
**NCAT ENERGY CORPS AMERICORPS PROGRAM
2016-2017
Host Site Application**

Organization Name: City of Red Lodge, MT

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Contact Person: Ed Williams

Title: Mayor

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Name of AmeriCorps member's direct supervisor: William R. Foisy

Title: Alderman, City of Red Lodge **Phone:** 406-426-0550

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Number of member(s) requested: (1)

If you have a particular individual in mind who might be interested in serving at your site, please provide contact information below:

Name: Katelynn Essig

Phone: 217-341-0951

Email: kessig1390@gmail.com

Narrative:

1. Describe your organizations and community's unmet needs and opportunities that the member's service activities will address.

The 2013 Red Lodge Growth Policy cites a policy under the Climate Protection section of demonstrating a commitment to environmental protection and sustainability. Infrastructure and city services goals in the Growth Policy include a commitment to recycling in municipal operations and mitigating light pollution affecting the night sky.

The City believes there is a need to reduce energy costs for City buildings, as general fund revenues are stable while operating costs continue to escalate. The City also needs to improve its capital facilities at the recycling facility and recognizes the opportunity to expand the quantity of recyclables and the types of recyclables including electronic waste. As cited in the Growth Policy goals, the City believes that more direct control of its street lighting facilities can result in updated technology to support energy goals and light pollution.

2. Describe the service activities in which the AmeriCorps member will engage. Please be specific.

The service activities identified include those that are ongoing and some may be completed before the second year of service begins.

A. Hands on Energy Assistance – Electric Vehicle Charging Stations

Goal – To insure the stations operate on a sustainable basis over time.

Work to Date: Four electric vehicle charging stations have been secured and are being installed at the public restroom area on North Oakes Avenue.

Tasks:

- (1) Document all information and procedures used for installation to include contact information for installers and funders, agreements, equipment inventory, costs, and physical location of supporting manuals and information.
- (2) Develop and conduct an ongoing monitoring process that documents vehicle usage, energy costs and savings, and maintenance issues.

B. Hands on Energy Assistance – LED Lighting for Streets

Goal – To reduce energy costs to the City and save energy.

Work to Date: The cost savings have been documented for the retrofit of 14 decorative streetlights, owned by the City, from 70W metal halides to 30W LEDs, on Broadway Avenue from 3rd Street to 8th Street. Installation is pending per programming of funds by the City.

Tasks:

- (1) Document all information for suppliers and installers for the 14 decorative streetlights and establish an ongoing monitoring process that documents the monthly cost savings for the 14 decorative streetlights.
- (2) Document the potential cost savings for the retrofit of the remaining decorative streetlights on Broadway Avenue owned by Northwestern Energy. Coordinate a meeting between City officials and Northwestern Energy to review results and options for purchase.
- (3) Incorporate the street light inventory information developed by Northwestern Energy for all remaining streetlights in the City into the City's newly acquired Geographic Information System.
- (4) Identify public service commission, tariff, ownership and rate issues involved with modifying the remaining City streetlights to LED. Identify and develop alliances with other communities with the same situation and goals.

C. Hands on Energy Assistance – Light Emitting Diode (LED) Retrofit for City Buildings

Goal – To reduce energy costs for City buildings.

Work to Date: An energy audit has been conducted for City buildings and the cost savings for retrofit of the City buildings to LED have been identified.

Tasks:

- (1) Coordinate the retrofit of the City buildings per funds programmed by the City in the FY 2017 budget.
- (2) Document all information for suppliers and installers.
- (3) Establish an ongoing monitoring process that documents the monthly cost savings.

D. Hands on Energy Assistance – Solar Arrays for City Buildings

Goal – To reduce energy costs for City buildings.

Work to Date: City building rooftop space has been defined. A general analysis has been completed which includes: rooftop square footage, number of solar panels to fit square footage, potential KW

production, installation costs at \$3 per KW, and estimated purchase and install cost for each rooftop.

Tasks:

- (1) Complete full written analysis after working with intern this summer.
- (2) Attempt to include engineering and architectural assistance for a preliminary structural analysis.
- (3) Identify financing mechanisms, including grant opportunities and tax incentives.
- (4) Research communities and recommend modifications to the City code for the design of future city buildings in order to make roofs solar ready.

E. Energy Education and Outreach – Expanded Recycling Activities

Goal – To increase the awareness of the importance to recycle household goods.

Work to Date: A general overview of recycling activities at the recycling center has been researched. Conversations with Republic Services have occurred to understand waste management practices in Red Lodge. Opportunities and drawbacks of these practices have been defined. Recycling activities have substantially increased in Red Lodge Schools due to the work of the High School Green Team. A Facebook page has been approved and education materials for the page have been discussed. Approval of the education materials and a launch date is TBD.

