department (2012-18).

APPENDIX B – 2-Page Resumes

LISA A. SKUMATZ, Ph.D., Principal, SERA

Ph:303-494-1178 // 346 Shag Rock Lane, Orcas WA 98280; or 762 Eldorado Dr., Superior CO 80027
skumatz@serainc.com // www.serainc.com; Current Board Member Recycle Colorado.

SUMMARY: Dr. Skumatz brings more than 30 years of experience in solid waste policy and program design, evaluation, and modeling. For over 25 years, Dr. Skumatz has been Principal of SERA, a research and consulting firm that specializes in solid waste and resource conservation work. She is known for her extensive and innovative work in PAYT programs. SERA's business focus includes "best practices" and quantitative policy and program work to identify effective and cost-effective sustainability initiatives at the local, regional, national, and international level. Her extensive expertise in policy and program analysis in recycling / solid waste has been recognized in the US and internationally – reflected in her project assignments but also in three "Lifetime Achievement…" awards and appointments/elections to numerous boards and panels. She has taught more than 60 in-person workshops, given 100 webinars or presentations, and published more than 150 papers and articles in solid waste topics. Lisa brings a mix of practical and forward-thinking solutions, backed by proven quantitative skills, creativity, and problem identifying-and-solving capabilities. She brings real-world data to all her work, and has the robustness of background to understand and frame the issues from the range of relevant perspectives.

EDUCATION:

Ph.D., M.A.	Economics, The Johns Hopkins University, Baltimore, Maryland, 1978, 1987.
B.A.	Economics, The University of Wisconsin, Madison, Wisconsin, 1975.
Certification	Sustainability Leadership and Implementation Certification, University of Denver

WORK HISTORY:

1994- Principal, Skumatz Economic Research Associates (SERA, Inc.)
1998- President, The Econservation Institute (non-profit)
1990-94 Vice President, Pacific Northwest Division, Synergic Resources Corporation.
1987-90 Rates Economist, City of Seattle.
2004-2014 Town of Superior Trustee; 2014-5 Graduate school faculty, University of Colorado -Denver
1985-87:Energy Research Analyst, Pacific Gas and Electric Company; 1980-85: Research Economist, Battelle Pacific Northwest Laboratories; 1978-80; Research Economist, U.S. Bureau of Labor Statistics; 1977-78: Economist, U.S. Department of Health, Education, and Welfare; Previous - Teaching Assistant and Research Assistant, The Johns Hopkins University, Baltimore; Paid Intern - Ralph Nader's Public Interest Research Group, Washington DC.

EXPERIENCE AND CLIENT HIGHLIGHTS:

PAYT: Dr. Skumatz is ***the international authority on Pay As You Throw (PAYT),*** an incentive-based strategy for increasing recycling. She works with clients to develop practical, tailored PAYT options suited to their situation including feasibility, design, implementation, and rates work for communities. ***Projects include work for****: EPA (headquarters and Regions 8, 9, and 10); States of PA, IL, IA, WY, OH, CA, GA; UK's WRAP; University in Santiago, Chile; Local Government Commission; Longmont, CO; ICMA; Large NE City; Maui County (HI); GVRD / Metro Vancouver, BC; Snohomish County, WA; Westminster, CO; Knox County, TN; Anchorage, AK; Sacramento County, CA; Cincinnati, OH; Gilroy, CA; Morgan Hill, CA, Orange County, CA; Berkeley, CA; San Francisco, CA; Ventura, CA; Oak Park, IL; Sunrise, FL; Largo, FL; Ft. Wayne, IN; Victoria, CRD, BC; and many others.*

Policy Analysis: Dr. Skumatz conducted statistical work to analyze the performance and cost impacts of single stream recycling, collected data from communities, MRFs and mills, conducted detailed analyses to identify the tradeoffs, strengths, and weaknesses compared to dual stream programs. She estimated cost per MTCE for energy and recycling strategies to guide national and local policy (requested by Obama's Transition Team). ***Selected Clients include****: EPA, UK-WRAP, Colorado CDPHE, Boulder County, consortium of 15 California cities and counties, AF&PA, City of Seattle, Seattle/King County, Steel Recycling Institute, National Soft Drink Association, American Beverage Association, Fort Collins CO, Boulder County CO, SCE, CPUC, CIEE, and many others.*

Detailed Models of Collection, Recycling & Composting Processing Options: Dr. Skumatz has constructed detailed cost models for residential collection, commercial collection, recycling processing

(from "dump and pick" to mega automated plants), and composting facilities (including food) that support develop reliable costs for program changes and to run scenarios to assess the relative impacts of integrated options. The models are "real world", with extensive input and vetting from hauler and the private and public processing industry. ***Selected Clients include**: Private client, New York City MRF, Colorado CDPHE, Asheville NC, Lethbridge Canada, State of CT, and others.*

Program Evaluation / Analyses / Optimization, Impacts, and Data: Lisa brings specialized evaluation methods, including control groups / experimental design, multivariate statistical approaches, and other methods to provide defensible results and program attribution to her work. Most of her evaluation work is designed to support decision-making (at the community, state, or national level) about the development, design, refinement, and funding of policy and program / strategy options. ***Projects include work for**: States of RI, MA, NC, MN, CO; KAB; EPA (federal and Regions 5 and 9); 15 cities / counties in California, Metro Vancouver, BC; Fort Collins CO; Westminster, CO, Boulder, CO; MN SWMCB, Seattle, WA; Porterville, CA; Gainesville, FL; Largo, FL; West Jordan, UT; Portland Metro, OR; Santa Clarita, CA; King County, WA; Akron, OH; Berkeley, CA; Santa Barbara, CA; Austin, TX; associations (NEMA, PSI, APC, NSDA, SRI), CA DTSC, non-profits (Reason Foundation), private clients, and others.*

