

## CPRG IMPLEMENTATION GRANTS COMPETITION WORKPLAN FOR Resilient Rapid City: City and Community Partnership Efforts for Reducing GHG Emissions

With a population of 78,833 (ACS 1-Year Estimates, 2022), Rapid City is western South Dakota's largest city. It is the fastest-growing community in the upper Midwest, having held this status for two years, and is ranked the 54th fastest-growing city in the nation (Elevate Rapid City, May 18, 2023). An economic hub for a five-state region—providing education, health care, and cultural and recreational resources—Rapid City also is the gateway to the state's most popular tourist attractions and welcomes 3.8 million tourists each year. It goes without saying that the city relies on the health and sustainability of its natural resources and environment to attract visitors and maintain the quality of life its residents enjoy.

### 1. OVERALL PROJECT SUMMARY AND APPROACH

#### a. Description of GHG Reduction Measures

At 20 MTCO<sub>2</sub>e, Rapid City's current per capita emissions are higher than the national average of 15 MTCO<sub>2</sub>e ([Rapid City's Community Climate Resiliency Plan \(PCAP\)](#)). This is largely due to the electricity consumption of the city's residential, commercial and industrial sectors. Energy production in this region is largely comprised of fossil fuels.

Rapid City's Community Climate Resiliency Plan ([PCAP](#)) identified seven priority areas with multiple GHG reduction measures within each. The **eight GHG reduction measures** being proposed in this implementation grant were chosen because they align with the needs of our community, as identified in the PCAP, and fit within the parameters of the CPRG implementation grant. Some of the GHG reduction measures included in this application have been further refined from those identified in the PCAP due to prioritization of needs, ability to implement within the grant period, and other considerations determined in developing specific projects for this grant application.

#### Rapid City's GHG Reduction Measures

##### Low Emission City Facilities & Schools

- City Building & Facility Retrofits
- City-Wide LED Lighting Conversion
- School Weatherization
- Non-Profit Energy Efficiency
- Water System Energy Study

##### Renewable Energy Innovation

- City Facility Solar PV Pilot
- SD Mines Solar Pilot

##### Waste Energy Conversion

- Solid Waste Methane Gas Conversion

#### 1. City-Owned Building and Facility Retrofits

The largest source of energy consumption in Rapid City is heating and cooling of buildings, but reducing consumption involves upgrading infrastructure and technologies, which takes significant up-front costs. This action is often restricted locally by the availability of funding. The City of Rapid City (the City) owns and maintains a total of 43 principal buildings and facilities. The oldest of these buildings was built in 1935 and the newest in 2015; about half were built in the 1970s, 1980s, and 1990s. By improving the energy efficiency of its buildings and facilities, the City will significantly reduce energy consumption and pave the way for other businesses and industries.

**PCAP Alignment:** This measure can be found in Rapid City's [PCAP](#) under the Low Emission City Facilities and Schools section, pages 69-75.

**Major Tasks and Milestones:** For this implementation grant, the City will target up to 10 City-owned facilities, to potentially include buildings such as City Hall, the Rapid City Public Library, the Journey Museum, and others, for a total of approximately 350,000 square feet. Procurement of a

consultant to complete energy assessments will be completed in 2025, and energy assessments will be conducted through early 2026. A municipal building retrofit plan will then be created, concluding with a list of prioritized improvements needed, after which a contractor will be procured to complete the identified energy efficiency installations. All prioritized City-owned buildings will be retrofitted with HVAC systems and other energy efficiency upgrades by early 2029. The City will also develop plans to use the energy cost savings realized to help finance retrofits in its other buildings beyond the grant period.

Success of Measure: Based on an estimated 25% reduction in energy consumption, this measure will reduce GHG emissions produced from City-owned buildings and facilities by 1,030 MTCO<sub>2</sub>e by 2030. Furthermore, using the energy cost savings, the City will build capacity to continue retrofitting projects beyond the grant period with a goal of upgrading all City facilities.

## **2. City-Wide LED Lighting Conversion**

The City will focus on three critical areas for LED lighting upgrades – 1) The Monument, Rapid City’s only event and convention center, 2) street lighting, and 3) public sports fields.

