

Sustainability Best Practices Guide for the Bear River Band of the Rohnerville Rancheria



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Bear River Band of the Rohnerville Rancheria



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ABOUT THIS GUIDE

This guide has been created using recommendations from the Sustainability Best Practices Framework developed by the Institute for Local Government (ILG). Most recommendations have been tried or implemented by other municipalities in California. To learn about their process contact the Institute for Local Government. For more information about the ILG visit www.ca-ilg.org/sustainability. For more on ILG's Sustainability Framework visit <http://www.ca-ilg.org/climate-action-sustainability-best-practices-framework>

INTENTIONS AND HOW TO USE THIS GUIDE

The Sustainability Best Practices Guide intends to inform the Bear River Band of the Rohnerville Rancheria (BRBRR or "the Rancheria") of ways to incorporate sustainability into the day to day operations of the Rancheria, including local businesses and residents. Each department may have different needs and may look to this guide to:

- Generate ideas about programs and policies to pursue
- Inform planning processes
- Integrate sustainability ethics into general plans and policies
- Implement sustainability actions and practices
- Ways to connect &/or partner with residents and businesses on sustainability practices

The best use of this guide is to review relevant sections to your department and use the bulleted list to gain ideas for projects, goals and objectives to help your department and the Rancheria to become more sustainable in practice. Your department can return to this guide year to year or as frequently as necessary as a tool to guide you as you plan future projects and best practices.

It is recommended that departments consult one another when deciding to move ahead with action items as there are many actions items that are relevant to multiple departments. Departments should strive to form integrated partnerships with one another rather than pursue independent actions that could lead to redundancy or misinformed approaches. It is also advised that departments take a community-based planning approach that considers the thoughts and ideas of tribal members on a project that directly affects or directly relates to Tish Non Village residents and tribal members.

There are several co-benefits to many of the actions/practices suggested in this guide, including:

- Reduced greenhouse gas emissions
- Energy, water, fuel and cost savings
- Improved health
- Increased resilience to climate change impacts
- Improved ecosystem function

This document features several areas of focus that departments on the Rancheria may be involved in, including:

- Energy Efficiency & Conservation
- Water & Wastewater Systems
- Green Building
- Waste Reduction & Recycling
- Climate Informed Purchasing

- Renewable Energy & Low-Carbon Fuels
- Efficient Transportation
- Land Use & Community Design
- Open Space & Offsetting Carbon Emissions
- Community & Individual Action

WHAT IS SUSTAINABILITY?

The concept of sustainability has increasingly been accepted as an important facet to daily life, and to running a business or government. It has been defined by the United Nations as, “the ability to make development sustainable to ensure that it meets the needs of the present without compromising the ability for future generations to meet their own needs.”³ This definition has a development approach but does imply limits to growth based on the present day technology and the ability of the environment to handle the effects of human activities while providing the resources humanity needs.³

Despite the relatively new awakening to sustainability, it is a very old concept, now commonly referred to as the Seventh Generation philosophy which is credited to the Iroquois Confederacy and practiced by many Native Nations.¹ This philosophy guides tribal decision makers to consider how their actions and decisions today will effect descendants seven generations into the future.¹

In order to ensure that people seven generations into the future live on a planet that can support their needs, we must take actions to stop and restore the negative impacts of today and strive to live in balance with the natural systems that sustain all people. Sustainability challenges us to consider the environmental, social and economic ramifications of our individual and collective actions and to seek solutions that are environmentally just, socially equitable, and economically viable.



ENERGY EFFICIENCY & CONSERVATION

AUDITS AND ASSESSMENT

- ❖ Audit energy use of Rancheria buildings to identify opportunities for energy savings through efficiency and conservations measures
- ❖ Use energy management software to monitor real-time energy use in Rancheria buildings to identify energy usage patterns and abnormalities
- ❖ Conduct commissioning and retro-commissioning studies of Rancheria buildings, including equipment such as heating, ventilation and air conditioning (HVAC) and lighting systems to ensure they are operating as designed and installed.
- ❖ Benchmark energy use of major Rancheria buildings