Food and Organics: Dr. Skumatz has conducted assignments in organics including best practice manuals and state-of-the-art in food collection programs. She also conducted work in modeling and costing drop-off and collection programs, and compost processing sites for communities and state plans. ***Selected clients include:** EPA Region 5, Illinois, State of Colorado, State of Connecticut, Longmont CO, Boulder CO, Arlington County VA, Santa Barbara CA, Chittenden SWMD, King County WA, Boulder County CO, Portland Metro, Anchorage, Mesa County CO, others.*

Surveys, Market Research, and Data Collection: Dr. Skumatz has extensive experience in all phases of detailed survey design, statistics, and analysis for research and program evaluation purposes including using random or stratified random approaches to collect data. ***Clients include**: Seattle WA, Mecklenburg County NC, Metro Vancouver BC, States of NY / ME / IL / CA / RI, Oregon DEQ, Boulder CO, Boulder County CO, Edgewater CO, Oak Park IL, Anchorage AK, Pitkin County CO, Tukwila WA, and many others.*

SWM & ZW Plans / Modeling – and "Comp Plan in a Box": She has developed "zero waste" and "solid waste management" plans to identify the most cost-effective portfolio of programs, incentives, and policies toward waste diversion and effective waste management – and estimates the cost to the client and (cost and often rates) to the residential and commercial generators affected by the programs. ***Selected Clients include**: Colorado CDPHE, State of Connecticut, Oregon WPLG, Massachusetts OEOA, Iowa DNR, EPA Headquarters and Regions 5 / 9 / 10; Nashville TN; Alameda StopWaste, CA; Boulder County, City of Boulder, Eagle County, CO; UK-WRAP; Metro Vancouver, BC; Seattle Public Utilities, WA; Consortium of 15 Cities / Counties in CA; Anchorage AK; Pitkin County, CO; Mesa County, CO; Westminster, CO; Fort Collins, CO; Many others.*

Funding, Incentives, and Rates: Dr. Skumatz has conducted funding options analysis which include self-funding options that provide incentives. She is a skilled rates economist with expertise in examining cost of service / revenue requirement and incorporating rate designs that meet incentive, sufficiency, and other goals. ***Selected Clients include**: Colorado CDPHE; Boulder County, CO; Alameda StopWaste, CA; Nashville TN; King County, WA; Seattle, WA; US EPA; State of Massachusetts OEOA; Iowa DNR; Oregon WPLG; Clean Washington Center, WA; Metro Vancouver, BC; Mesa County, CO; Anchorage, AK; Pitkin County, CO; City/County of Denver, CO; San Jose, CA; San Francisco, CA; Santa Barbara, CA;, and many other cities / counties / authorities.*

Tonnage Forecasts, Set Outs, and Waste Characterization Analyses: Lisa is an economist / econometrician, conducting work ***forecasting*** solid waste tonnage for rate studies and comprehensive / zero waste plans since 1987. Lisa has conducted scores of ***statistical waste characterization studies*** gathering data on recycling / trash streams constituents, designed and conducted scores of set out surveys for communities considering solid waste changes. ***Clients include:** Seattle WA, Snohomish County WA, Metro Vancouver BC, State of OR, State of MA, and State of CO, Anchorage AK, Pitkin County CO, Boulder CO, Boulder County CO, Tukwila WA, USEPA, and many others.*

DANA D'SOUZA, SENIOR ANALYST, SERA

762 Eldorado Drive, Superior, CO 80027 dsouza@serainc.com; 303/494-1178;
Current Board Member Colorado SWANA

EDUCATION: 1991 B.A. International Business, Business Emphasis: Marketing, Management, Finance
San Diego State University

WORK EXPERIENCE

2008-present SERA - Senior Environmental Analyst See Below for current work
2010-2014 Econservation Institute, Superior, CO- Grant Compliance- Financial & Contractual Compliance
2004-2010 Board of Trustees, Town of Superior, CO – Approval / Oversight of Municipal and Utility Funds, Budgets & Departmental Planning, Land Purchases, Contracts, Community Programs, Capital Investment Projects, and Housing and Facility Development Planning.

1998-1999-Roche Pharmaceuticals, Boulder, CO- Accounting assistant- Closing out of Capital Projects; 1991 National Pen Corporation, San Diego, CA- Accounts Receivable for national sales: 1990- International Trade Administration, San Diego, CA- Financial Trade Internship- International Letters of Credit

RELEVANT EXPERIENCE

Ms. D'Souza is a senior environmental analyst with SERA, Inc. and has conducted research on nearly every aspect of solid waste and recycling systems, including cost of service, facility financial data, operations, and equipment return on investment. She has worked on several integrated solid waste and diversion plans for states, counties, and cities gathering data on recycling and organics material, market values, program and collection costs and efficiencies, and single stream and multi-stream MRF operating and material costs. On dozens of projects, she has conducted detailed surveys or interviews with participants, non-participants, stakeholders, program staff and others to identify program impacts, successful designs, costs, and "best practices" including financial data used for SERA's cost models. She has conducted both quantitative surveys and detailed case study research for state, city / county, and national business clients. She has successfully interviewed an array of stakeholders – households, commercial businesses, cities and state contacts, and others -- for residential and commercial programs in California, Minnesota, Colorado, and across the nation. Many of those involved examining various rate structures for curbside programs and benchmarking work that often consisted of reviewing department and program budgets from across the nation. For multiple projects, she has collected and analyzed market data and cost of materials for recycling and organic streams and was co-author for a published article on the "value of buried" recyclable/ compostable material.