The Monument’s year-round concerts, trade shows, regional sports and entertainment events bring an estimated 750,000 visitors to Rapid City each year. Older sections of the City-owned facility, built in the 1970s and 80s, are converted to LED lighting as the very limited capital budget allows. These projects, however, only account for a fraction of the lighting requiring conversion, calling for a more ambitious initiative to convert all lights within the facility.

Regarding city-owned street lights and sports field lighting, both require conversion to LED to reduce GHG emissions. The majority of city street lights are currently legacy high-intensity discharge (HID) lights (of the 3,200 City-owned streetlights, 2,400 are HID and 800 are older generations of LED). Similarly, light fixtures at the City’s sports field facilities currently use 1,000 W or 1,500 W metal halide lamps. Replacing these lights will significantly reduce GHG emissions, they will also provide a more consistent lighting environment for the public and comply with the region’s Dark Sky initiative.

PCAP Alignment: This measure can be found in Rapid City’s [PCAP](#) under the Low Emission City Facilities and Schools section, pages 69-75.

Major Tasks and Milestones: For this implementation grant, The Monument will complete facility-wide LED lighting conversion for a total of 530,049 square feet. The City’s Traffic Operations Division will upgrade 3,200 street light fixtures. For its sports fields, the City’s Parks and Recreation Department will convert 130 HID lighting fixtures at 1 BMX track, 11 soccer fields, 10 softball fields, and 5 baseball fields. Following grant award, City staff will release bids to procure lighting, materials, and contractors to install the LED lighting and complete needed electrical services. Conversions will begin mid-2025 and be phased over multiple years with completion by the end of the grant period.

Success of Measure: This measure will reduce GHG emissions produced from electricity consumption by city-wide lighting by 1,630 MTCO<sub>2</sub>e by 2030. By the end of the grant period, 100% of the lighting at The Monument, all city-owned street lighting, and lighting at over half of the City’s sports fields facilities will be converted to LED, resulting in significant GHG emission reductions and promote cost savings. With energy cost savings, the City will also have the capacity to finance future LED conversions and maintain these efficiencies.

### 3. School Weatherization

For this grant, the City will focus on energy efficiency upgrades to one public school, North Middle School, which is Rapid City's most disadvantaged and underserved middle school and the only middle school without air conditioning in the district. This school releases students for "heat days" more frequently (generally two to three more days each year) than other middle schools in the district. This creates an inequity in education compared to other students in the community, a long-standing environmental justice issue. The school district is extremely limited by available funding to improve its facilities so providing the opportunity for energy efficiency upgrades at North Middle School will greatly benefit this LIDAC community and create an environment that is better suited for learning.

PCAP Alignment: This measure can be found in Rapid City's [PCAP](#) under the Low Emission City Facilities and Schools section, pages 69-75.

Major Tasks and Milestones: For this implementation grant, the City will partner with Rapid City Area Schools (RCAS) to install geothermal exchange HVAC systems and LED lighting upgrades at North Middle School. The City will award a two-part subaward to RCAS during the first quarter of 2025, which will enable RCAS to complete procurement processes for hiring contractors to complete the improvements. LED lighting conversion is expected to be completed by mid-2026, and the geothermal exchange and HVAC systems are projected to be installed and operational by the end of 2028. Lessons learned from this project will allow RCAS to plan for further HVAC retrofits and weatherization/energy efficient measures at other schools beyond the grant period.

Success of Measure: This measure will reduce GHG emissions produced from energy consumption at North Middle School by 1,846 MTCO<sub>2</sub>e by 2030. It will also eliminate the need to release students from school due to extreme heat and ensure they have equal time in the classroom as other middle school students in the district. Furthermore, RCAS will be positioned to continue such efforts throughout its entire school district, using the knowledge acquired during the grant period and financial resources gained from potential energy cost savings.

### 4. Non-Profit Organization Energy Efficiency

To positively impact LIDAC, as well as encourage others in the community to adopt similar GHG reduction measures, the City of Rapid City aims to help local non-profits improve the energy efficiency of their facilities via an open competition for subawards. Non-profit organizations are often focused on meeting their mission through day-to-day operations, leaving financial resources less available for building upgrades. This grant will provide critical funding so improvements can be made, which will both reduce GHG emissions and operating costs. The non-profit organizations competing will be asked to explain their needs, the impact energy efficiency improvements will have on their organization/facility and the LIDAC they serve, their capacity to complete and maintain installed improvements, and other funding sources they have explored.