INTERNAL POLICIES AND PROCEDURES

- ❖ Prepare and monitor progress of implementing Renewable Energy Sovereignty Master Plan
- ❖ Establish an energy efficiency and conservation policy that provides employees with behavioral guidelines for energy efficient use of the facility such as turning lights, copiers, and computers off, appropriate use of thermostat, etc.
- ❖ Establish energy efficiency and conservation protocols for building custodial and cleaning services and other contract employees
- ❖ Utilize smart power strips to reduce “plug” load for personal equipment
- ❖ Implement a network cloud-computer system to reduce computer work station energy use
- ❖ Incorporate energy efficiency features in agency data centers, by implementing an IT energy efficiency program
- ❖ Adopt energy efficiency purchasing standards for all new computer equipment, appliances, and equipment
- ❖ Require new Rancheria buildings to exceed Title 24, California’s energy efficiency building standard
- ❖ Follow the approved BRBRR Energy Sovereignty Building Code (Appendix C and D in the Renewable Energy Sovereignty Master Plan)
- ❖ Implement off-peak scheduling of pumps, motors, and other energy intensive machinery where possible
- ❖ Implement a revolving loan fund or other mechanism to finance future energy investments in Rancheria buildings and operations
- ❖ Work with energy providers to access technical assistance and financial incentives, such as facility audits, rebates, on-bill financing, loans, savings-by-design, and demand management programs
- ❖ Require new construction to be net zero energy
- ❖ Require Rancheria funded housing projects to incorporate renewable energy, and energy efficient features, equipment, and appliances

RETROFITS AND UPGRADES

- ❖ Develop and implement a time-line to address no cost/low cost energy retrofit costs
- ❖ Reduce energy demand by capturing “day-lighting” opportunities
- ❖ Install motion sensors, photocells, and multi-level switches to control room lighting systems
- ❖ Replace incandescent lights with energy efficient lights, such as, compact fluorescents, overhead fluorescent lights or light-emitting diodes (LEDs)

- ❖ Upgrade pumps, motors, and other energy intensive machinery where feasible
- ❖ Replace appliances and equipment with energy efficient models
- ❖ Replace natural gas fueled appliance and equipment, such as, boilers, stoves, water heaters with high efficiency units
- ❖ Install smart meters on buildings
- ❖ Install/upgrade to energy efficient and dark sky compatible outdoor lighting

WORKING WITH LOCAL BUSINESSES

- ❖ Encourage community businesses to conduct energy audits and implement energy efficiency retrofits
- ❖ Encourage businesses to install energy efficient exterior lighting appropriate to location and use considering security and decorative lighting issues
- ❖ Promote and reward energy efficiency efforts of local businesses
- ❖ Require new commercial buildings to exceed Title 24, California's energy efficiency standards, to the extent permitted by law
- ❖ Require new commercial construction to be net zero

WORKING WITH HOMEOWNERS AND APARTMENT OWNERS

- ❖ Provide information about energy conservation and efficiency to homeowners
- ❖ Provide rebates or other financial incentives to help residents pay for whole house retrofits
- ❖ Install solar panels on homes
- ❖ Require energy audits and or retrofits at time of sale for residential properties
- ❖ Require new residential buildings to exceed Title 24, California's energy efficiency standard, to the extent permitted by law
- ❖ Require new residential construction to be net zero energy
- ❖ Work with energy provider to provide information about utility rebates or other energy efficiency or renewable energy program
- ❖ Host/support compact fluorescent light bulbs, LED give-away or incandescent bulb exchange programs
- ❖ Collaborate with schools and colleges to co-sponsor students to conduct energy audits and/or retrofits

GREEN BUILDING

RANCHERIA

- ❖ Follow the BRBRR Energy Sovereignty Building Code (Appendix C and D in the Renewable Energy Sovereignty Master Plan)
- ❖ Adopt a policy that requires new buildings to exceed the minimum requirements of California's Green Building Standards Code (CalGreen). Options to exceed the standard include CalGreen's built in tiers and /or certification under Build it Green's Green Point Rated system, LEED, or alternative certification program.
- ❖ Require Rancheria buildings to exceed Title 24, Part 6, the State's Building Standard code which establishes energy efficiency requirements for residential and non-residential new construction and major remodels
- ❖ Incorporate materials that are renewable, reusable, recyclable, recycled, non-toxic, and contain zero or low volatile organic compounds (VOCs)

