

PARTNERS FOR A SUSTAINABLE NEVADA

MARCH 2022

# MENU OF OPTIONS



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# ABOUT PARTNERS FOR A SUSTAINABLE NEVADA



## WHAT IS PARTNERS FOR A SUSTAINABLE NEVADA?

The Partners for a Sustainable Nevada (PSN) is a group of non-governmental organizations (NGOs) and governmental agencies that have come together to foster communication and collaboration about sustainability programs across Nevada. The group's mission is to change the way Nevada thinks about sustainability for our future generations by identifying and promoting opportunities to advance and expand sustainability efforts statewide.

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## WHY WAS THIS GROUP FORMED?

The idea to develop a stakeholder group focused on statewide sustainability was born out of a major re-haul of the Bureau of Sustainable Materials Management (BSMM) within the Nevada Division of Environmental Protection (NDEP). Previously named the Bureau of Waste Management, the Bureau originally focused on the end-of-life management for solid and hazardous waste and touched on recycling. As part of the re-haul and rebranding, the Bureau shifted its focus to the entire lifecycle of all materials and reducing the environmental impacts from the materials system.

With this change, the BSMM realized that there were several successful regional efforts to enhance materials management and sustainability throughout Nevada. However, these efforts often lacked communication with other helpful organizations. This limited the outcomes and scale of these efforts and led to several legislative proposals that resulted in no meaningful change. Therefore, the BSMM set out to create a centralized statewide network for non-profits, private businesses, and governmental organizations, where everyone can explore potential policy changes, lead projects, and emerge as a unified voice for sustainability in Nevada.

Seven months since the Kickoff Meeting, the PSN has become a strong network of private and public sector members who are interested in and dedicated to building a sustainable Nevada. From non-profits to businesses to state and local governments, these members have come together to tackle their first major project - the Menu of Options. This document discusses innovative solutions to sustainability issues and provides the group with potential solutions and projects to pursue in the future.

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# MENU OF OPTIONS

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# GLOSSARY

Bureau of Sustainable Materials Management (BSMM)  
Circular Economy (CE)  
Environmental Protection Agency (EPA)  
Extended Producer Responsibility (EPR)  
Governor's Office of Economic Development (GOED)  
Leadership in Energy and Environmental Design (LEED)  
Materials Recovery Facility (MRF)  
Municipal Solid Waste (MSW)  
Nevada Department of Transportation (NDOT)  
Nevada Division of Environmental Protection (NDEP)  
Nevada Revised Statutes (NRS)  
Nevada System for Higher Education (NSHE)  
Nongovernment Organization (NGO)  
Partners for a Sustainable Nevada (PSN)  
Public Service Announcement (PSA)  
University of Nevada Cooperative Extension (UNCE)  
University of Reno (UNR)

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# MEET THE STAKEHOLDERS

**Aimee Frugoli**

*Envirovolution*

**Alexia Sober**

*Comstock Mining Inc*

**Aster Girma**

*Nevada Green Institute*

**Ana Conway**

*Hawthorne Utilities*

**Brian Thornton**

*Former business owner & mechanical  
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**Carly Norton**

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**Carol Shank**

*Pershing County - Big Meadow*

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**Cheri Tuccelli**

*Darling Ingredients*

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**City of Reno**

**City of Sparks**

**Clinton Combs**

*Combs Brothers*

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**Jon Ruiter**

*The Greenhouse Project*

**Kendra Kostelecky**

*Waste Management*

**Kimberly Rios**

*Keep Truckee Meadows Beautiful*



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# MEET THE STAKEHOLDERS

**Lakshmi Albright**

*Reusable Reno*

**Lauren Boitel**

*ImpactNV*

**Lina Tanner**

*Tanner Law & Strategy Group*

**Linda Miller**

*Reusable Reno*

**Lisa Ortega**

*Nevada Plants*

**Madonna Dunbar**

*Incline Village GID, Waste Not Program*

**Marco Velotta**

*City of Las Vegas*

**Mark Korinek**

*Carson City School District*

**Nettie Johnston**

*Titanium Metals Corporation*

**Nima Pauline**

*Eco Culture Manufacturing and Textile Recapture Program*

**Patty Moen**

*Nevada Division of Environmental Protection*

**Peter Gower**

*The Nature Conservancy*

**Phoebe Judge**

*Waste Management*

**Ricky Dunn**

*Dunn and Son*

**Sam Baker**

*Clark County Department of Environment and Sustainability*

**Sandra Carroll**

*greenUP!*

**Scott Jolcover**

*American Battery Technology Company*

**Sue Jacox**

*Great Basin Outdoor School*

**Susan Fisher**

*McDonald Carano LLP*

**Tamara Wright**

*Ecolution Studio*

**Tara Pike**

*University of Nevada, Las Vegas*

**Tina Kadrmas Mudd**

*Granite Construction Inc.*

**Todd Welty**

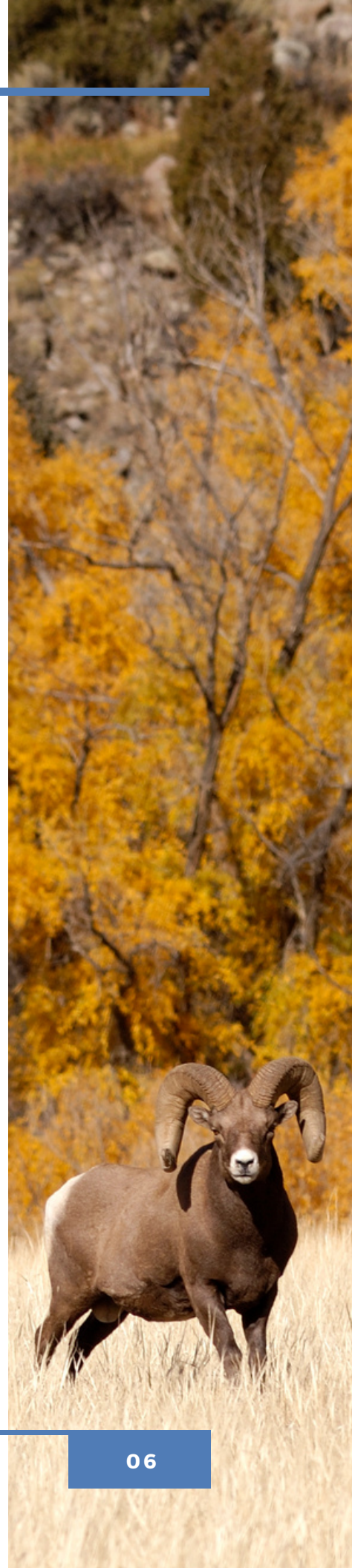
*Reno-Tahoe Airport Authority*

**Vanessa Robertson**

*Envirolution*

**Wesley Rubio**

*Washoe County Health District*



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# OUR JOURNEY SO FAR

## **Kickoff Meeting**

PSN held its first meeting on August 18th, 2021, with more than 130 stakeholders participating.