PCAP Alignment: This measure can be found in Rapid City's [PCAP](#) under the Low Emission City Facilities and Schools section, pages 69-75.

Major Tasks and Milestones: For this implementation grant, the City will fund up to \$1,000,000 in non-profit energy efficiency projects through an open competition for subawards. The competition

application period will be open during the final quarter of 2025, and the City will select five non-profit organizations by early 2026. The City will then procure a consultant to conduct energy assessments for all of the organizations to identify and prioritize needed energy efficiency improvement at each of their facilities. The non-profits will then procure contractors to complete the energy efficiency installations by the end of 2028.

Success of Measure: Based on an estimated 35% reduction in energy consumption, this measure will reduce GHG emissions produced from non-profit organizations by 1,300 MTCO<sub>2</sub>e by 2030. Furthermore, the cost savings realized from these upgrades will have a positive impact on the LIDAC these non-profits serve, by allowing for additional funds to be used to meet the needs of the city's most disadvantaged populations.

## **5. Water District Net Zero/Low Energy Study**

Water consumption is estimated to surpass supply in western South Dakota as climate change increases the severity of droughts. Western Dakota Regional Water System (WDRWS), is charged with evaluating and planning for the long-term water system needs of western South Dakota. It currently is taking steps toward implementing a pipeline project from the Missouri River to the Black Hills, a distance of hundreds of miles, that will ensure reliable water supplies for the region. WDRWS has developed a conceptual hydraulic model that demonstrates energy requirements for the various pump station locations. The elevation change between the Missouri River to Rapid City is significant, increasing over 1,800 feet. Thus, the power and electrical demands required to transfer water along this pipeline will be substantial but imperative as droughts intensify and disproportionately affect LIDAC communities.

PCAP Alignment: This measure can be found in Rapid City's [PCAP](#) under the Low Emission City Facilities and Schools section, pages 69-75.

Major Tasks and Milestones: For this implementation grant, the City will assist WDRWS with its efforts by providing funding through a subaward to complete a net zero/low energy study that will evaluate solar, wind, and hydroelectric power rather than "traditional" power for the pipeline pumping stations. The City will award the subaward to WDRWS during the first quarter of 2025, which will enable WDRWS to move forward with procuring a consultant that same year. The study will be completed and results shared by mid-2027.

Success of Measures: The tasks and milestones described above will ensure the larger success of this GHG reduction measure by presenting a solution for reducing future GHG emissions in the region. Once the water pipeline is constructed, this study will help the water system prevent 152,539 MTCO<sub>2</sub>e from being emitted by 2050 and achieve substantial long-term operations and maintenance cost savings.

## **6. City Water Reclamation Facility Solar PV Pilot**

The City's Water Reclamation Facility is located on the eastern edge of Rapid City and serves as a prime site for behind-the-meter solar PV technology. Owned and operated by the City, this solar energy system will offset the facility's extensive electricity consumption and provide an opportunity to sell any excess generation to the local grid. It will be the City's first solar energy project and staff are excited to pilot this project, paving the way for future PV projects at other facilities.

PCAP Alignment: This measure can be found in Rapid City's [PCAP](#) under the Renewable Rapid City section, pages 76-81.

Major Tasks and Milestones: For this implementation grant, the City will install a 422 kW solar PV system at the City's Water Reclamation Facility. The City will hire a consultant to complete a feasibility study and site assessment by mid-2026, followed by hiring a contractor to install the system by the end of 2027. Once operational, staff training will also occur during the final quarter of 2027 and early 2028 and annual maintenance will be performed by the contractor for the remainder of the grant period.

Success of Measure: The tasks and milestones described above will ensure the success of this GHG reduction measure by reducing the amount of GHG emissions produced from the City by 379 MTCO<sub>2e</sub> by 2030. It will also result in energy cost savings that will help keep utility rates reasonable for residents. Furthermore, this pilot project will be among the first solar energy generation systems installed in Rapid City, providing a noteworthy example of how low emission and renewable energy solutions are achievable in the region.