- ❖ Explore using alternative materials such as packed gravels, permeable concrete/asphalt instead of conventional paving materials to enhance replenishment of ground water and reduce stormwater runoff
- ❖ Incorporate water efficient (native) plants, trees, green roofs, and rain gardens in landscaping
- ❖ Use compost, mulch and/or bio-solids in landscaping as a water conservation measure
- ❖ Incorporate smart irrigation technology on landscaping, parks and lawns to save water and energy
- ❖ Require verification by a certified third-party rater to ensure compliance with green building standards for all newly built facilities
- ❖ Enact a construction and demolition debris recycling ordinance that requires 50 percent or more diversion of project waste

COMMUNITY

- ❖ Establish a green building awareness program to educate and encourage homeowners and builders to use green building techniques
- ❖ Train community members to become third party certifiers of the green building standards
- ❖ Train community members to install solar photovoltaic (PV) systems
- ❖ Create a page on the Rancheria website dedicated to green building information and resources for the community
- ❖ Provide information and resources for the community about rebates and energy efficiency programs
- ❖ Provide technical and financial assistance and other incentives to encourage green building in the community
- ❖ Adopt a “solar ready” ordinance, requiring all new residential buildings to be pre-wired and pre-plumbed for photovoltaic and solar hot water systems
- ❖ Utilize smart irrigation systems for landscaping
- ❖ Enact a construction and demolition debris recycling ordinance that required 50 percent or more diversion of project waste
- ❖ Offer technical assistance and incentives for converting lawns to dry landscaping, native plant (drought-tolerant), or edible landscaping

RENEWABLE ENERGY AND LOW CARBON FUELS

SOLAR PROJECTS

- ❖ Convert to 100% renewable energy
- ❖ Replace street lights, safety lights, pedestrian “walk” signals with solar powered versions
- ❖ Adopt a “solar ready” ordinance requiring new buildings to be pre-wired and pre-plumbed for solar photovoltaic and solar hot water systems
- ❖ Purchase solar photovoltaic systems or enter into power purchase agreements to meet all or part of the electrical energy requirements for buildings and facilities owned, leased or operated by the Rancheria
- ❖ Install PV systems over the parking lots to serve a dual purpose to cover cars and create energy
- ❖ Purchase land offsite for the construction and production of renewable energy infrastructure such as wind or solar energy to be used on the Rancheria
- ❖ Work with the Community Choice Energy Program at the local Redwood Coast Energy Authority to seek funds for renewable energy development
- ❖ Provide alternative energy options to homeowners via Grid Alternatives

FUEL EFFICIENT AND ALTERNATIVE FUEL VEHICLES

- ❖ Establish and implement a policy to convert the Rancheria fleets to alternative or fuel efficiency vehicles
- ❖ Purchase small work appropriate electric UTV for staff to use for Rancheria based work
- ❖ Implement bike sharing program to employees traveling between facilities
- ❖ Install bicycle racks, showers and other amenities to promote bicycle use by employees and visitors or partner with the recreation center to create an employee use policy for bicycle commuters
- ❖ Install electric vehicle charging stations in neighborhoods and public facilities such as parking lots and community centers
- ❖ Require new commercial developments to include electric vehicle charging stations on site

WATER AND WASTEWATER SYSTEMS

ENSURE WATER EFFICIENCY IN BUILDINGS AND OPERATIONS

- ❖ Audit water and wastewater pumps and motors to identify most and least efficient equipment
- ❖ Work to implement a cycling and equipment replacement program for least efficient water and waste water pumps and motors
- ❖ Initiate a water loss program or "leak audit" of water infrastructure
- ❖ Upgrade and retrofit plumbing systems and appliances with water efficient technologies and fixtures
- ❖ Work to implement the use of recycled water
- ❖ Require dual plumbing for use of recycled water for new facilities
- ❖ Find ways to incorporate rainwater catchment into building water use

REDUCE WATER USE IN RESIDENTIAL AREAS PARKS AND LANDSCAPING

- ❖ Protect, restore, and preserve natural resources, such as, wetlands, floodplains, recharge zones, riparian areas, open space and native habitats as they provide flood protection, improve water quality, and recharge groundwater
- ❖ Create landscaping that is drought tolerant with dry landscaping techniques or planting with native drought tolerant plants
- ❖ Create low flow, water conservation irrigation systems when irrigation is needed
- ❖ Use permeable surfaces for the hardscape (parking lots, roads, playgrounds)
- ❖ Develop dual plumbing systems that allow gray water from showers, sinks and washers to be reused for landscaping irrigation
- ❖ Install smart water meters to track water usage and effectiveness of water use
- ❖ Assess, maintain, and repair existing irrigation systems to conserve water use
- ❖ Adopt a water recycling master plan that connects parks and landscaped areas into the watering system
- ❖ Use recycled water for facilities and operations as appropriate
- ❖ Reduce turf and grass in landscaped areas. Use native turf, grass, plants or dry landscaping when applicable
- ❖ Use compost, bio-solids, and mulch in landscaping as a water conservation measure