## **Creating a Mission Statement**

The stakeholder group is composed of non-profit groups, private businesses, industry, and governmental agencies, and it brings like-minded people together to create a coordinated effort towards sustainability within the state. As one of its first tasks, the group created its mission statement (shown below).

## **Organizing the Working Groups**

Leading up to the August kickoff meeting, members were surveyed to identify common topics of interest regarding sustainability. This led to the formation of six working groups: Education and Outreach, Organics Management, Policy Change and Funding, Recycling, Source Reduction, and Sustainability. The groups were then tasked to create a document called the Menu of Options and outline options to improve sustainability throughout the State. Since the kickoff meeting, these working groups have met multiple times to develop potential sustainability strategies and solutions for the Menu of Options.

## MISSION STATEMENT

*Our mission is to change the way Nevada thinks about sustainability for our future generations by identifying and promoting opportunities to advance and expand sustainability efforts statewide.*





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# FIRST MAJOR OUTCOME: THE MENU OF OPTIONS

## OPTIONS TO ENHANCE SUSTAINABILITY ACROSS NEVADA



This Menu of Options is an extensive list of options that can be considered by organizations within Nevada to enhance sustainability across the state. The ideas represented here are not an endorsement of specific policies or actions but rather an outline of options that communities throughout Nevada can consider to help increase their sustainability efforts.

These options include, but are not limited to, legislative or policy changes as well as actions that municipalities, NGOs, businesses, and/or the state can adopt to progress towards our vision of a more sustainable Nevada.

The first major goal of each working group was to create their section of this Menu of Options. To do this, each working group held meeting sessions pertaining to their topic areas and discussed potential policies or actions that could be implemented to increase sustainability across the state. Additionally, to focus efforts, the sustainability working group defined what "sustainability" means for the PSN (see definition above).

This Menu of Options is just the first step for the PSN. The group's next step will involve prioritizing solution ideas and action items from this Menu of Options and developing them into executable projects, programs, and policies.

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# MENU OF OPTIONS FOCUS AREAS

The PSN is divided into six working groups, each focused on a different topic relating to sustainability. Based on their focus area, the groups were assigned to develop their sections in the Menu of Options by outlining options to improve sustainability throughout the State.



## Education and Outreach

Identify and address gaps, challenges, and opportunities in sustainability education and outreach efforts



## Organics Management

Identify opportunities and solutions for improving collection, transportation, processing, and end usage of organic material



## Policy and Funding

Identify current policies that are barriers to sustainability efforts, propose new policy recommendations, and find funding mechanisms for projects and initiatives

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# MENU OF OPTIONS FOCUS AREAS

## Recycling

Improve access to recycling while reducing contamination and identify opportunities to meet and exceed the 25% state recycling rate goal



## Source Reduction

Identify problematic waste streams and find solutions to reduce these wastes at their sources



## Sustainability

Look at sustainability from a 30,000-foot view and find ways to integrate multiple efforts together to achieve a more synergistic effect



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# EDUCATION & OUTREACH

**CHAIR: JEREMY WALTERS, REPUBLIC SERVICES**

**CO-CHAIR: KIMBERLY RIOS, KEEP TRUCKEE MEADOWS BEAUTIFUL**



The Education and Outreach Working Group has been focused on building a comprehensive and centralized resource hub for all facets of sustainability in Nevada. The group has worked to identify gaps in education and ways in which the PSN can effectively provide the necessary information to increase and drive sustainability efforts within the state. This working group believes that having access to accurate information will create a strong foundation for implementing projects across the state as we work to protect our environment and change the way Nevada thinks about sustainability.

The Education and Outreach Working Group proposed the following objectives to increase sustainability education and outreach in Nevada:

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# EDUCATION & OUTREACH

## OBJECTIVE 1

### **Create a website to serve as a centralized data clearinghouse for sustainability across the state**

The Education and Outreach working group is working with the BSMM to convert the Nevada Recycles website into a Sustainable Nevada website. This will serve as a centralized data clearinghouse and resource center for sustainability across the state. The content will be organized into four main categories based on the key target audiences: residents, educators, businesses, and government. To achieve this objective, the following topics will each have dedicated sections on the website:

- **Nevada Residents**

- Ensure that resources and content on these pages empower residents to adopt sustainable actions, make easy behavioral changes, and understand sustainability topics and their importance
- Develop content that discusses top actions residents can take to increase sustainability
- Develop resources that discuss daily sustainability actions an individual can take throughout their day, whether they are at home, at the office, or at the store
- Provide a library of guides and resources for residents categorized by topic and region

- **Nevada Educators**

- Ensure that resources and content are easily accessible and satisfy science standards
- Develop content that discusses top actions educators and schools can take to increase sustainability
- Create content showing how to incorporate sustainability topics into the teaching curriculum
- Provide a library of curriculums and teaching resources organized by topic and region

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# EDUCATION & OUTREACH

- **Nevada Businesses**

- Ensure that resources and content make the economic case for implementing sustainable practices and improve understanding of how to incorporate sustainability into business operations
- Promote credible sustainable business certification programs
- Develop content that discusses top actions businesses can take to increase sustainability
- Provide a library of guides and resources for businesses categorized by topic and region
- Provide information regarding how to measure the sustainability of business operations

- **Nevada Government**

- Ensure that resources and content empower government officials to be involved in sustainability initiatives and improve their understanding of sustainability topics
- Develop content that discusses top actions government officials can take to increase sustainability
- Produce content discussing how sustainability supports Nevada's climate goals
- Create a library of resources about current and future policy regarding sustainability as well as current programs or actions that have been adopted by various agencies or local governments

## OBJECTIVE 2

### **Increase and focus representation on social media**

The Education and Outreach working group identified social media as an opportunity to share information and resources regarding sustainability. Once the new Sustainable Nevada website is complete and digital resources are developed, the working group will determine the best social media platforms to share the content produced on the website and its blog.