Recent Projects include:

- EREF- Solutions for Recycling Contamination Reduction
- Chittenden Solid Waste District, VT – Tonnage Forecasts
- Saskatoon, SK (CAN) – PAYT & Organics Program
- KAB - Public Space Recycling and waste composition
- Lethbridge – feasibility of in-house curbside recycling vs. contracted
- Nashville - ZW Plan and residential / commercial surveys, and TBL analysis
- San Antonio - PAYT analysis
- Longmont - Organics Set-Out Survey
- State of Colorado CDPHE - Markets analysis
- Greeley CO - Recycling Survey
- Broomfield CO - PAYT and contracting initiatives
- State of Colorado - Integrated Solid Waste Management Plan, surveys, 10 stakeholder meetings
- Dakota County, MN - Commercial and Residential Diversion Programs
- State of Colorado - Social Marketing Pilot Program and Evaluation
- Philadelphia - Evaluation of In-sink diversion program
- USDN – develop commercial program / policy toolkit;
- King County - Best Practices for advanced communities
- SWMCB, Metro Minneapolis - Food waste strategies
- State of Colorado - Visioning project
- EPA Region 5 - Best Practices in Food waste programs
- Asheville – PAYT, compost programs, residential / commercial survey

- Illinois - Compost Market and Food Recovery Analysis with Economic and Job Impacts,
- State of MN MPCA - Best practices in schools
- Dakota County MN - Commercial recycling options, and barriers in billing / invoicing

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Community, Household / Business Interviews and Best Practices: Ms. D'Souza has gathered and analyzed information about community solid waste practices, including their solid waste management plans and goals, business programs, cost of services, and contracts. She has conducted hundreds of interviews and surveys with businesses and households on behaviors, preferences and behavior changes. She has interviewed both businesses and haulers on the cost implications of current systems and potential opportunities. She has extensive experience conducting case study work. Work of this nature was conducted for numerous clients.

Commercial Recycling and MRFs: For a national association, Ms. D'Souza gathered hard to find information on the recycling stream of the commercial sector. Ms. D'Souza interviewed public and privately owned MRFs collecting data on material flow and cost of material processing. She reached out to a wide number of communities in an effort to gather detailed recycled material data and program costs. In conjunction, she reviewed our community and solid waste program specific database, updating information for a large number of comparisons communities used for this project.

Solid Waste and Sustainability Initiatives: Ms. D'Souza has conducted program review, case study, and benchmarking interviews with solid waste program staff across the country, including data on program design, costs, infrastructure, and diversion. She was a task lead on work to estimate the GHG potential - impacts of waste not diverted in Colorado. She has collected data on the wide variety of recycling and solid waste programs across the US – including recycling, yard waste, source reduction, electronics, single stream recycling, education / outreach programs, and others. These data have been used to identify cutting edge programs and provide key data on the factors affecting program performance.

Advanced Deposal Fees (ADF) – Product Stewardship & Funding*:* Ms. D'Souza gathered data on communities across the US and Canada that had ADF and extended product responsibility programs. As a second phase of the project, she contacted cities, associations, and reviewed the literature to gather data on the demand (dollar and units), and demand elasticities associated with 12 commodities targeted for possible ADFs, including toxics, packaging, single use bags, pesticides, cigarettes, fast food packaging, bottle bill items, etc.

Mandatory Recycling and Recycling Ban Options*.* For clients in California and Canada, Ms. D'Souza interviewed program managers across the nation on mandatory commercial and residential recycling programs, and on a variety of material bans to identify effects, successful program design options, costs, and enforcement strategies for mandatory programs and bans.

Set Out Surveys and Waste Composition Analysis. Ms. D'Souza conducted set out surveys / measurement of residential disposal, recycling, and yard waste, and sorted samples of waste and recycling to estimate refuse and recycling participation of households in several communities in Colorado. Tasks included collection and analysis of solid waste, recycling, and yard waste data from a sample of households in the area.

Measuring the Diversion and Cost Impacts of Social Marketing. Ms. D'Souza helped design and implement a carefully-designed pilot program to measure the impacts and cost effectiveness of community based social marketing on recycling and energy efficiency behaviors.

PUBLICATIONS AND PRESENTATIONS

Ms. D'Souza has given presentations and poster sessions on her energy, recycling, social media / marketing, and sustainability work at conferences including the SWANA B.C, and US National & Regional SWANA conference, Behavioral Energy (BECC) conference, Colorado Association for Recycling, and National AESP, and ACEEE conferences. Publications include articles in trade journals such as *Resource Recycling*.

GARY HORTON Senior Associated Consultant SERA

Skumatz Economic Research Associates, (SERA); 762 Eldorado Drive, Superior, CO 80027; 303/494-1178

SUMMARY

Gary Horton is a seasoned waste industry executive recently retired from Western Disposal Services, Inc. in Boulder, Colorado. In his various roles with the Company, including Vice President of Finance and President, Mr. Horton managed a private collection firm as it evolved from trash collection only to trash, recyclables and compostable organics collections – and to fully automated trucks and the introduction of a CNG transition. At various times, he has overseen the operation of landfills, the processing of commercial recyclables and the production of compost and other organic materials from organics collected from both residential and commercial sources.