## **7. SD Mines Solar Pilot**

Located in Rapid City, South Dakota School of Mines and Technology (SD Mines) is among the top STEM universities in the nation, specializing particularly in engineering research and innovation. In 2023, the university created a Center for Sustainable Solutions, which focuses on sustainability involving water quality, infrastructure, carbon capture, environmental stewardship, and more. SD Mines will expand its own sustainability efforts by installing a 50-kW solar rooftop project on a residence hall and 375-kW solar carport/rooftop project at a laboratory building on campus. During and after implementation, these projects will further provide learning and research opportunities for SD Mines students.

PCAP Alignment: This measure can be found in Rapid City's [PCAP](#) under the Renewable Rapid City section, pages 76-81.

Major Tasks and Milestones: For this implementation grant, the City will provide SD Mines with a subaward to install two solar PV systems on its campus. The City will award the subaward to SD Mines during the first quarter of 2025, which will enable SD Mines to move forward with the project design phase and procuring a contractor by early 2026. Both systems will be installed over the summer months of 2026, 2027, and 2028, with the goal of being fully operational by the end of 2028.

Success of Measure: This measure will reduce GHG emissions produced from SD Mines by 248 MTCO<sub>2e</sub> by 2030. Furthermore, this pilot project will be the first solar energy systems installed at SD Mines, helping to save energy costs, increasing campus climate resiliency, and building the foundation for expanded renewable energy generation systems.

## **8. Solid Waste Methane Gas Conversion**

In 2021, Rapid City's landfill operations produced 47,289 MTCO<sub>2e</sub> of methane, a staggering figure, which does not reflect the short-term global warming potential (GWP) of methane. If short-term GWP were measured, this figure may nearly triple. The City's Solid Waste Division captures the methane off-gassing from the capped areas of the facility, as required by federal and state law. Some landfill gas (LFG) is used

to generate heat for a few landfill facility buildings, but most is flared. The City will reduce the amount of LFG flared and instead convert it to heat its Material Recovery Facility (MRF).

PCAP Alignment: This measure can be found in Rapid City's [PCAP](#) under the Low Waste Rapid City section, pages 82-87.

Major Tasks and Milestones: For this implementation grant, the City will proceed with constructing a pipeline from its flare to the MRF and installing a methane gas conversion hot water boiler system and air handling unit to utilize additional LFG for heating. Plans and design will be completed by the end of 2025, and a contractor will be procured by early 2026. The methane gas conversion system will be fully implemented and operational by mid-2027.

Success of Measure: This measure will reduce GHG emissions produced from Rapid City's landfill by 2,674 MTCO<sub>2</sub>e by 2030. Furthermore, the energy cost savings realized from these improvements will positively impact on the community by offsetting operating costs and will also demonstrate another innovative way for providing renewable heating and energy sources to City buildings and facilities.

All eight of these GHG reduction measures meet the goals of the CPRG program, specifically by addressing the primary drivers of GHG emissions in the community. Rapid City is pursuing projects that are new and innovative to both the city and region, serving as an example by which other cities, businesses, and organizations may follow. With the success of these projects, the City of Rapid City will be positioned to provide substantial community benefits, especially to LIDAC communities. These benefits will come in many forms, including, but not limited to, cost savings, enriched health as a result of improved air quality, and expanded employment opportunities. Measure 3 specifically addresses an historic environmental justice issue for a LIDAC school in the community. Additionally, the tasks completed under these measures are replicable and can be "scaled up" to include other facilities and industries, as well as other cities in the Rapid City Metropolitan Statistical Area and surrounding area.