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# EDUCATION & OUTREACH

## OBJECTIVE 3

### **Create education and outreach campaigns surrounding working group topics**

The other working groups have identified areas where education and outreach are needed to improve sustainability efforts. In the short term, the Education and Outreach group can incorporate these suggestions into the new website. However, the Education and Outreach Working Group understands that the website is only one tool and that an integrated, multi-prong approach to education and outreach is needed.

As you read the Menu of Options, you will notice that the other five remaining working groups highlight specific education and outreach opportunities and barriers that need to be addressed in order to further their overall objectives and strategies. If and when the PSN chooses to pursue some of these proposed strategies, the Education and Outreach group will provide support by developing any needed resource materials and outreach campaigns.



*"Keep Truckee Meadows Beautiful is pleased to be a member of the Partners for a Sustainable Nevada as it helps us inch closer to our core mission which is to create a more sustainable and beautiful region."*

***Kimberly Rios, Co-Chair***

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# ORGANICS MANAGEMENT

**CHAIR: DEAN STANPHILL, UNIVERSAL ENGINEERING**  
**CO-CHAIR: CLINTON COMBS, COMBS BROTHERS**



The Organics Management Working Group focused on identifying opportunities and solutions for improving organic material collection and processing, such as composting, aerobic/anaerobic digestion, and diverting food scraps for use as animal feed. By creating an organics management system that best utilizes the organics produced and used within Nevada, greenhouse gas emissions can be reduced, and desert soil that characteristically lacks nutrients can be replenished. There are multiple hurdles to overcome, such as underdeveloped material transportation infrastructure, the cost of processing these materials, and the lack of a sustainable end-use marketplace for composted materials. For effective long-term programs for organics collection and waste diversion, processing facility locations, permitting requirements, contamination vectors, and materials volumes all need to be considered.

The Organics Management Working Group proposed the following objectives for improving organic material management in Nevada:



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# ORGANICS MANAGEMENT

## OBJECTIVE 1

### Increase demand for compost product

- **Conduct education and outreach to increase awareness of compost end-uses and benefits**
  - Explain the environmental benefits of composting
    - Partner with the US Composting Council, which has established a benefits framework for quality compost
  - Implement targeted campaigns towards schools (K-12 and college), hospitals, prisons, hotel/casinos, grocery stores, and food banks
- **Create more opportunities for end-use**
  - Expand Government Environmentally Preferable Purchasing requirements
    - Evaluate a minimum organic matter component for road and landscaping projects
    - Evaluate proper erosion control applications with the Nevada Department of Transportation (NDOT)
    - Research programs from neighboring states for best use practices
  - Encourage the switch from chemical fertilizers to compost
  - Encourage residential gardening that utilizes compost (e.g., support Victory Gardens, Kitchen Gardens, and other at-home/local growing opportunities)
  - Increase the quality of compost by implementing compost assurance programs, such as the US Composting Council Seal of Testing Assurance Program



*“We live in a world with significant environmental challenges as well as opportunities. The beneficial re-use of organics for compost, animal feed, electricity, and renewable natural gas is one of the greatest opportunities we have for enhancing our global environmental resiliency.”*

***Dean Stanphill, Chair***

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# ORGANICS MANAGEMENT

## OBJECTIVE 2

### **Increase the amount of organics diverted from the landfill**

- **Evaluate a mandate for a state organics diversion rate goal**
  - Create sustainable, long term growth goals/milestones to slowly increase diversion rates over time
- **Create awareness for yard waste and food waste reduction methods**
  - Promote the environmental benefits of feeding food scraps to livestock, such as converting food waste into quality meat products and greenhouse gas reductions
  - Promote xeriscape and water-saving landscape options
    - Evaluate incentives to encourage private property owners to remove water-intensive landscaping
  - Encourage home composting through a variety of composting methods such as the bokashi method, 3 bin composting, vermicomposting, and any other composting method not mentioned here, in support of local composting facilities
- **Evaluate a state tax credit for businesses who invest in organics management technologies**
- **Make organics collection more economical by increasing collection locations for residential food and yard waste**
  - Such sites may include transfer stations, neighborhood drop-off spots etc.
  - Food scraps may be collected separately to be used as livestock feed where available
- **Partner with fuels reduction programs to move materials to composting rather than landfilling and support revegetation projects**
- **Create a promotional effort to highlight businesses' diversion efforts**
  - Provide a searchable database of participating businesses or organics business tracker
  - Evaluate an organics certification program/award for sustainable operations

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# ORGANICS MANAGEMENT

## OBJECTIVE 3

### Close data gaps within organics management

- **Establish a reliable organics management data collection method**
  - Organics management data throughout Nevada is collected via the state recycling rate data collection. This data is optional to report, and therefore the data received is not comprehensive.
- **Research and develop bacteria that is best suited to the wide temperature variations and arid conditions of Nevada**
- **Research and develop criteria for using organic fertilizers produced from food waste and other organic wastes in agricultural processes (production plan currently online in Sacramento)**

## OBJECTIVE 4

### Improve organics management facilities/infrastructure in Nevada

- Review specific criteria for siting organics diversion facilities to reduce unintended consequences

*"As a native Nevadan and third generation recycler, I take the words 'Home Means Nevada' to heart. We must be good stewards of our home and protect it for generations to come. For nearly 60 years our family has provided recycling services to the Las Vegas community by converting food scraps into livestock feed. We are passionate about sustainability, ready for growth, and grateful for this opportunity to contribute to Partners for a Sustainable Nevada."*

**Clinton Combs, Co-Chair**



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# ORGANICS MANAGEMENT

- **Evaluate the current organics facility permitting process**
  - Consider changing the location of the composting permit requirement to reside in the Nevada Department of Agriculture
  - Explore the feasibility of reject organics to be utilized as alternate daily cover
  - Establish clear permitting criteria for aerobic and anaerobic digesters
  - Require state agencies to divert all organic waste from landfills and utilize products made from these materials
  
- **Evaluate requiring provisions for organics diversion in franchise agreements**
  - Evaluate a requirement for yard waste collection by waste haulers who provide curbside pick-up recycling and municipal solid waste (MSW) at residential locations
  
- **Evaluate co-locating organics management facilities at the following locations to reduce costs and provide job skills and training:**
  - Prisons
  - Schools
  - Landfills
    - Several landfills have land that is permitted for use or have the related infrastructure to support associated energy-producing processes such as digestion and biogas
  - Wastewater Treatment Plant
    - Maximize production of renewable and compressed natural gas with the idea of fueling collection truck fleets
  - Evaluate co-locating biomass facilities for electrical energy generation at composting facilities - especially in light of forest products that are created as part of fire prevention.
  