CREATE SAFE AND EFFICIENT WATER AND WASTEWATER SYSTEMS

- ❖ Use non-toxic fertilizer in parks and landscaped areas to reduce pollution in run-off
- ❖ Create a Fats, Oils, and Grease (FOG) Control Program to reduce blockages in wastewater system
- ❖ Develop a bio-solids program and determine best and appropriate uses for the bio-solids such as, use on local landscaping, golf courses, community parks, farms or broader markets.
- ❖ Audit the wastewater facility to determine ways to increase energy efficiency for water and wastewater pumps and motors
- ❖ Promote methane capture and enhanced production through co-digestion of other organic waste streams for use as renewable energy at wastewater treatment plant

ADDRESS FUTURE WATER SECURITY

- ❖ Create a groundwater well monitoring program to monitor the level of drinking water wells
- ❖ Construct rain gardens and detention basins to increase groundwater recharge
- ❖ Collect rainwater for small scale farming/gardening or landscaping purposes
- ❖ Create a drought contingency plan

PROMOTE COMMUNITY WATER CONSERVATION

- ❖ Provide water conservation educational information for homeowners via webpage, handouts, mailings, or workshops
- ❖ Adopt water efficiency guidelines to new residential and commercial developments
- ❖ Require or recommend water efficiency audits at point of sale for commercial and residential properties
- ❖ Provide free faucet aerators, water-efficient shower heads, and low flow nozzles to residents
- ❖ Create a water-efficient landscaping ordinance where feasible
- ❖ Create a water efficient demonstration garden that includes native and drought tolerant plants and requires low volume mulch, irrigation, and other water saving features
- ❖ Provide trainings or workshops to educate landscapers and Rancheria personnel on practices that reduce water use and toxic chemicals

PROMOTE WATER RECYCLING AND GREYWATER USE

- ❖ Incentivize and promote the installation of residential greywater systems that meet regulatory standards
- ❖ Include in the water ordinance a requirement that all new homes must have a greywater system
- ❖ Require dual plumbing for use of recycled water for new and commercial and/or residential developments
- ❖ Provide education and resources for residential rainwater catchment

EDUCATE ABOUT WATER POLLUTION AND PREVENTION

- ❖ Install informational kiosks at parks, wetlands or public use areas to educate residents about stormwater pollution
- ❖ Engage the public in community and wetland clean-ups, storm drain marking, or restoration activities along streams and wetlands
- ❖ Create and/or maintain bio-retention basins for stormwater collection and natural filtration prior to discharge
- ❖ Develop a community education program or campaign that engages residents as watershed stewards

WASTE REDUCTION AND RECYCLING

REDUCE

- ❖ Create and implement a comprehensive waste reduction, recycling and compost program in offices and facilities
- ❖ Create and facilitate an employee education program highlighting waste reduction and recycling/composting best practices
- ❖ Adopt a paper reduction practices policy
 - “Think before you print” campaign
 - Reduce margins and logos on templates, letterhead and memos
 - Remove blank pages from documents
 - Print both sides or reuse single sided paper for notes
 - Scan and distribute electronic copies as appropriate
 - Purchase recycled copy paper
- ❖ Identify, remove and replace single use items especially plastic and styrofoam, i.e. replace plastic utensils and single use items in breakrooms with reusable items such as metal utensils, ceramic mugs...etc.