Success of these proposed GHG reduction measures relies on the assumption that the City of Rapid City will be able to overcome risks associated with construction barriers, inflated prices, and unforeseen technological problems. For instance, the City is assuming City-owned buildings, the selected school, and the selected non-profit organization buildings will have been constructed in a way that will easily support energy efficiency and weatherization improvements, such as HVAC system upgrades and heat pumps. If the costs associated with readying these facilities for retrofitting exceed expected parameters, the City may be unable to retrofit as many municipal buildings as planned during the grant period, thus possibly lessening the impact on GHG emission reductions. Furthermore, necessary materials and supplies may be limited if available items cannot be procured within the set budget and according to Build America Buy America Act (BABAA) requirements. If the cost of materials exceeds expected estimates, supplies are delayed, or requests need to be submitted for a BABAA waiver, delays in implementing these GHG reduction measures could result. Finally, a further assumption is that all involved entities have the technical and workforce capacity to coordinate and maintain all proposed energy efficiency improvements. To overcome these risks, the City will communicate frequently with project implementers (City departments and sub-awardees) and the EPA to ensure obstacles are overcome within a reasonable timeframe and the grant's goals continue to be met.



## **b. Demonstration of Funding Need**

Rapid City is the *only* entity in South Dakota that was awarded a CPRG planning grant. Not only did the State of South Dakota turn down the opportunity to receive CPRG funding, but Sioux Falls, the only other metropolitan area (and largest) in the state, also declined a CPRG planning grant. Rapid City's decision to accept funding through the CPRG program was a marked step outside of the state and its residents' general consensus regarding climate change. While the City of Rapid City has applied for smaller clean energy grants (including the Charging and Fueling Infrastructure (CFI) Discretionary Grant Program and the Energy Efficiency and Conservation Block Grant Program), it has not been awarded funding for these projects. The CPRG program is truly the first opportunity for Rapid City to realize the potential for significant climate resiliency planning and action.

The CPRG implementation grant offers the flexibility needed to introduce and implement climate action and GHG reduction measures in a palatable way to the diverse residents of Rapid City by meeting local needs. Other grants, such as the EPA's Solar for All, are off-putting to our community as large-scale changes in energy production will affect the success of local energy companies. Conversely, the CPRG implementation grant allows City staff to create a diverse array of projects that will introduce climate resiliency in a fashion that does not negatively affect local livelihoods. Likewise, it will provide substantial community benefits which allow the stage to be set for future projects and grants that at this time would not be well received or feasible. Without CPRG implementation funding, and the co-benefits it brings, Rapid City may never be able to obtain the political and community support urgently needed to implement climate change mitigation measures.

South Dakota is also a rural state with a total population of less than one million. For this reason, the state receives less support in terms of federal funding than most other states. The state also has no state income tax and low tax rates for other revenue sources, ranking second overall in the 2023 State Business Tax Index. This is seen as a positive for residents, but it does lead to fewer funding options available to local communities for infrastructure and other needs. Thus, any opportunity to obtain additional federal funding and resources through grant opportunities can have a substantially great impact. The State of South Dakota is also notorious for turning down federal funds allocated to states, like the CPRG planning grant, cybersecurity, and IRA Home Energy Rebates, just to name a few. This limits Rapid City's access to many funding resources that other communities have through their state governments.

The GHG reduction measures proposed in this grant application include a variety of shovel-ready projects that have been identified by Rapid City leadership and community partners who have staff willing and ready to implement these measures, but who are currently limited by available funding. Due to limited budgets, local organizations are accustomed to doing things by the most efficient means possible. This grant will provide the financial resources to do needed projects that would otherwise take many years, or possibly even decades, to implement in phases, jump starting the community's efforts on climate action and inspiring others to do the same.

## **c. Transformative Impact**

Though South Dakota has been slow to address climate change, its impacts are being felt in our region through increased droughts, hotter temperatures, more severe storms, and greater wildfire and flood risk. [Rapid City's Community Climate Resiliency Plan \(PCAP\)](#) is the first of its kind for the city, and the CPRG program has given the City of Rapid City the opportunity to bring climate resiliency planning and

action into public discourse in a way that has not been possible before. This alone has already created a transformational impact on the community and its residents. The GHG reduction measures proposed in this application will enable the City to lead by example in implementing some of the city's first climate resiliency projects. These projects are designed in a way to be easily replicable and scalable. Thus, as Rapid City residents realize the feasibility and benefits of these projects, community interest in and political support of future GHG emission reduction approaches will likely increase.