A big believer in cooperation between private business, local government and non-profits in developing comprehensive waste diversion programs, Mr. Horton played a key role in the development of the waste management activities in Boulder County and the cities located within the County.

EDUCATION

B.A., University of Denver, Business Administration

WORK HISTORY

2015- PRESENT	Associate Consultant SERA
1980-2015	Western Waste Systems, Boulder, Colorado, various positions including President
1975-1980	La Primo Foods, Denver, CO, Accounting

WORK HIGHLIGHTS

Mr. Horton began his career in public accountancy where he earned his Certified Public Accountants credentials, although he no longer practices as a CPA, that training laid the groundwork for a keen insight into cost analysis, rate design and operational analysis.

Hauler Ordinances and PAYT: During Mr. Horton's tenure with Western Disposal, the company helped the City of Boulder and Boulder County design their waste hauler ordinances which required the use of Pay-As-You-Throw rates, the inclusion of free recyclables collection with trash collection and both free and minimal cost pricing models for organics collected from residents. For two SERA project in Fort Collins, CO Mr. Horton contributed and authored white papers on;

- Tonnage and cost estimates for both residential and commercial programs including a recycling ordinance
- PAYT rate incentives

Contracting and Public Engagement: Western Disposal was the successful bidder for the initial implementation of "single-hauler" residential programs in both Louisville and Lafayette, CO. Mr. Horton was one of the presenters in those communities for question and answer meetings with local residents. Those were contentious meetings but they all resulted in residents feeling that they had been heard and listened to concerning the issue of losing the ability to choose their individual refuse hauler. He has been a valuable contributor to SERA's Westminster project, providing the necessary link between the City Council and multiple haulers in public meetings addressing the potential change to PAYT and a single contracted hauler.

Collection and Facilities Expertise & Modeling: Mr. Horton has an understanding of facilities of collections not only from a hauling and operational standpoint, but as a CPA that understands the cost intricacies needing for effective modeling work. With SERA, this work has included collection cost modeling for both residential and commercial sectors and for multiple streams- trash, recycling, and organics. Gary has developed detailed models of MRF processing, residential and commercial collection services, and organics processing. He recently completed work developing cost models for collection and processing for the Colorado State Integrated Materials Management Plan.

Sustainability Innovations: During his tenure at Western Disposal he oversaw the progression from manual trash collection to fully automated trucks and the introduction of a CNG transition as well as use of technology to reduce the number of route vehicle miles traveled by the truck. He can be credited with creating the first-Class II composting facility in Boulder County and to reduce the company's power consumption for the operations building, the largest solar awning in the state.

Public Policy: In addition to his activities in Boulder County, Mr. Horton served on the Board of Directors of the Colorado Association for Recycling for six years and served for five years on the Assistance Committee to the Pollution Prevention Advisory Board to the Colorado Department of Health and the Environment. That committee is charged with distributing money collected by the State of Colorado through Landfill rate surcharges to worthwhile recycling, composting and other waste diversion projects throughout the State of Colorado. The City of Boulder "trash" tax was developed and implemented with active participation from Mr. Horton. Mr. Horton also served on the board of the Boulder County Recycling and Composting Authority for many years.

He has worked on a number of projects with SERA, including:

- Westminster municipal collection costs and efficiencies / options model
- Lethbridge recycling collection and service procurement optimization
- Connecticut Solid Waste Management Plan
- Colorado CDPHE Integrated Materials Management Plan
- PAYT options in Asheville NC
- MRF cost and operations options for private client
- And other assignments.

PUBLICATIONS / AWARDS

Mr. Horton has written publications on PAYT, composting collection and processing (in Resource Recycling) and others. In 2014, he received a Lifetime Achievement Award from Colorado Association for Recycling for his work in waste reduction.

Memo

To: Mountain Village Green Team Committee

From: Emma Gerona, EcoAction Partners

Date: September 17th, 2020

Re: EcoAction Partners Updated Proposal; 2021 Programs and Budget

Mission: EcoAction Partners' mission is to track regional greenhouse gas emissions and coordinate programs that reduce energy use and waste throughout the San Miguel region.

In response to the MV Green Team discussion on September 8th and follow-up discussions with Green Team members and MV staff, EAP has developed a revised 2021 proposal for services. This proposal focuses on EAP's regional services and programs as well as MV staff support, removing MV-specific GHG Inventories from the proposed services and total budget. We are happy to negotiate listed EAP programs, scope and budget for each individual program area to better align with Green Team goals and priorities.

To support the facilitation of our regional program areas in partnership with Mountain Village we are requesting $18,090. These funds allow EAP to successfully track and analyze regional greenhouse gas emissions and energy use, administer EAP programs throughout the MV community, facilitate Sneffles Energy Board meetings and programming, work towards community and regional composting solutions, as well as other staff and Green Team support. Within our regional services, EAP will update the regional collaborative Sustainability Action Plan by spring 2021 based on analysis and progress over the last 10 years, consider new and relevant strategies and facilitate programs to address regional GHG emission reduction goals.

Our programs prioritize commercial and residential building energy use, which are reported to contribute a large percentage of MV's community GHG emissions (63% EcoAction Partners 2018 Inventory; 93% Lotus Engineering 2019 Inventory). EAP's Green Business Certification and Greenlights programs aim to address this significant source of emissions. Details on each program area are included in the following summary of program information.