REUSE

- ❖ Reuse unwanted printed material for other purposes, such as scratch paper or shred for use at a local animal shelter
- ❖ Reuse or redistribute to the community or non-profit groups office items such as supplies, electronic equipment, furniture or appliances in order to divert them from the landfill
- ❖ Host a community garage sale or swap meet for the community to sell or redistribute unwanted items. Unclaimed useable items can be donated to a non-profit or thrift store
- ❖ Provide and encourage the use of reusable dishes and drinkware in Rancheria buildings and breakrooms

RECYCLE

- ❖ Purchase a mixed recycling service from local recycling collection providers to service Rancheria facilities
- ❖ Provide recycling bins (labeled or different color from trash bins) in each office on the Rancheria
- ❖ Adopt a “Buy Recycled” policy for Rancheria departments
- ❖ Recycle and refill ink/toner cartridges as appropriate
- ❖ Provide a bin for collection of used batteries, and compact florescent lights for proper disposal
- ❖ Require all demolition projects to incorporate waste recycling or recovery practices
- ❖ Evaluate current community recycling infrastructure relative to future population growth and waste generation
- ❖ Work with solid waste and recycling collection providers to calculate the carbon footprint of collection systems and from waste produced at the Rancheria
- ❖ Work to reduce the carbon footprint of the collection program and from the waste generated on site

ORGANICS

- ❖ Evaluate agency facilities and operations to identify opportunities to increase material recovery and beneficial use of organic material

- ❖ Establish a program to collect compost materials from interested departments and compost that material for use on site in the gardens
- ❖ Approve siting of composting facilities within jurisdiction
- ❖ Create educational signage about what is compostable and how to compost
- ❖ Distribute information in newsletter highlighting community waste reduction programs, accomplishments or pertinent information

BUSINESSES

- ❖ Coordinate with the California Department of Resources, Recycling and Recovery (CalRecycle) for latest information, resources and programs to assist local business. www.calrecycle.ca.gov
- ❖ Adopt a program or ordinance to encourage or require waste audits and waste reduction plans for existing and new commercial developments
- ❖ Find ways to collect compost for businesses on the Rancheria
- ❖ Adopt an ordinance to restrict the use of expanded-polystyrene containers at restaurants and other establishments on the Rancheria
- ❖ Adopt an ordinance to restrict the availability of single-use plastic bags at retail markets
- ❖ Implement a green business program that rewards local businesses for sustainability measures
- ❖ Implement food scrap (compost) collection program for large food-waste producing businesses and provide different waste containers for compost, recycling and landfill items
- ❖ Use reusable or compostable food-wear and dining-wear where appropriate
- ❖ Create educational signage for staff and costumers to help them divert waste properly into recycling, compost and landfill containers
- ❖ Require recycling and food waste collection at special events

RESIDENTIAL

- ❖ Include waste reduction, recycling, e-waste, and compost information on Rancheria website and newsletters
- ❖ Provide information to residents on how to stop receiving unwanted catalogues, phone books and weekly circulars
- ❖ Provide recycling and waste reduction information packets for new and current tenants
- ❖ Offer waste reduction, composting and recycling workshops for residents
- ❖ Offer compost pick-up/drop off services to interested households
- ❖ Implement a vermiculture (worm bin) composting program where residents can “check out” or borrow composting bins from the Rancheria to learn about composting and start their own

ELECTRONIC-WASTE AND HAZARDOUS MATERIAL

- ❖ Create and distribute information about e-waste and hazardous waste disposal
- ❖ Host e-waste events where community members can dispose of e-waste
- ❖ Promote proper recycling and disposal options for lightbulbs and batteries
- ❖ Promote disposal options for “sharps” (needles) and prescriptions drugs to prevent injuries and contamination of water and waste water

CONSTRUCTION MATERIAL AND DEBRIS

- ❖ Adopt a program or ordinance to reduce, reuse, and recycle community construction and demolition waste
- ❖ Salvage and reuse materials from community remodeling projects
- ❖ Recycle cement and asphalt as appropriate
- ❖ Utilize permeable pavements or recycled asphalt pavement for streets and roads
- ❖ Use recycled rubber, mulch or other appropriate material for resurfacing playgrounds
- ❖ Partner with local businesses to create materials reuse opportunities