Targeting the key sector producing the most GHG emissions is the City's primary goal for creating transformational impact that will lead to significant long-term GHG emission reductions in the community. Electricity is the largest source of GHG emissions overall, 47% of the total ([PCAP](#)). Reducing the amount of electricity used and switching to alternative sources will have the greatest impact for reducing GHG emissions in the region. For this reason, the GHG reduction measures proposed in this application are focused on increasing energy efficiencies and implementing renewable energy options that will reduce fossil-fuel energy use and result in significant energy savings.

While it may seem Rapid City is starting "small" with these projects, the intent is for the City to demonstrate achievable means for reducing energy consumption, increasing energy efficiencies, and lowering GHG emissions production. With these GHG reduction measures in place, their success will create a notably "large" impact in the community by the end of the grant period and the City will be poised to expand its climate initiatives further and lead by example for other communities in western South Dakota. Thus, this implementation grant will enable Rapid City to set the stage for sweeping regional change which will have long-lasting results.

## 2. IMPACT OF GHG REDUCTION MEASURES

### a. Magnitude of GHG Reductions from 2025 through 2030

The total GHG emission reductions for the period of 2025 through 2030 for each of the City of Rapid City's GHG reduction measures included in this application are listed in the table below.

GHG Reduction Measure	Quantitative Totals of GHG Emission Reductions in Metric Tons of CO <sub>2</sub> e
City-Owned Building and Facility Retrofits	1,030
City-Wide LED Lighting Conversion	1,630
School Weatherization	1,846
Non-Profit Organization Energy Efficiency	1,300
Water District Net Zero/Low Energy Study	0
City Water Reclamation Facility Solar PV Pilot	379
SD Mines Solar Pilot	248
Solid Waste Methane Gas Conversion	2,674
<b>TOTAL</b>	<b>9,107</b>

*See GHG emission reduction calculations spreadsheet for complete calculations and formulas (GHGcalcs\_RapidCity).*

All GHG reduction measures are permanent improvements and/or retrofits, thus, the estimated GHG emission reductions should be relatively permanent and durable for the life of the installed equipment.



The Western Dakota Regional Water System is not anticipated to construct their pipeline project until after 2030, which is why the emissions reductions are shown as zero in the table above.

### b. Magnitude of GHG Reductions from 2025 through 2050

The total GHG emission reductions for the period of 2025 through 2050 for each of the City of Rapid City's GHG reduction measures included in this application are listed in the table below.

GHG Reduction Measure	Quantitative Totals of GHG Emission Reductions in Metric Tons of CO <sub>2</sub> e
City-Owned Building and Facility Retrofits	5,812
City-Wide LED Lighting Conversion	7,580
School Weatherization	20,058
Non-Profit Organization Energy Efficiency	9,645
Water District Net Zero/Low Energy Study	152,539
City Water Reclamation Facility Solar PV Pilot	1,214
SD Mines Solar Pilot	1,110
Solid Waste Methane Gas Conversion	11,588
<b>TOTAL</b>	<b>209,546</b>

See GHG emission reduction calculations spreadsheet for complete calculations and formulas (GHGcalcs\_RapidCity).

All GHG reduction measures are permanent improvements and/or retrofits, thus, the estimated GHG emission reductions should be relatively permanent and durable for the life of the installed equipment.

### c. Cost Effectiveness of GHG Reductions

The cost effectiveness of the identified GHG reductions is \$48,075,605/9,107 MTCO<sub>2</sub>e = **\$5,279**.

In addition to the calculation above, other considerations that should be taken into account includes the cost savings implementing these reduction measures will provide as well as the lifetime costs per metric tons (MT) of emissions avoided. As evident on the chart below, all actions will save money in operating and maintenance (O&M) once installed, primarily through lower fuel costs and energy savings. Once the lifetime costs, which include capital and operations, are divided by the cumulative GHG emission reduction amount (MTCO<sub>2</sub>e), it is clear that measures are cost effective to implement.