A list of specific changes made to EAP's 2021 proposal to the MV Green Team:

- MV-specific Community & Municipal GHG Inventories have been removed.
- MV Staff Support has been added as a budgetary line item to address the request for more regular communication regarding contracted services. This line item was previously categorized under "Regional Energy & Waste Resource" in the 2020 contract.
- MV GHG calculation support is now included within staff support.
- A Green Business rebate line item option was added to address concern regarding MV businesses paying to participate in this fee-for-service program.
    - This rebate option is provided by Telluride and SMC to their businesses and helps incentivize businesses to participate in the program by reducing costs.

We look forward to continuing our work with the Mountain Village community going forward. Thank you very much for your 2020 support, participation in EAP programs, and consideration of EcoAction Partners' 2021 contract renewal request.

EAP Regional Programs Provided to MV, Supported by Green Team Funding:

Sneffles Energy Board: **$1,785**

EcoAction Partners coordinates and facilitates the Sneffles Energy Board in partnership with government and staff representatives from San Miguel and Ouray counties, the towns of Telluride, Mountain Village, Ophir, Norwood, Ridgway, the City of Ouray as well as utility partners, San Miguel Power Association, Black Hills Energy and various citizen group representatives.

These local leaders collaborate on various efforts to accomplish regional sustainability goals including developing and updating a regional sustainability action plan to guide program implementation, and reviewing the progress of GHG emission reductions through the annual update of our regional GHG inventory. This group is currently in the process of updating the regional Sustainability Action Plan that was developed collaboratively in 2010.

Partners of the board meet quarterly to share best practices, design successful regional programs, identify new opportunities and analyze progress made to-date. This regional approach provides a stronger voice to influence political change, greater grant leverage, and the ability to address region specific challenges through enhanced engagement with community stakeholders.

Regional Greenhouse Gas Inventory & Regional Energy Analysis: **$2,040**

Gathering and analyzing our region's Greenhouse Gas emissions data has been an essential service EcoAction Partners has provided to our partners since 2010 when EAP secured a grant for the development of a baseline Greenhouse Gas Inventory for San Miguel and Ouray Counties. This was made possible with the generous support of a $1000 contribution from each of the six larger governments in the region. This inventory was developed by the University of Colorado, Denver with data collection and assistance from Kim Wheels. Since the initial inventory was created, Wheels has managed and updated our region's GHG data and continued to present GHG information across the region. This data allows EAP and regional stakeholders to make key decisions regarding prioritization of sustainability initiatives that will impact our regions GHG emission reduction goals.

Greenlights: **$1,530 program support + $1,000 billable municipal contribution**

The Greenlights program exists to promote one of the easiest ways to reduce greenhouse gas emissions: replace incandescent and CFL bulbs with LED bulbs. LED bulbs use on average 85% less electricity than a traditional incandescent bulb. SMPA has historically offered a 50% rebate on LED bulbs, requiring members to purchase bulbs at full price and then submit a reimbursement application. Greenlights seeks to simplify the purchasing process by offering this rebate upfront and contributing an additional 25% off of bulb prices through municipality contributions, without any of the additional paperwork. Since the inception of the project we have sold over 1,330 bulbs in Mountain Village, saving 72,941 kWh and reducing 58.77 Metric tons of CO2 annually.

This year the program faced some uncertainty due to the COVID-19 pandemic and was reimagined to focus on business-only sales in the contributing jurisdictions. The program launched online on August 1st and will be available through the end of the year, as funding allows. EcoAction looks forward to re-expanding the program to the general public in summer 2021.

Greenlights Statistics:

2015-2019

Total Bulbs Sold: 17,495

kWh reduced (yearly): 950,000

kWh reduced (bulb lifetime): 18,600,000

Metric Tons CO_2 saved (yearly): 788

Metric Tons CO_2 saved (bulb lifetime): 15,200

Municipal Contributions: $52,643

SMPA/Tri-State Contributions: $110,555

Green Business Certification Program: **$2,550 program support + $2,000 billable incentive**

The Green Business Certification program identifies GHG reduction strategies in commercial buildings which contribute 20% of our region's GHG emissions. The program helps save energy while putting dollars back into our businesses' pockets starting with a free customized consultation. These savings through lower energy bills can make the difference needed for a business to stay afloat. We connect participants with rebates, incentives and staff expertise, lowering the time and financial commitment needed to make energy upgrades and increasing the payback period on these investments. As a Black Hills Energy trade ally, EAP works as a contractor to fill gaps in weatherization services not otherwise offered in our region, in addition to leveraging resources from utility incentives, provide information on financing opportunities and offer business grant materials. Estimated GHG savings from future certifications and building energy upgrades are difficult to estimate as the nature of the program depends largely on individual businesses needs and current building state. The program includes an annual re-certification process to continue to actively engage with participating businesses, check-in on progress and understand the impact of completed energy upgrades.

Since the inception of the Green Business Program, EAP has worked with 14 MV businesses. Several MV businesses are currently certified including The Fairmont, Bootdoctors, Mountain Adventure Equipment and others. In 2021, we hope to expand to engage businesses that could greatly benefit from these upgrades and certify or re-certify 10 MV businesses.

The additional request for up to $2000 in billable incentives helps cover the certification fee, creating further incentive for MV businesses to participate in the program by lowering one possible initial barrier to participation.

Plastic Film Recycling: **$510**

This program grew out of the need for plastic film recycling (polyethylene 2 & 4) from the businesses participating in the Green Business Certification Program. Retailers in particular receive all their merchandise individually wrapped in plastic and have complained about the inability to recycle these materials. EcoAction Green Business staff found that TREX uses this recycled material in the production of decking and their TREX furniture and have a drop off location in Montrose. Currently there are 2 public collection boxes located in Mountain Village and several more hosted by individual MV businesses. To-date EcoAction has collected and recycled more than 1,000 pounds of plastic film. This is an immense amount of plastic considering the lightweight nature of plastic film products.