CLIMATE-INFORMED PURCHASING

RANCHERIA

- ❖ Review current purchasing practices to identify possible “green procurement” opportunities
- ❖ Establish standards for purchasing climate-friendly products and services. Examples include: Office and cleaning supplies and equipment that minimizes environmental impacts and that do not harm human health such as:
 - Office paper containing a minimum percentage of post-consumer recycled content
 - Cleaning products with the GreenSeal or EcoLogo
 - Energy Star or comparable equipment
 - Computers that meet the highest feasible Electronic Product Environmental Assessment Tool (EPEAT) certification level
 - Computer and lighting controls to reduce energy and computer idle time
 - Rechargeable batteries where appropriate
 - Compostable or reusable cups, plates and utensils
- ❖ Purchase green building materials such as:
 - Materials that meet or exceed the BRBRR Energy Sovereignty Building Code
 - Carpeting, furnishings or plastic items with a minimum percentage of recycled content
 - Paint or carpets that contain low or no volatile organic compounds (VOC)
- ❖ Purchase fleets that reduce environmental impact
 - Fuel efficient, dual fuel or alternative fuel fleet vehicles
 - Electric utility vehicles (UTVs) for on Rancheria mobility
- ❖ Conduct employee awareness training on the purchasing and use of green products and services
- ❖ Report achievements of green procurement program to staff, and tribal members in newsletters
- ❖ Consider the life-cycle of a product
- ❖ Consider life-cycle pricing to ensure that the maintenance, operating, insurance, disposal, and replacement cost of the product or service is considered when evaluating purchase options

CONTRACTING

- ❖ Request that consultants and contractors and grantees use recycled products and supplies when feasible
- ❖ Request service providers to follow sustainable practices, or include a preference selecting and contacting with service providers who use sustainable practices
- ❖ Consider the greenhouse gas emission impacts associated with transportation distances when determining which business or service award to contract

- ❖ Incentivize the use of fuel-efficient, dual use, or alternative fuel vehicles for contractors using buses, hauling vehicles or doing construction
- ❖ Request contractors to show green certifications if applicable, and demonstrate technical knowledge and commitment to sustainability

COMMUNITY

- ❖ Provide education on sustainable purchasing
- ❖ Educate the community about Rancheria efforts toward climate-informed procurement actions
- ❖ Identify barriers that prevent sustainable behaviors and purchases
- ❖ Demonstrate affordable and simple changes to create a more sustainable lifestyle

EFFICIENT TRANSPORTATION

PLANNING

- ❖ Assess the long-term mobility (the ability for people to get around) needs of the community, including the efficient movement of people and goods
- ❖ Update transportation models to reflect all modes of transportation, such as walking, bicycling, private vehicles, UTVs, commercial vehicles, buses, and other forms of transit
- ❖ Plan for increased access to electric vehicle charging stations
- ❖ Identify funding sources for implementing transportation plans
- ❖ Partner with local and regional transportation to maintain access to public transit on the Rancheria
- ❖ Implement transportation planning strategies that demand management solutions for public transit, bicycle and walking, equally with strategies that enable automobile transit

INFRASTRUCTURE

- ❖ Install roundabouts in lieu of signalized intersections as a ways to improve traffic flow, reduce accidents, and reduce greenhouse gas emissions
- ❖ Maintain intersection safety with pedestrian signals and high visibility crosswalks
- ❖ Encourage, plan, and construct infrastructure for electric vehicle charging and natural gas fueling for Rancheria fleet and community
- ❖ Increase bicycle lanes, racks, paths and signage throughout the community

Rancheria Fleet

- ❖ Adopt a policy that sets fleet efficiency standards for new vehicles
- ❖ Purchase fuel efficient or alternative fuel, including zero or near-zero emission vehicles, to save fuel and money, and reduce greenhouse gas emissions.
- ❖ Purchase electric UTV vehicles for emission free transportation for Rancheria personnel especially for staff traveling between buildings and outdoor work sites throughout the day
- ❖ Alternatively, purchase bicycles for local travel by Rancheria personnel
- ❖ Evaluate natural gas fueling infrastructure
- ❖ Establish a crew-based maintenance plan instead of individual assignments so as to reduce miles driven

RANCHERIA EMPLOYEE PROGRAMS

- ❖ Offer employees incentives to use alternatives to single-occupant car commuting, such as carpool parking, flexible schedules, public transit incentives, bicycle facilities, bicycle sharing programs, ridesharing services, locker/shower facilities, and telecommuting
- ❖ Offer employees incentives to purchase fuel efficient or alternative fuel vehicles
- ❖ Create access to a flexible work schedule for employees incorporating public transit, biking or telecommuting into their schedule
- ❖ Construct bicycle stations for employees
- ❖ Create a terms of use for electric UTVs for departments who share a UTV if not all departments have access to one