- **Promote the monetary benefit of energy capture from organics management operations**
  - Utilize federal and state incentive and grant programs to assist in the production of renewable energy and low carbon fuels
    - Truckee Meadows Water Reclamation Facility developed an anaerobic digester to energy facility utilizing similar programs

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# POLICY CHANGE & FUNDING

**CHAIR: TINA MUDD, GRANITE CONSTRUCTION**  
**CO-CHAIR: SUSAN FISHER, MCDONALD CARANO**



The Policy Change and Funding Working Group has identified a lack of data on existing regulations and policies and roadblocks to information-sharing when new sustainability-related legislation is proposed. Additionally, this working group has been coordinating with the other five working groups to identify needs, barriers, and opportunities based on their specific focus areas. Moreover, as part of this Menu of Options effort, this working group has begun to explore funding mechanisms for expanding and developing new sustainability projects.

The Policy Change and Funding Working Group proposed the following objectives for improving sustainability in Nevada:

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# POLICY CHANGE & FUNDING

## OBJECTIVE 1

**Identify and change current regulations and policies that are barriers to sustainability and promote those that are successful, measurable, and economically sound**

- **Collect accurate and prompt measurements**

- Evaluate data collection methods and establish sustainability baselines to provide a basis of measurement for success
- Identify and set goals and metrics for any future PSN initiative in order to evaluate and measure success
- Identify data and metrics needed to measure the success of sustainability programs for businesses, governments, and higher education

- **Evaluate and provide incentives and growth opportunities**

- Identify opportunities for government agencies and partners to prioritize the use of recycled or reusable materials over virgin materials in technical specifications, purchasing contracts, and bidding preference. Examples include:
  - Tires and plastic in asphalt mixes
  - Compost in roadside reclamation and facilities' landscaping
  - Glass in asphalt mixes and other materials
  - Lithium ion battery recycling
  - Businesses: over packing, cell phones, reusable packaging
  - Statewide offices can replace single use items (water stations, reuse bottles)

- **Evaluate franchise agreements and provide guidance for minimum requirements addressing diversion and recycling**

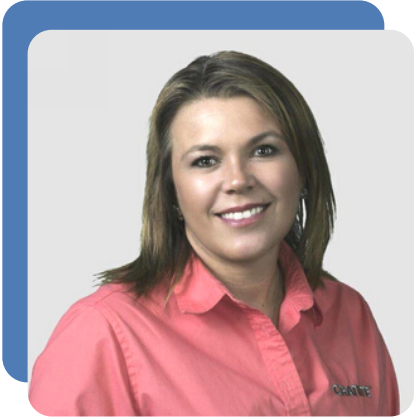
- Develop a template and guide that provides language for municipalities to improve diversion and recycling strategies

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# POLICY CHANGE & FUNDING

- **Identify current programs, areas of improvement, and numerous groups working on the same initiatives for collective efforts:**

- Continue to develop the PSN network by finding organizations that are successfully pursuing sustainability programs
  - Integrate these organizations, provide support, and help scale and expand their efforts
- Utilize organizations such as the Nevada System for Higher Education (NSHE), University of Nevada Cooperative Extension (UNCE), Resource Conservation Districts, and the Governor’s Office of Economic Development (GOED) to assist businesses in adopting sustainability measures
- Continue to utilize organizations such as the GOED to attract the correct type of businesses to advance sustainability and improve end markets for recycled products



*“As the Environmental Manager for Granite Construction, we take Sustainability very serious in our operations. By working with the Partners for a Sustainable Nevada group, I am looking to help develop strategies and policies that achieve Sustainability for Nevada while also making Nevada Businesses and Industry part of the solution”*

***Tina Mudd, Chair***

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# POLICY CHANGE & FUNDING

## OBJECTIVE 2

### **Address project funding needs**

- **Evaluate funding mechanisms such as adopting a statewide tipping fee or increasing the state tire recycling fee to support sustainability initiatives and efforts. Directed funding could focus on:**
  - Reducing the impacts of illegal dumping
  - Improving education and outreach
  - Funding viable sustainability projects
  - Providing grants for underserved communities to develop improvements to local waste management

## OBJECTIVE 3

### **Increase the communication surrounding legislative proposals**

- Invite legislative representatives to the PSN meetings
- Utilize the PSN Policy Change and Funding Group to discuss legislative proposals. The group will encourage open discussion and will vet programs and their implementation efforts to ensure the viability of proposals.
- Increase presentations to interested organizations regarding the PSN to gather further input from as many industries as possible



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# POLICY CHANGE & FUNDING

## OBJECTIVE 4

### **Provide recommendations to the revision of the 2022 Nevada Solid Waste Management Plan**

- Develop a mechanism for including reliable, measurable, and useful data collection and information
- Recommend increasing disposal and diversion data collection/reporting to encompass all of the counties and more details (e.g., a more detailed breakdown by the source of waste)
- Recommend the State set clear targets/outcomes and have counties align with those metrics
  - Discussed possibility of tying those metrics to franchise agreements
- Recommend including sustainable materials management and circular economy principles
- Discuss the need for information and data regarding costly issues, such as illegal dumping, abandoned cars, and homeless encampments

*“My personal and professional interest in environmental stewardship goes back to my upbringing on a farm in the San Joaquin valley. We must be cognizant of the balance between the environment and business and industry and I’m honored to have the opportunity to work with the great team at NDEP and other stakeholders to make sure we are taking the right steps now to preserve our great quality of life here in Nevada.”*

**Susan Fisher, Co-Chair**



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# RECYCLING

**CHAIR: JESSICA PRESTON, REPUBLIC SERVICES**

**CO-CHAIR: WES RUBIO, WASHOE COUNTY HEALTH DISTRICT**



The Recycling Working Group identified opportunities for meeting and exceeding the 25% state recycling goal and improving access to recycling while reducing contamination. Improving recycling access to multifamily buildings and rural communities presents a significant opportunity to increase recycling in Nevada. Recycling access is often limited or non-existent for these residents due to long transportation distances to processing facilities and/or lack of collection opportunities. Additionally, while this group focused on the typical recyclable material streams, the members did note that more specialized materials (e.g., solar panels) will be addressed in the future.