EAP Regional Services Provided to MV, Supported by Green Team Funding:

Mountain Village Staff Support: **$2,400**

EcoAction Partners has set aside 40 hours per year of dedicated staff support time to provide clear communications on project status, updates and future goals. We will meet directly with staff to coordinate efforts and provide monthly updates. EAP will present to the Green Team on program and organization updates on a quarterly basis, at which point priorities, goals and objectives can be reviewed and discussed.

Farm to Table Program GHG Savings Calculations: **$425**

MV launched the Farm to Table program in 2018 and requested support from EAP to measure the GHG emission impacts of the program. EAP provided this service for the programs 2018 & 2019 years of operation. Due to the termination of EAP's contract for the second half of 2020 we were unable to provide this support this year.

Going forward, EAP is uniquely positioned to support MV government staff with specific GHG calculations that are consistent with the historical calculation methodologies and factors utilized in our regional GHG Inventory.

Gondola GHG Offset Calculations: **$850**

In 2010, MV requested EAP to perform a calculation of GHG emissions savings associated with gondola operations reducing vehicle traffic between MV and Telluride. Due to significant changes over the last 10 years, the town has requested that this calculation be updated, to reflect the significant increase of ridership on the gondola over the past 10 years, and other transportation-related changes that would impact the GHG savings results.

Regional Services: **$3,000**

EAP regional services support our program areas as well as the MV government and Green Team in their emission reduction goals. EAP provides links to MV programs and resources on our website, a monthly newsletter with program and resource information, telephone and in-person support for community members, recycling outreach information, participation and leadership in sustainability related regional events, forums and meetings and support for multi-governmental collaborative sustainability projects. These services help our communities understand and access the resources that are available to them. EAP wants to be readily available to support MV in your commitment to sustainability and GHG emission reduction goals. This funding makes it possible to provide direct support to MV stakeholders including residents, businesses, students, the Green Team and government in reducing energy, saving money and supporting MV in becoming a leader in sustainability work. We are uniquely positioned to due to our collaboration with stakeholders across San Miguel and Ouray Counties to successfully administer sustainability programming. As a central solution for regional stakeholders we make it possible for our governments, businesses, and residents to develop energy and waste reduction projects without needed to be or hire a sustainability expert. EAP provides the professional expertise, collaboration and commitment to succeed in our regional GHG reduction goals. We're able to explore emission reduction strategies from a regional and community level and use our partnerships to expand programs that benefit all our regional jurisdictions

Total Requested Funding for Regional Programs, Services and Support: **$18,090**

EAP graciously requests $18,090 for the above program areas, regional services and MV Green Team and staff support. We hope to be able to continue offering these programs to MV residents, assisting with regional goals and GHG tracking and supporting sustainability initiatives withing MV and across the region. As a local organization we understand the intricacies of energy and waste work in a small mountain town and look forward to continuing to collaborate with the MV Green Team on energy reduction efforts and sustainability initiatives.

EcoAction Partners Proposed Contract Services for Mountain Village - 2020	Hours	Cost	% of Total
MV Staff Support & Program Services		**$15,090**	**83%**
MV Staff Support (total of items below)			
- Staff meetings monthly, communication & other efforts as needed to support contract & program implementa	40	$2,400	13%
- Green Team meeting updates quarterly			
- Special GHG Project Calculations & Consulting (specific items listed below based on requests for 2021)			
a) Farm to Table Program: calculate GHG emissions savings	5	$425	2%
b) Update Gondola GHG offset calculation from 2010	10	$850	5%
Regional 2020 GPC-Compliant GHG Inventory & Energy Use Analysis (regional program)	24	$2,040	11%
- Regional GHG Inventory Update - 2020 data & methodologies			
- 2010 - 2020 summary report & analysis			
- Compare and contrast the 2020 GPC-compliant inventory with the 2019 inventory in a brief memorandum.			
- Regional GHG data sharing on EcoAP website			
Sneffels Energy Board - coordination of meetings, notes, communication (regional program)	30	$1,785	10%
- regional government elected official & staff representation, SMPA staff, & others collaborating regionally on GHG emissions reduction efforts			
- Implementing updated Sustainability Action Plan			
- Sharing of statewide collaboration & resources to assist with local / regional initiatives & projects			
Regional Energy & Waste Resource Organization for Governments & Community. Regional services include:	50	$3,000	17%
a) Website with resources for community (including links to MV programs)			
b) Monthly email newsletters			
c) Telephone & in-person support for community members on energy efficiency & renewable energy resources & financial incentives (incl: SMPA, Black Hills, state & federal tax programs, C-PACE, & MV)			
d) Recycling outreach information for region			
e) Participation & leadership in sustainability-related regional events, forums, and meetings			
f) Participation, leadership & research to support multi-government regional collaborative sustainability projects			
Green Business Certification Program	50	$2,550	14%
- engaging businesses in reducing energy use & GHG emissions			
- financial incentive support for energy efficiency & renewable energy actions			
- engaging property management companies in reducing GHG emissions			
Plastic Film Recycling Program for #4 Plastics	12	$510	3%
- MV location(s) support, outreach to engage new businesses, volume tracking			
- coordination with MV partners to manage collection and delivery to EAP in Telluride &/or directly to City Market in Montrose			
Greenlights LED Program Implementation	30	$1,530	8%
Program Funding (allocated directly for participating residents & businesses; utilized amount is invoiced):		**$3,000**	
Greenlights Government Contribution for LED bulbs		$1,000	
Green Business Incentive Program (50% off up to $200 per business for new or re-certification)		$2,000	
Mountain Village Green Team Proposed Total: (including Program Funding)		**$18,090**	100%