Tasks

- (1) Determine the feasibility of creating a recycling committee to build better oversight of the Recycling Center.
 - a. Members would include previous recycling committee members, Beartooth Industries employees, and city officials.

Tasks include:

 - i. Document current recycling procedures including, the types of goods recycled, the amounts recycled and income generated per month, and the physical facility and equipment.
 - ii. Research needs of the center to be more efficient, including findings funding for signage and a forklift.
 - iii. Develop a community education and logistics program with goals to expand the geographic area of coverage, the amount of goods recycled and the types of goods recycled.
 - iv. Research additional recycling activities including glass and composting feasibility
- (2) Determine the feasibility of placing recycling containers in City parks and in the downtown area. Identify types of containers that can withstand damage by animal predators and a process for collection of recyclables that results in the satisfactory separation of trash and recyclables.

F. Hands On Energy Assistance - Climate Action/Energy Conservation Plan

Goal – Create an energy plan the city can implement after the EnergyCorps position is finished

Work to Date: Clearpath Pro software has been obtained per the City joining ICLEI.

Tasks

- (1) Katelynn will obtain necessary data to complete a municipal greenhouse gas inventory, including description of vehicle fleet, vehicle fleet mileage for gasoline vehicles, diesel gallons purchased, Discharge Monitoring Reports from the Wastewater and Water Treatment Plants, fire suppressant purchases, electricity and natural gas usage, and distributing an employee commute survey to

- (2) Data will be compiled on excel spreadsheet and then entered into ClearPath Pro software
- (3) Methods and results will be verified and approved by ICLEI staff
- (4) Determine the feasibility of creating an Energy conservation plan or a Climate Action Plan
 - a. Current Pros and Cons of each plan are listed below
 - b. A final decision will be made in the coming months

Energy Conservation Plan

- (1) Combining Katelynn's work, offer a method of procedure to reduce energy costs for the city
 - a. Baselines would include total energy use for the city and results from greenhouse gas analysis
 - b. Analyses completed would include: solar panel analyses for city buildings, Streetlights, and energy audit results
 - c. Analyses to be completed would include the results from a Wastewater and Water Treatment Plant energy audit, completing an energy portfolio for separate buildings
 - d. Insights and suggestions for future projects
 - i. i.e. passing a resolution for new construction buildings to be energy efficient

Climate Action Plan

- (1) Process would occur upon completion of the Greenhouse Gas (GHG) Analysis
- (2) Requires working group of community members to meet once a month for 5-6 months
- (3) With the GHG Analysis results as a baseline, the group would:
 - a. Analyze similar communities' Climate Action Plans including Yountville, CA, Coupeville, WA, Aspen, CO and Yellow Springs, OH
 - b. Define topic areas where the community and municipality can reduce Greenhouse Gas impact
 - i.e. renewable energy, recycling, resource conservation, food, water, active transportation, local economy, open space, and more
 - c. Work to set CO2 emission reduction goals for the city from the GHG Inventory
 - d. Combine research to create a route to meeting those goals
- (4) Determine feasibility of creating a city committee
- (5) Potential project outcomes of CAP include: greater oversight of the recycling center, meeting representatives from companies including Republic Services, Northwestern Energy, etc.; work with consultants for carrying out bigger projects like solar panels and methane capture at the WWTP; pass a resolution for more stringent building codes in regards to energy efficiency; conduct in-house employee engagement like power-down Fridays; work on increasing tree canopy in town; adopt a climate friendly purchasing policy; implement a water-savings policy like replacing all toilets with high efficiency models; investing in a drip irrigation system; re-schedule irrigation for early in the morning to prevent evaporation; evaluate vehicle fleet for efficiency upgrades; research public transportation options; research bike rideshare opportunities; research grey water systems for the golf course

G. Outreach and Education – High School Green Team Assistance

Goal – To provide assistant to the Green Team at all capacities

Work to Date: Provided assistance to Kate Belinda and the Green Team including researching fundraising opportunities for solar panels, dumpster dives, Earth Week events, and recycling outreach to Red Lodge Schools.

Tasks

- (1) Continue to provide support to the green team and their needs for the '16-'17 school year. Potential projects may include researching funding opportunities to install a windmill on campus and participate in the newly installed solar panel education activities.

3. Describe expected accomplishments, results and how the host site and member will gather results-based feedback from service recipients.