COMMUNITY

- ❖ Offer car and bicycle sharing programs
- ❖ Work with public transit authorities to ensure or adjust bus schedules to suit the needs of the community to maximize ridership
- ❖ Promote bicycling and walking as healthy modes of transportation
- ❖ Partner with schools to identify and implement safer travel opportunities for bicycles and walking between home and school (i.e. Safe Route to School Programs)
- ❖ Create and distribute bike maps and "safe routes to school" maps to residents
- ❖ Include information on Rancheria website about state and federal clean vehicle rebates

LAND USE AND COMMUNITY DESIGN

ENCOURAGE COMPACT, EFFICIENT AND CONTIGIOUS DEVELOPMENT

- ❖ Develop general plan policies that integrate diverse land uses –including housing, open space, employment and community serves, at appropriate densities to reduce automobile travel and encourage walking and bicycling
- ❖ Zone the Rancheria for various land uses and appropriate development for the land
- ❖ Implement methods to limit sprawl or non-contiguous development patterns and foster a more compact community structure
- ❖ Use a geographic Information system (GIS) to create zoning and use maps for Rancheria general planning
- ❖ Support access to and development of open space (parks, gardens, trail, food forests, wildlands, etc.) to support recreational needs of residents

ALTERNATIVE ENERGY AND WASTE PROCESSING LAND USE OPTIONS

- ❖ Identify and zone appropriate sites for solar and wind generation facilities on and off Rancheria
- ❖ Identify and zone appropriate sites for bio-solids composting and food/yard waste composting facilities
- ❖ Work with Grid Alternatives to continue installing solar roofs on homes in Tish Non Village
- ❖ Find renewable energy rebate programs to participate in
- ❖ Follow the approved Renewable Energy Sovereignty Master Plan and Climate Change Adaptation and Mitigation Plan to reduce greenhouse gasses and achieve 100% renewable energy independence

LAND USE POLICIES SUPPORTING GREEN BUILDING

- ❖ Follow the Energy Sovereignty Building Codes (Appendix C and D in the Energy Sovereignty Master Plan) to inform the construction of “green” infrastructure
- ❖ Require or recommend LEED certification for new developments
- ❖ Require bicycle racks, showers and or other amenities as part of new Rancheria facilities
- ❖ Integrate permeable pavement in parking lots
- ❖ Integrate Low Impact Development (LID) to new commercial projects, such as bio swales, stormwater detention ponds, native plant/edible landscaping, and permeable pavement

EVALUATE GREENHOUSE GAS EMISSIONS AND PLAN FOR CLIMATE CHANGE ADAPTATION AND MITIGATION

- ❖ Plan for and implement action items in the Climate Change Adaption and Mitigation Plan (CCAMP)
- ❖ Create goals and objectives to decrease greenhouse gas (GHG) emissions over time
- ❖ Monitor GHG emissions to track progress toward meeting goals
- ❖ Utilize ecological mechanisms for sequestering and storing carbon dioxide (CO₂) and other GHGs
 - Plant native plants - especially trees
 - Implement carbon grazing techniques to keep grasses down and carbon in the soil
 - Study wetland methane and carbon storage capacity

COMMUNICATION, COLLABORATION AND INCLUSION

- ❖ Coordinate with relevant departments, stakeholders and community members in the planning and implementation of Rancheria projects and policy
- ❖ Collaborate with local, regional, state and federal agencies to share relevant information or to partner on regional projects especially on lands important to the tribes
- ❖ Analyze impacts of development on public safety and emergency planning
- ❖ Balance the economic, environmental and social equity needs of the community in the decision making processes regarding land use and development
- ❖ Participate in regional planning efforts especially environmental, economic, transportation and development conversations

OPEN SPACE AND OFFSETTING CARBON EMISSIONS

PLANS AND POLICIES

- ❖ Include specific goals and policies designed to reduce carbon emissions in open spaces and using open spaces
- ❖ Adopt a tree ordinance to protect forested lands and to ensure a net zero tree loss. Consider the 3 to 1 recommendation outlined in the Climate Change Mitigation and Adaptation Plan
- ❖ Utilize actions outlined in the Climate Change Mitigation and Adaptation Plan
- ❖ Create plan to allow for tree, shrub, grass thinning for fire protection to prevent wildfire emissions