Based on this information, the Recycling Working Group proposed the following objectives for improving recycling in Nevada:

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# RECYCLING

## OBJECTIVE 1

### **Improve recycling access to rural communities in Nevada**

- **Develop a hub-and-spoke model to bring better recycling access to rural communities**
  - Identify and actively work with rural stakeholders
  - Consider best transportation routes and optimal source density
  - Determine if new Materials Recovery Facilities (MRFs) or other equipment are needed
  - Research location and capacities of processing facilities/end-users of collected recyclables
  - Evaluate funding mechanisms for material collection and transportation

## OBJECTIVE 2

### **Improve recycling access to multi-family buildings in Nevada**

- **Engage with both tenants and landlords to encourage effective and successful recycling programs at multi-family buildings**
  - Provide resources to tenants on how they can encourage their landlord to set up recycling at their building
  - Provide resources to landlords on how to set up successful recycling programs
  - Identify interested multi-family buildings and implement a pilot program to serve as a model for other interested buildings
  - Provide education to reduce high contamination rates that are often associated with recycling at multi-family businesses
- **Explore potential mandates (e.g., Mandating recycling at multi-family buildings with "X" or more units)**

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# RECYCLING

## OBJECTIVE 3

### **Improve recycling infrastructure and demand for collected materials**

- **Explore policies and regulations**
  - Minimum recycled content standards for beverage containers - Example: CA's AB 739 (2020) adopted minimum recycled content requirements for beverage containers (15% by 2022, 25% by 2025, 50% by 2030)
  - Extended producer responsibility (EPR) policies for problematic waste streams or materials with low recycling rates
- **Conduct life cycle assessments to determine the most environmentally beneficial markets for the collected recyclable materials**

## OBJECTIVE 4

### **Address illegal dumping**

The Recycling Working Group identified that some efforts to improve recycling and diversion efforts may increase collection costs or tipping fees. This may lead to an increase in illegal dumping. Therefore, this working group wanted to note the importance of improving local jurisdictions' abilities to address illegal dumping and finding ways to deter illegal dumping. Some potential options to consider include the following:

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# RECYCLING

- **Engage with local trash haulers and/or landfill operators to explore the possibility of additional service options to reduce illegal dumping (e.g., more convenient options, less costly options, more free services/collection events)**
  - Consider additional free services (bulky waste pickups, e-waste pickups, free dump passes, and time- and event-targeted community dumpsters for weekend nights, holiday weekends in tourist spots, etc.)
  - Explore options to ensure that multi-family units have the same range of free bulky/low-cost waste disposal options as single-family dwellings
- **Partner with retail establishments to accept commonly dumped items for disposal (e.g., subsidies to support tire shops, furniture stores, etc)**
- **Partner with community organizations to clean up illegal dumpsites**
  - Garbage often begets garbage. Once sites are clean, they often stay clean
- **Increase enforcement efforts to discourage illegal dumping**
  - Utilize public service announcements (PSAs) to remind residents that everyone ends up paying for illegal dumping – it’s not a victimless crime
  - Increase targeted enforcement – patrolling known illegal dumping hot spots at key times
  - Increase surveillance and/or signage at known hot spots
  - Promote the use of anti-dumping “hotlines” for reporting dumpsites or dumping in progress

*“While we must prioritize waste reduction and reuse, recycling of common materials like aluminum, paper and glass continues to be important.”*

***Patty Moen, NDEP Recycling Coordinator***



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# SOURCE REDUCTION

**CHAIR: LAKSHMI ALBRIGHT, REUSABLE RENO**

**CO-CHAIR: LIZ FUTCH, UNR BUSINESS ENVIRONMENTAL PROGRAM**



The Source Reduction Working Group identified problematic waste streams and found solution options to reduce these wastes at their sources. The desired results of these source reduction solutions are to save natural resources, conserve energy, reduce pollution, and lower the toxicity of waste. Methodologies such as circular economy road maps, EPR policies, and targeted regulation will be important mechanisms for achieving these goals. Additionally, the group emphasized the importance of collecting actionable data and developing targeted solutions based on waste stream and material type. Understanding the nature of a specific waste stream and where/how it is generated will determine how to reduce or prevent the waste from occurring. No one solution will effectively address all waste streams. Also, the group identified the following initial waste streams as problematic: single-use plastics, packaging, organic waste, hazardous and toxic wastes, and construction debris. Based on this, the Source Reduction Working Group proposed the following objectives for reducing waste generation:

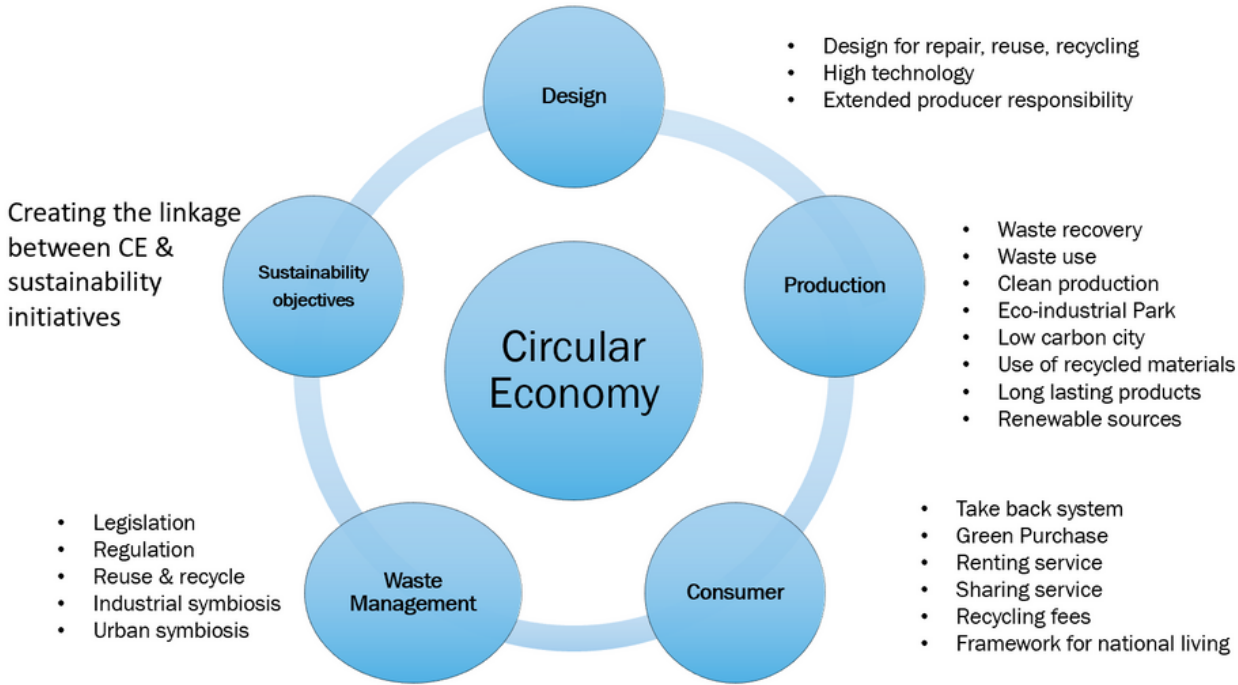
# SOURCE REDUCTION

## OBJECTIVE 1

### Develop a roadmap to a circular economy (CE)

According to the Environmental Protection Agency (EPA) (2021), a CE is a systems-focused approach that aims to reduce material use, redesign products to be less resource-intensive, and recapture “waste” as a resource to manufacture new products and materials. The desired results of a CE involve moving beyond our current “take-make-waste” mindset towards a more sustainable and regenerative economy that decouples economic growth from the consumption of finite resources (Ellen Macarthur Foundation, 2022). Objective 1 focuses on how Nevada can begin to build a CE.

Figure 1 below depicts a summary of a CE model and the general strategies and tactics that could be used at different stages of a product’s life. Targeting only one element of the system is not sufficient to achieve a CE.



**Figure 1: The interdependent elements of a circular economy**

*Adapted partially from Ogunmakinde, Emmanuel. A Review of Circular Economy Development Models in China, Germany and Japan. <https://doi.org/10.3390/recycling4030027>*

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# SOURCE REDUCTION

- **Identify and articulate Nevada's CE opportunities, barriers, and policy options for selected problematic materials**
  - Engage experts from industry, government, and academia to discuss developments and innovations in CE thinking, opportunities and challenges, and essential circular strategies
  - Identify priority materials and products for which a CE approach is appropriate and beneficial
  - Identify fundamental and enabling laws/policies to create the platform for the shift towards circularity
- **Investigate the sectors that are resource-intensive and determine where the potential for circularity is high**
  - Conduct research and lifecycle assessments to determine which problematic waste streams would best benefit from a CE action plan
  - Prepare an action plan for each product circular initiative
  - Describe the business benefits of transitioning to a circular business model
- **Develop assessment tools to evaluate the effectiveness of CE initiatives**
  - Identify baseline criteria to measure the performance of selected product circularity
  - Develop benchmarking for short- and long-term goals and measurements
- **Provide policymakers with a methodology and actionable toolkit to help accelerate the transition towards the CE**
  - Layout considerations, consistent messaging needs, and trade-offs that policymakers must examine when creating CE policy
  - Coordinate with stakeholders and policymakers to update regulation, allocate funds efficiently, and develop information systems



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# SOURCE REDUCTION

## OBJECTIVE 2

### **Decrease the amount of single-use plastic, textile, and packaging waste generated in Nevada and sent to the landfill**

- **Design public events that generate less waste**
  - Work with event organizations to utilize reusable foodware, mobile washing systems, and mobile water refill stations
  - Work with event organizers to eliminate or significantly reduce single-use plastic products by finding alternatives or requiring these products to be requested
  
- **Encourage and support the use of reusable foodware in high traffic locations (e.g., airports, casinos, schools, theaters, malls, large office buildings)**
  - Provide information on how to implement a safe and sanitary reuse program for foodware at these locations
  - Encourage the installation of water refill stations
  - Eliminate or significantly reduce single-use plastic products by finding alternatives or requiring these products to be requested
  - Work with credible green business certification programs to include reuse programs in their certification process
  - Set up a Green School Certification and an annual competition with a prize
  
- **Encourage residents and students to reduce their use of single-use products**
  - Develop and run a state-wide “Pass Up Plastics” pledge campaign (e.g., Say no to the straw, plastic bags, and plastic cutlery when getting takeout)
  - Teach students about the environmental and monetary costs associated with single-use waste generation
  - Evaluate policy that clarifies when recycling symbols should be used on products to increase the transparency of proper end-of-life management

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# SOURCE REDUCTION

- **Promote circular design to change the ‘single-use’ character of the plastic or textile into ‘multi-use’**
  - Develop and encourage strategies that plan for the next life cycle of the textile or plastic
  - Provide a hub for companies to collaborate and partner
  - Promote businesses that have found innovative ways to create products from single-use plastic or textiles
  - Reduce and educate about activities that prevent reuse such as contamination or ‘combination products’
  - Promote and educate on the value of repair
  - Provide support for grass-roots programs engaged in circular activities to scale

## OBJECTIVE 3

### **Decrease the amount of hazardous waste generated in Nevada**

- **Encourage the adoption of green chemical substitution in industry (e.g., using less hazardous chemicals)**
  - Explore and provide information about green alternatives for industry to substitute such as EPA's Safer Choice - Certified Products
  - Provide education for businesses on the benefits, including making the business case for substitution and providing case studies or peer success stories
  - Provide a resource and information database so that businesses can learn how to substitute, what costs/savings may be associated with substitution, and peer networking to provide support
- **Reduce household hazardous waste by encouraging the use of environmentally friendly alternatives in households**
  - Research and provide incentives for households to purchase environmentally friendly chemicals (e.g., -switch pools and hot tubs to mineral/salt water)
  - Provide online resources on environmentally friendly alternatives to household chemical products

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# SOURCE REDUCTION

- **Encourage the industrial and commercial sectors to adopt source reduction practices for processes that generate hazardous waste streams**
  - Conduct research with specific industries in the state to identify effective source reduction practices (e.g., improved rinsing operations, improved maintenance scheduling/procedures, better inventory control, raw materials substitution, improved process analysis system)
  - Provide education and case studies highlighting cost savings for waste minimization and showcase Nevada companies
  - Develop peer network for organizations to share best practices and ideas for reducing hazardous wastes
  - Incentivize Zero Waste programs through public relations and/or financial grants
- **Develop an industrial ecology (or circular) system for industry to find ways that certain hazardous waste products can be used as useful products in another process**
- **Improve access to Household Hazardous Waste (HHW) collection programs**

## OBJECTIVE 4

### **Address data and knowledge gaps in Nevada's waste streams and diversion efforts**

The Source Reduction Working Group found that Nevada has limited data regarding its waste streams, diversion efforts, and materials management systems. The following strategies highlight just some of the data gaps that need to be addressed.