PROPOSAL TO EVALUATE INCENTIVE PROGRAMS AND UPDATE GHG INVENTORIES FOR THE TOWN OF MOUNTAIN VILLAGE

September 16, 2020

BACKGROUND

The Town of Mountain Village (Town) wishes to solicit a proposed scope of work from Lotus Engineering and Sustainability, LLC (Lotus) for the following tasks:

- Task 1: Revamp and help facilitate the solar incentive program.
- Task 2: Develop and help facilitate a plastic incentive policy.
- Task 3: Develop three 2020 GPC-compliant greenhouse gas (GHG) inventories.
    - Task 3a: Regional GHG emissions inventory.
    - Task 3b: Community GHG emissions inventory.
    - Task 3c: Municipal GHG emissions inventory.
- Task 4: Summary of Inventory Findings.

PROPOSED SCOPE OF WORK

Lotus will build upon the 2019 community-wide and municipal GHG inventories, 2019 comparison memorandums, and previous reports completed by Eco-Action Partners.

TASK 1: REVAMP AND HELP FACILITATE SOLAR INCENTIVE PROGRAM

- Hold a kick-off meeting with the Town.
- Review the current solar program structure with the Town and San Miguel Power Association (SMPA).
    - Research the flow of Renewable Energy Credits.
    - Determine how the program fits within the Town's and SMPA's larger energy and climate goals.
    - Understand program details, current participation, and barriers to participation.
    - Understand how the program is marketed.
- Conduct up to five interviews with local resident participants. Learn what is working and what is not working with the application process and program administration.

- Research solar incentive programs from similar communities. Preferably in Colorado and similar in size and economic structure.
- Research potential outreach methods that are already in place (HOA emails, community emails, community influencers, solar companies, etc.).
- Review Town regulations and policies that may affect rooftop solar installations.
- Review potential upcoming regulations, policies, and trends that may affect the Town's programs, e.g., upcoming building codes, SMPA's and Tri-State's renewable energy commitments, trends towards transportation and building electrification, etc.
- Develop preliminary recommendations for revamping the program, including:
    - Outreach and marketing methods and language. Note that our budget does not include the actual outreach and marketing effort.
    - Application process and application itself. If we recommend an online process, we will collaborate with the Town's IT department.
    - Estimated rebate outlay and associated energy generation.
    - Participation and energy generation goals.
    - Metrics to track success.
    - Outline of responsible parties and ongoing program administration plan.
- Meet with the Green Team Committee and Town staff and present initial findings and preliminary recommendations on how to revamp the program. Note that our budget assumes that this meeting will be virtual.
- Finalize recommendations based on feedback from the Green Team Committee and Town staff.
- Facilitate coordination with SMPA and provide a clear explanation of the flow of Renewable Energy Credits. Note that our budget assumes that this meeting will be virtual.
- Develop a program administration handbook.

Deliverable(s)

- Kick-off meeting.
- Interim memo of research and interview findings, including a summary of barriers and preliminary recommendations.
- Presentation to Green Team Committee and Town staff.
- Virtual facilitated meeting with SMPA.
- Program Administration Handbook.

Task 2: Develop and Help Facilitate Plastic Incentive Policy

- Hold a kick-off meeting with the Town.
- Review all documents related to the current policy including the:
    - Voluntary Single-Use Plastic Reduction Initiative.
    - Planet Over Plastics website.
    - Recycling and Zero Waste website.

  - Zero Waste Action Plan.
  - Disposal Plastic Bag Reduction Plan.
  - Establishing a Plastic Bag Reduction for mountain.
  - Any state regulations that affect local plastic policies.
- Review results from the commercial plastics inventory.
  - Focus on feedback related to actions to reduce plastics, funding opportunities for alternatives, and business resources.
- Develop preliminary recommendations for driving the incentive forward including:
  - Outreach and marketing methods and language. Note that our budget does not include the actual outreach and marketing effort.
  - Potential gaps and areas of opportunity for policy amendments.
  - Suggested incentive amounts and payout scenarios.
  - Metrics to track success.
  - Outline of responsible parties and ongoing program administration plan.
- Meet with the Green Team Committee and Town staff and present initial findings and preliminary recommendations on how to drive incentive forward. Note that our budget assumes that this meeting will be virtual.
- Finalize recommendations based on feedback from the Green Team Committee and Town staff.
- Write plastics incentive recommendation memorandum or short report.

Deliverable(s)

- Kick-off meeting.
- Interim memo of preliminary recommendations.
- Presentation to Green Team Committee and Town staff.
- Plastics incentive recommendation memorandum or short report.

TASK 3: DEVELOP 2020 GHG INVENTORIES

Task 3a: Develop a 2020 Community-Wide GPC-Compliant GHG Inventory

- Hold a kick-off meeting with the Town. (This meeting may be sufficient to cover all three inventories.)
- Update the Lotus-derived data management and emission calculation spreadsheet. Key aspects of this tool include a summary of data sources; emission factors; emission calculations; emission summary.
  - Non-GPC emission sources, such as avoided emissions from recycling and renewable energy, will also be included as information-only items.
- Collect data.
- Conduct a quality assurance/quality control (QA/QC) review on collected data to ensure that it aligns with best practices and industry knowledge.