GHG Reduction Measure	Projected Saved in O&M		Lifetime Costs (Capital + OM) per MTCO <sub>2</sub> e Emissions Avoided
	2025-2030	2025-2050	
City-Owned Building and Facility Retrofits	\$431,420	\$2,907,026	\$398
City-Wide LED Lighting Conversion	\$1,987,734	\$14,034,609	-\$160
School Weatherization	\$628,321	\$12,965,625	\$1,449
Non-Profit Organization Energy Efficiency	\$283,779	\$8,047,991	-\$366
Water District Net Zero/Low Energy Study	\$0	\$222,528,816	-\$1,455
City Water Reclamation Facility Solar PV Pilot	\$338,076	\$1,735,632	-\$1,077

SD Mines Solar Pilot	\$249,195	\$1,656,686	\$1,031
Solid Waste Methane Gas Conversion	\$437,184	\$1,894,464	\$122
<b>TOTAL SAVED in O&amp;M</b>	<b>\$4,355,710</b>	<b>\$265,770,849</b>	<b>-\$58</b>

See GHG emission reduction calculations spreadsheet for complete calculations and formulas (GHGcalcs\_RapidCity).

For instance, with the reduced wattages required for LED lighting, it is anticipated the City will see a reduction of greater than 50% in both CO<sub>2</sub> and electricity costs in its street lighting alone. Switching to LED lights would reduce the overall power draw at the sports fields facilities as well, which would mean a longer lifespan for the other electrical infrastructure (i.e., transformers, service lines, and panels). Additionally, LEDs have a longer lifespan, reducing O&M costs.

In addition to the GHG emission reductions and hard costs savings that will result from this project, the societal impacts are equally important. In this region, there is an uncertainty about climate change and subsequent mitigation practices. Any opportunity to show the community that there are cost-effective ways to address the issue while not harming their way of life has positive value for helping to shift perceptions. This will lead to more willingness to embrace additional innovative ideas in the future.

#### d. Documentation of GHG Reduction Assumptions

Please refer to the attached Technical Appendix and GHG Emission Reduction Calculations Spreadsheet.

### 3. ENVIRONMENTAL RESULTS – OUTPUTS, OUTCOMES, AND PERFORMANCE MEASURES

#### a. Expected Outputs and Outcomes

The table below presents the outputs and outcomes that are expected by the end of the grant period for each of the GHG reduction measures proposed in this application. Throughout the life of the grant, and informed by each of the reduction measures' outputs and outcomes, the City will use this as an opportunity to educate and inform the public on the results and community benefits of the GHG reduction measures. Progress and results will be tracked and shared with interested parties for potential replication in the future.

GHG Reduction Measure	Expected Outputs	Expected Outcomes (by 2030)
City-Owned Building and Facility Retrofits	Energy assessment conducted for 10 City-owned buildings  Up to 10 City-owned buildings retrofitted (approximately 350,000 square feet total)	GHG emissions reduced by 1,030 MTCO <sub>2</sub> e; 25% energy use reduction; energy cost savings; reduced O&M costs; and improved public awareness
City-Wide LED Lighting Conversion	100% of lighting at The Monument converted to LED (530,049 square feet total)	GHG emissions reduced by 1,630 MTCO <sub>2</sub> e; energy use reduction and cost savings; reduced O&M costs; reduced light pollution; reduced light spill and glare; better and safer lighting conditions in the community; and improved public awareness

City-Wide LED Lighting Conversion (cont.)	3,200 city-owned street light fixtures converted to LED  130 sports fields lighting fixtures at 10 facilities converted to LED (totaling 27 fields)	
School Weatherization	Geothermal exchange and HVAC systems at North Middle School installed  LED lighting conversion at North Middle School completed	GHG emissions reduced by 1,846 MTCO <sub>2</sub> e; significant positive impact to LIDAC; resolution of environmental justice issue; energy cost savings; reduced O&M costs; two to three learning days gained every school year; student learning opportunities; enhanced community engagement; and improved public awareness
Non-Profit Organization Energy Efficiency	Energy assessments conducted for five non-profit organizations  Five non-profit buildings/facilities retrofitted (approximately 215,000 square feet total)	GHG emissions reduced by 1,300 MTCO <sub>2</sub> e; significant positive impact to LIDAC communities; energy cost savings; reduced O&M costs; staff capacity building; enhanced community engagement; and improved public awareness
Water District Net Zero/Low Energy Study	Net zero/low energy study completed for future water supply pipeline project	Potential reduction of GHG emissions of 152,539 MTCO <sub>2</sub> e by 2050; knowledge and results sharing for future decision-making regarding energy supply options for pipeline design; and improved public awareness
City Water Reclamation Facility Solar PV Pilot	422 kW solar project installed and operational	GHG emissions reduced by 379 MTCO <sub>2</sub> e; generation of 422 kW in renewable energy; lower demand of traditional energy supply; energy cost savings; staff capacity building; knowledge for future decision-making; and improved public awareness
SD Mines Solar PV Pilot	50-kW solar rooftop project and 375-kW solar carport/rooftop project installed and operational	GHG emissions reduced by 248 MTCO <sub>2</sub> e; generation of 425 kW in renewable energy; lower demand of traditional energy supply; energy cost savings; student learning opportunities; knowledge for future decision-making; and improved public awareness
Solid Waste Methane Gas Conversion	Landfill gas conversion system, including pipeline, hot water boiler system, and air handling unit, installed to heat MRF	GHG emissions reduced by 2,674 MTCO <sub>2</sub> e; lower demand of traditional energy supply; energy cost savings; and improved public awareness