- Conduct a large-scale waste characterization study in Nevada
- Require all counties to report recycling data and provide clear and precise directions for entities required to report

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# SOURCE REDUCTION

- Improve access to data on waste streams within Nevada
  - Create a central hub, information and data clearing house, and/or dashboard about Nevada's waste streams and diversion efforts
- Collect or find data related to the relationship between waste and community health
- Partner with higher level education, health districts, waste haulers, casinos, and non-profits to provide data and/or do research related to solid waste and diversion
- Collect data surrounding single-use plastic use and waste
- Close data gaps in hazardous waste generation information on Small Quantity Generators, Very Small Quantity Generators, and Household Hazardous Waste
- Conduct lifecycle assessments to determine the best ways to manage materials/products

## OBJECTIVE 5

### **Decrease the amount of waste generated during various design, construction, and deconstruction phases in Nevada**

- **Consider waste reduction during demolition phase / Plan for deconstruction before demolition**
  - Support deconstruction practices and teams through education and promotion
  - Encourage the use of deconstruction tools such as EPA Rapid Assessment Tool
  - Set up a central facility for deconstructed materials to be purchased or re-used - a “sustainable resource distribution facility” to support reuse of materials
  - Set up tax benefits for deconstruction (tax benefits for donations, avoidance of taxes on sale of materials from deconstruction, etc.)

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# SOURCE REDUCTION

- **Encourage building and development design strategies that reduce material waste**
  - Incentivize building design that uses standard material sizes to eliminate cut-offs
  - Promote and work with material suppliers that provide pre-cut services and use the cut-offs in house
- **Encourage building and development design strategies that reduce or eliminate resource waste (energy, water, etc)**
  - Incentivize site and climate analysis during the schematic design phase so green strategies can be incorporated early
  - Educate about passive design strategies and energy-efficient specifications
  - Promote and incentivize the development of walkable communities
  - Create transit-oriented developments and high-density corridors that include mixed-use live-work-play environments
  - Promote and incentivize the use of various sustainability frameworks
    - Evaluate different frameworks and certifications, such as Leadership in Energy and Environmental Design (LEED), EcoDistricts, or Living Future Institute
  - Evaluate policies/impediments to gray-water reuse systems
  - Evaluate policies/impediments to renewable energy access or shared community systems
  - Set and achieve consensus-based targets for resources and carbon use
  - Create effective policies such as green building mandates, incentives, hybrid vehicle plug-ins, storage capacity for net positive production

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# SOURCE REDUCTION



*"I joined the Partners for a Sustainable Nevada to aid in the hard work of finding sustainable solutions and practices for our businesses, communities, and people so that our natural resources are better protected and our communities can thrive now and in the future."*

**Elizabeth Futch, Co-Chair**

*"I grew up in an environment where almost everything we used was either reused or repurposed or returned to the earth in some form with very little waste. Households didn't usually have a waste bin and single-use products were unheard of. This was less than 30 years ago. We now live in a world where creating more of everything to accommodate a use-and-throw culture is the norm. But this is not sustainable and it pains me to think about the waste-filled world we'll be leaving for our future generations. I truly believe that curtailing this excessive use at the source, whether it's at the extraction stage or manufacturing or at the consumer end, is possible. Rich or poor, we all have a stake in the future of our planet, and together, we can make the changes required to create less waste. I joined the NDEP initiative to do my part and hope to inspire others."*

**Lakshmi Albright, Chair**



## References

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# SUSTAINABILITY

**CHAIR: CHRIS LYNCH, UNR BUSINESS ENVIRONMENTAL PROGRAM**  
**CO-CHAIR: NOAH ROTROFF, THE SIERRA CLUB**



The Sustainability Working Group focused on looking at sustainability from a 30,000-foot view and finding ways to integrate multiple efforts together to achieve a more synergistic effect for sustainability in Nevada. Several topics are included in sustainability, and this group was tasked with bringing together the many entities who are working on sustainability-related projects. The overarching goals were to highlight the efforts that are currently underway and bring to attention what areas of concern need help and resources. Based on this information, the Sustainability Group proposed the following objectives:

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# SUSTAINABILITY

## OBJECTIVE 1

### **Amplify and scale existing effective efforts for maintaining a sustainable and equitable water supply**

- **Increase public access to the information about their local water supply, water demand, and best practices**
  - Create a central information source that can answer the following questions:
    - “Where does my water come from?”
    - “How is our water supply being used?”
  - Collect and showcase data – water consumption by sectors (residential, commercial, industrial, agricultural) and historical trends in use
  - Identify industries and sectors that commonly use large amounts of fresh water and promote alternative methods and source reduction methods
  
- **Coordinate a working group with water suppliers, the state water engineer, and regulatory agencies to identify shared water conservation and sustainability goals for water in Nevada**
  - Create a forum for sharing best practices within the context of water supply issues being different in different parts of Nevada; what works best and where
  - Coordinate with the University of Reno (UNR) to develop a network addressing water issues for rural and urban stakeholders
  - Identify where measures are needed to balance growth with availability
    - Create alignment of economic development goals and initiatives with water suppliers; engage economic development authorities
    - Examine AB 356 from the 81st Legislative session
  
- **Identify and support ongoing projects in the state, for example, Nevada Water at the UNR**



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# SUSTAINABILITY

- **Identify existing regulations to be amended and new regulations to be implemented:**

- Conduct a regulatory review and analyze industry-specific uses of water for potential reduction solutions, especially when it comes to fresh water:
  - Requiring recycled water when freshwater is not necessary (e.g., evaluating the use of freshwater in dust suppression)
  - Water for cooling for large data centers
- Encourage the installation of separate indoor vs. outdoor meters
  - This allows domestic and industrial users to track consumption and identify and tackle targeted reduction measures
- Incentivize water use reductions based on local considerations
  - Switch to pricing structures that emphasize conservation (e.g., credits that reward reduction, fees that increase with consumption)

- **Take greater measures to promote and advertise those businesses that are acting as leaders in water sustainability**

- Highlight leaders
- identify and break down barriers to widespread adoption of conservation and efficiency measures
- Put a higher emphasis (e.g., tech and financial assistance) on those smaller and local businesses with less capital/revenue, and therefore less opportunity, to implement potentially costly green initiatives

We recognize that most of the above set of options are mainly focused on water supply, not water quality. Maintaining, improving, and enforcing water quality are extremely important issues that work in tandem with conservation, and the working group plans to have a greater focus on drinking water regulations, wastewater treatment standards, water pollution, and degradation issues in the future.