- Calculate emissions and complete the 2020 GPC-compliant inventory.
- Review all findings with the Town.
- Calculate key metrics for future comparison including, but not limited to, emissions by sector, emissions by source, emissions per capita, energy use intensity by building sector, residential electricity and natural gas use per capita.

Deliverables

- Project kickoff meeting.
- GHG inventory tool that is customized for community emissions.
- 2020 GPC-compliant GHG inventory with inputs and all accompanying data sources, including emails and original reports and spreadsheets.

Task 3b: Develop a 2020 Municipal Emissions Inventory

- Update the Lotus-derived data management and emission calculation spreadsheet. Key aspects of this tool include a summary of data sources; emission factors; emission calculations; emission summary.
- Collect data.
- Conduct a QA/QC review on collected data to ensure that it aligns with best practices and industry knowledge.
- Complete the 2020 inventory for municipal operations.
- Review all findings with the Town.
- Calculate key metrics for future comparison including, but not limited to, emissions by department (or comparable breakdown as provided by the Town), emissions by source, and emissions per city employee.

Deliverables:

- GHG inventory tool customized for municipal emissions.
- 2020 municipal GHG inventory with inputs and all accompanying data sources, including emails and original reports and spreadsheets.

Task 3c: Develop a 2020 Regional GPC-Compliant GHG Inventory

- Develop a Lotus-derived data management and emission calculation spreadsheet. Key aspects of this tool include a summary of data sources; emission factors; emission calculations; emission summary.
    - Non-GPC emission sources, such as avoided emissions from recycling and renewable energy, will also be included as information-only items.
- Collect data.
- Conduct a quality assurance/quality control (QA/QC) review on collected data to ensure that it aligns with best practices and industry knowledge.
- Calculate emissions and complete the 2020 GPC-compliant inventory.
    - Findings will be disaggregated by each community.
- Review all findings with the Town.

- Calculate key metrics for future comparison including, but not limited to, emissions by sector, emissions by source, emissions per capita, energy use intensity by building sector, residential electricity and natural gas use per capita.

Deliverables

- GHG inventory tool that is customized for county-wide (regional) emissions and disaggregated by each community.
- 2020 GPC-compliant GHG inventory with inputs and all accompanying data sources, including emails and original reports and spreadsheets.

Task 4: Summary of Inventory Findings

- Summarize key emission findings from each inventory into a brief report that can be shared with Town Council, the Green Team Committee, and community stakeholders.
    - Include a comparison of energy usage and GHG emissions between 2020 and previous years. Differences between activity data and emission factors will be explored and discussed with Town staff.
    - The report will be graphic-heavy and will be easy to read by a non-technical reader.
    - A draft Word report will be provided for feedback.
- Review findings with Town staff and the Green Team Committee.
- Incorporate into the report and update.
- Prepare a final report in InDesign.

Note: In addition to a report, we can work with the Town's IT department/website to share key data and/or a dashboard that can be uploaded to the Town's sustainability website. A dashboard is not included in our budget.

Deliverables(s)

- A draft report in Word.
- A final report in InDesign.

Project Management

Specific subtasks:

- Regular check-in emails.
- Regular phone calls between the Town and Lotus.
- Monthly invoice reporting.

Deliverable(s)

- Monthly invoice reports.

BUDGET AND TIMELINE

Lotus proposes a budget of $43,722 with a labor effort of 486 hours, resulting in an average blended rate of approximately $90 per hour. No travel is budgeted for the project.

We can negotiate the scope of work to meet your budget and timeline.

TASK AND SUBTASK	Lotus Labor Hours				Total Lotus Labor	Total Labor Costs
	Emily	Hillary	Julia	Rachel		
	Regular	Regular	Regular	Regular		
	$ 120	$ 120	$ 98	$ 75		
Task 1: Revamp and Help Facilitate Solar Incentive Program	**14**		**47**	**49**	**110**	**$ 9,961.00**
Task 2: Develop and Help Facilitate Plastic Incentive Policy	**15**		**30**	**40**	**85**	**$ 7,740.00**
Task 3: Develop 2020 GHG Inventories	**24**	**0**	**80**	**113**	**217**	**$ 19,195.00**
Task 3a: Develop Community-Wide GHG Inventory	6		20	34	60	$ 5,230.00
Task 3b: Develop Municipal GHG Inventory	6		20	34	60	$ 5,230.00
Task 3c: Develop Regional GHG Inventory	12		40	45	97	$ 8,735.00
Task 4: Summary of Inventory Findings	**12**		**20**	**30**	**62**	**$ 5,650.00**
Project Management	**0**		**12**	**0**	**12**	**$ 1,176.00**
TOTAL	**65**	**0**	**189**	**232**	**486**	**$43,722.00**

We anticipate a start date of early October 2020, with the project ending in June 2021. This assumes that data for the 2020 GHG inventories will be available in early 2021.

TASK	October		November		December		January		February		March		April		May		June	
	1st Half	2nd Half	1st Half	2nd Half	1st Half	2nd Half	1st Half	2nd Half	1st Half	2nd Half	1st Half	2nd Half	1st Half	2nd Half	1st Half	2nd Half	1st Half	2nd Half
Task 1: Revamp and Help Facilitate Solar Incentive Program																		
Task 2: Develop and Help Facilitate Plastic Incentive Policy																		
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Task 3b: Develop Municipal GHG Inventory																		
Task 3c: Develop County-Wide GHG Inventory																		
Task 4: Summary of Inventory Findings																		
Project Management																		