UPDATE AFTER TASKS ARE FINALIZED

Expected major accomplishments are summarized in:

- (1) Tasks 2A(6)-(8), Solar Arrays for City Buildings, to include estimating the total power production capacity of each roof PV system, a benefit cost analysis with consideration of PV product costs and modifications to the City Code for the design of future city buildings in order to make roofs solar ready.
- (2) Tasks 2B(5), (6), and (7), LED Retrofit For City Buildings, to calculate the annual energy and maintenance cost savings for LED fixtures for each City building, and financing mechanisms, including tax incentives.
- (3) Tasks 2C(2),(3), (5) and (6), LED Lighting for Streets, to include an updated inventory and a map of street lights within the City, the costs for LED fixtures including annual maintenance and replacement, and alternative electric lighting delivery service options.
- (4) Tasks 2D(3), (4), (5), Expanded Recycling Activities, to include a community education and logistics program to expand the geographic area of coverage, the amount of goods recycled and the types of goods recycled, including a school based component, to include the logistics of providing year round electronics waste recycling, and the feasibility of placing recycling containers in City parks and in the downtown area.
- (5) Task 2E(4), (5), Electric Destination Charging Station, to include an outline of the criteria for a successful site and installation of a charging station at two sites.

Feedback on the adequacy of the expected major accomplishments outlined above will be coordinated through City department heads responsible for City buildings, through Beartooth Industries, a social services organization operating recycling activities on City owned land, and through the Red Lodge Area Chamber of Commerce who will assist with the location of the electric destination charging station. A formal interview process with a survey is recommended.

4. Indicate how you plan to sustain these activities after the AmeriCorps program year has ended.

Following completion of the identified tasks, the City will incorporate the remaining and financially feasible projects identified through the AmeriCorps program in the annual assessment of capital needs for the City's Capital Improvements Program. The City adopted a Capital Improvements Program in February 2015 and is implementing projects as part of the City's annual budget.

5. List any specific skills or qualifications this position might require.

Software skills required for the identified tasks include word processing, graphics and strong spreadsheet or database capabilities. Geographic Information Software (GIS) expertise would also be beneficial though the ability of the City to provide readily available GIS software could be an issue.

Working knowledge of the commercial applications of solar and LED technology, and recycling technology including electronics, is desirable. The City will commit to provide local and state based training and education opportunities to further develop capabilities.

6. Indicate the number of individuals an Energy Corps member or members will be able to reach within the definition of accepted performance measures discussed above, that otherwise would not have received assistance, through your host site activities. Refer to performance measures on page two.

The number of individuals the Energy Corps member will be able to reach by task, include:

- (1) Task 2A, Solar Arrays for City Buildings (approximately 15 to primarily include facility managers facility personnel and department heads).
- (2) Task 2B, LED Retrofit for City Buildings (approximately 15 to primarily include facility managers, facility personnel and department heads).
- (3) Task 2C, LED Lighting for City Streets (approximately 20 to primarily include Northwest Energy personnel City department heads and business and residential interests affected by the various types of lights identified in the inventory (i.e. Broadway Avenue historic lights).
- (4) Task 2D, Expand Recycling Activities (approximately 30 to include personnel with the City, Beartooth Industries, Recycle Electronic Waste Into New Devices, commercial recyclers and schools.
- (5) Task 2E, Electric Destination Charging Station (approximately 10 to include manufacturer, local business organizations, local businesses and City personnel).

7. List opportunities for member development and training.

The City will request assistance from the National Center for Appropriate Technology, Montana Chapter, for appropriate training opportunities on-line, within the Billings region and statewide. Appropriate solar energy on-line training with Solar Energy International is a possibility. The American Solar Energy Society has state chapters but none exists in Montana. The Montana Department of Environmental Quality has programs for energy planning and renewables, and recycling which may offer group or individual training opportunities. Additional resources in the Red Lodge and Billings area include individuals and organizations with expertise in renewable energy.

8. Members that will have "recurring access to vulnerable populations" during their service terms must pass an FBI fingerprint check in order to serve in the program.

- **Definition of vulnerable populations:** children, elderly, people with disabilities

- **Definition of recurring access:** access on more than one occasion or access that is not for a 1 day period or episodic in nature

Will member have recurring access to vulnerable populations during the course of their service term? No

9. *For continuation host sites only.*

- Identify successes and challenges with previous Energy Corps projects and how a new member would continue and expand the initiatives of the previous member.
- Indicate any prospective changes in program supervision or staffing.

Please check below to indicate your ability to meet the following requirements:

- X **Cost Share:** \$11,500 cash match per full-time member
- X **Recruitment:** Participate in member recruitment efforts
- X **Work space:** Provide suitable work space and necessary equipment for member
- X **Supervision:** Provide on-site supervision, ensuring member activities adhere to program requirements and the member's position description
- X **Reporting:** Submit progress reports and evaluations to NCAT as agreed upon in the MOU

I have reviewed the NCAT Energy Corps AmeriCorps 2014-2015 Host Site Application information and submit this application on behalf of the above named agency.

Name:

Title:

Date:

Ed Williams, Mayor, City of Red Lodge, MT