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# SUSTAINABILITY

## OBJECTIVE 2

### **Improve sustainability plan implementation in county, city, and state government, K-12 and higher education, and private business**

- **Recommend a statutory mandate and framework for a sustainability plan for the State of Nevada involving all state agencies**
  - Use the plan to improve coordination between state-level sustainability planning with city and county level sustainability planning as well as sustainability planning at school districts and higher education institutions
- **Identify and disseminate existing sustainability plans and strategies**
  - Analyze plans for similarities and differences as well as lessons learned to date
  - Identify current challenges to the greater implementation of existing sustainability plans and help develop strategies and tactics that the PSN members can take to advance sustainability planning to actual sustainability action
  - Publicly highlight existing sustainability and climate action plans
- **Propose a private-sector environmental sustainability planning recognition program and/or sustainability planning challenge**
  - Support a sustainability mentoring, education, and technical assistance effort for small and medium-sized businesses through UNR Business Environmental Program
- **Amend Nevada statutory planning requirements at NRS 278.160 to include environmental sustainability goals and objectives**

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# SUSTAINABILITY

## OBJECTIVE 3

### **Increase the deployment of energy efficiency and clean energy technologies across Nevada - Linking the innovators to the policymakers**

- **Identify state-legislated goals for renewable energy and energy efficiency**
  - Create and display a “ticker” for actual progress versus the goals on a dashboard on the new sustainability website
- **Engage NV Energy, Southwest Gas, Rural Electric Co-ops, and Governor’s Office of Energy in the PSN energy-related objective(s)**
  - Support NV Energy green loop for clean energy
- **Analyze the gaps and opportunities that exist for clean energy technology development in Nevada and**
  - Collaborate with the companies currently developing these technologies to identify the common challenges and needs which if alleviated would allow them to flourish and grow
  - Establish an industry stakeholder group that works to identify (with the PSN as a bridge between innovators and policymakers):
    - Potential incentives
    - Beneficial regulation and policies changes
    - Financial assistance needs: grants, loans, tax credits, etc.
- **Create stakeholder groups to identify the needs and barriers to increased deployment of clean energy and energy efficiency by major sectors:**
  - Government
  - Business & Industry
  - Non-profits
  - Private Consumers (Single Family/Multifamily Structures)

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# SUSTAINABILITY

- **Continue the implementation, support, and improvement of proven green technology (e.g., electrification of transportation and solar)**
- **Determine the needs and demand for clean energy product recycling**
  - Clean, green, and efficient disposal and recycling of lithium batteries and solar panels
- **Investigate and explore grant opportunities especially related to microgrids, nature conservancy, and abandoned mining lands**
  - US Department of Energy grants
- **Research the existing and potential work on sources of renewable energy (e.g., biofuel, hydrogen, wind, geothermal)**

## OBJECTIVE 4

### **Mitigate inequities and disparities in environmental impacts and outcomes for all Nevadans**

- **Create a task force to identify policies and funding priorities to ensure equitable access to:**
  - Clean air and clean water for all Nevadans
  - Clean and healthy food
  - Energy efficiency resources, including in multifamily dwellings
  - Renewable energy resources
  - Green spaces
- **Ensure equity considerations, including cost considerations, are included as guiding principles in the development of state climate strategies so solutions are just and equitable**

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# SUSTAINABILITY

- **Collect and analyze data to baseline existing inequities and disparities in environmental impacts and outcomes and develop recommended policies and programs to correct identified inequities**
- **Establish stakeholder workshops to identify and address environmental, energy, and other sustainability needs in underserved communities**
  - Examples can include organizations such as the Nevada Environmental Justice Coalition, UNR Cooperative Extension, and other community representatives
- **Pursue legislation to ensure equity and justice considerations be considered in environmental and development permitting decisions so negative impacts of growth do not disproportionately affect disadvantaged communities**
- **Prioritize funding and training resources to develop a clean and equitable workforce in the sustainability sector**

## OBJECTIVE 5

### **Reduce greenhouse gas emissions in Nevada by helping communicate, advance, and promote the 2020 State Climate Strategy/Nevada Climate Initiative**

- **Identify goals and strategies in the 2020 State Climate Strategy where the PSN can provide recommendations and assist with implementation**
- **Develop a clearinghouse - include what's being done already, share information with rural areas to spur conversation, and look at what comparable cities and states are doing to benchmark**

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# SUSTAINABILITY

- **Investigate specific opportunities for emissions reductions, mitigation measures, and create stakeholder groups**
  - Industry stakeholder group – to arrive at incentives
  - Reduce emissions from the transportation sector
    - Increase use of public transport
    - Reduce vehicle miles traveled in public and private fleets and encourage alternative fuel use
    - Reduce vehicle miles traveled in private vehicles and encourage alternate fuel use
  - Explore opportunities to support education, industry and job development, incentives and legislative requirements for electrification of new and existing buildings
  - Provide information and links to electric vehicle infrastructure (e.g., charging)
  - Evaluate land-use options such as open space, soils, carbon sinks, etc. (e.g., carbon credits)
  - Reduce emissions associated with wastes and landfills
- **Increase state-federal communications to stay up-to-date on sustainability and climate change developments**



*"Without a doubt, environmental sustainability is an issue of our time for business and economic development in Nevada. When NDEP announced the Partners for a Sustainable Nevada initiative, I had to get involved. This partnership initiative is leading and setting the course in all aspects of sustainability for Nevada's future: waste, water, air, social equity, and climate change. "*

**Chris Lynch, Chair**

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# NEXT STEPS



This Menu of Options has set a foundation for enhancing sustainability throughout the state. The working groups have identified and characterized different challenges and opportunities in Nevada and have found a variety of solution options to address these challenges and capitalize on the opportunities. Furthermore, they have started to build a strong network of sustainability experts, government agencies, and sustainability-minded businesses and non-profits.

Now, the working groups will move on to the next phase – the selection and implementation of various options. After the Chairs and Co-Chairs select which options to first focus on, the working groups will begin to develop and implement programs, policies, outreach campaigns, and other sustainability projects. We look forward to the developments that come to fruition and the positive impacts they will have on Nevada’s sustainability and future.

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## **Webpage**

<https://ndep.nv.gov/land/waste/bsmm-strategic-plan/partners-for-a-sustainable-nevada>

## **Future Sustainable NV Webpage**

<https://ndep.nv.gov/nevada-recycles>