PARKS

- ❖ Create parks, native plant gardens, food forests, or restore natural habitat where open space areas are zoned
 - ❖ Incorporate green spaces into neighborhoods to increase access to recreational spaces
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HABITAT AND WILDLANDS

- ❖ Protect, restore and enhance natural areas on and off Rancheria via
 - Partnerships with other agencies, stakeholders, and non-profit organizations
 - Land acquisition
 - Conservation easements
 - ❖ Create habitat monitoring, management and restoration protocols to consider future impacts of climate change (see Climate Change Adaptation and Mitigation Plan)
 - ❖ Restore connection between fragmented habitats by creating wildlife/habitat corridors
 - ❖ Remove invasive and non-native plants and promote the growth of beneficial native plants that were historically part of the landscape prior development
 - ❖ Inventory existing vegetation on property including street trees and landscaped vegetation
 - ❖ Landscape with native/edible plants
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AGRICULTURE AND FOOD PURCHASES/PROGRAMS

- ❖ Adopt a policy to integrate local produce and ingredients into meal programs (especially from the Native Garden on the Rancheria)
 - ❖ Research carbon farming and agro-ecological practices and integrate appropriate practices into Rancheria agricultural operations
 - ❖ Utilize conservation techniques such as conservation tillage and other practices to retain carbon fixed in soils
 - ❖ Adopt a policy to reduce unnecessary food packaging when purchasing ingredients and delivering meals
 - ❖ Create a zero waste lunch by using reusable and compostable materials for packaging, serving and eating
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COMMUNITY INVOLVEMENT

- ❖ Provide resources to enable residents to incorporate sustainable landscaping practices on their property
- ❖ Engage the community in clean up, tree planting, and restoration events
- ❖ Sponsor a tree planting program to offer benefits of trees to landowners (shade, habitat, food, beauty, improved air quality)
- ❖ Engage community in garden volunteer days
- ❖ Host workshops on growing, harvesting, cooking and preservation techniques
- ❖ Provide financial incentives for residents to purchase fresh produce at local farmers markets

COMMUNITY AND INDIVIDUAL ACTION

INFORM

- ❖ Develop and implement community climate change education program to increase the understanding of climate change
- ❖ Host informational workshops to educate the community around sustainability techniques such as energy efficiency and water conservation
- ❖ Use positive messaging to promote ways to reduce greenhouse gas emissions
- ❖ Issue a sustainability section within the newsletter
- ❖ Use social media and other platforms to inform the community about sustainable actions, and activities to engage in
- ❖ Develop public service announcements or talk show podcasts related to sustainability on native lands
- ❖ Distribute maps of community bicycle and walking trails
- ❖ Distribute give-away items such as reusable bags, LED lightbulbs, garden planters etc.

CONSULT

- ❖ Survey businesses and tribal members to understand attitudes and behaviors related to sustainability, energy efficiency, and climate change; use this information to inform community sustainability actions
- ❖ Create opportunities for tribal member feedback on policies, programs via public comment periods, surveys, public forums, or community meetings

INVOLVE

- ❖ Create a community sustainability commission to help guide the implementation of the Climate Change Adaptation and Mitigation Plan
- ❖ Host a native environmental leadership training
- ❖ Include sustainability, climate change, and ecological related projects as part of youth activities
- ❖ Create “green” community challenges to promote individual actions to eat local, save energy, water, or reduce greenhouse gases

COLLABORATE

- ❖ Invite community members to participate in conversations about future planning for the Rancheria
- ❖ Collaborate with local schools to educate students about waste reduction, water conservation, wildlands, and plants and animals
- ❖ Partner with local colleges to study sustainability issues and implement solutions on the Rancheria

EMPOWER

- ❖ Create citizen science programs to help monitor parts of the Rancheria such as wetlands, plants, wildlife, air quality, temperature etc.
- ❖ Learn Native cultural practices
- ❖ Host events such as electronic waste drop off, plant a tree day, bike to work day or other campaigns

References Cited

1. Gibson, Kelly. *Sustainability, A Seventh Generation Philosophy: Partnership with Native Americans*, 2011 blog.nativepartnership.org/sustainability
2. Institute for Local Government. *Sustainability Best Practices Framework*, 2013
3. World Commission on Environment and Development. *Our Common Future*. Oxford: Oxford University Press, 1987. Print.