## b. Performance Measures and Plan

The two primary performance measures for all the GHG reduction measures will be reduced energy consumption and energy cost savings, which will be tracked by comparing historic and future energy bills over time. For the two solar and one methane conversion GHG reduction measures, another

performance measure will be the amount of renewable energy generated. A specific performance measure for the School Weatherization project will be the reduction in the number of “heat” days students miss school compared to previous years. Other quantifiable outputs and outcomes will be tracked as feasible, including reduced operations and maintenance costs, number of students involved in learning activities, and community engagement contacts.

To measure progress for each of the GHG reduction measures, staff will create documents which measure the progress of each individual project throughout the duration of the grant. Quantitative data will be tracked using tables and spreadsheets and written descriptions and visuals of qualitative data will be compiled as appropriate for each measure. Staff will also use MS Project software internally to identify benchmarks and track progress toward completion of goals. In addition, all sub-awardees will be required to conduct quarterly and final reporting, including specified performance measure data and qualitative descriptions. Regular check-in meetings will also be scheduled with project leads to monitor progress, resolve any issues, and ensure projects are progressing toward achieving expected results.

The performance measure data collected by staff and sub-awardees through reporting will be continuously compiled and the actual GHG emissions reductions resulting from each measure will be quantified. To facilitate this, data will be collected on the specific fixtures and equipment that are installed and/or replaced for the relevant measures. The GHG emission reductions will then be calculated with the assistance of a consultant. This data will be included in semi-annual and final reports due to the EPA and incorporated into other documentation shared with the public.

Lastly, the completion of the projects identified will produce information and data that will be used to build staff capacity and educate others on the practicalities and benefits of the GHG measures implemented. The knowledge gained will inform decision-making on future projects in the community, as well as build a foundation for the development of the City of Rapid City’s new sustainability program, meaning the grant dollars will produce outputs and outcomes that will be used effectively far into the future.

### **c. Authorities, Implementation Timeline, and Milestones**

The City of Rapid City will be the primary authority for implementing all of the GHG reduction measures. New grant manager and administrative assistant positions will be hired by the City to coordinate these projects and will be responsible for ensuring all departments complete necessary tasks. The specific City department and/or division, as listed in the table on page 13, will be responsible for leading its specific GHG reduction measure project, implementing the outputs, and tracking the outcomes. Consultants and contractors will be hired following proper procurement requirements to complete necessary studies and assessments and install the improvements identified for each GHG reduction measure. The City will also partner with community entities and issue subawards to implement some of the GHG reduction measures, as listed below. These entities will be responsible for implementing the outputs and tracking the outcomes of its specific GHG reduction measure project. The City’s grant manager will help to coordinate these projects and will be responsible for ensuring all parameters of the subawards are being met. All project activities will be overseen by the current Sustainability & Stewardship Program Development Manager (“Sustainability Program Manager”).

## Resilient Rapid City: City and Community Partnership Efforts for Reducing GHG Emissions

GHG Measure	Primary Authority	Project Implementer	Subaward
City-Owned Building and Facility Retrofits	City of Rapid City	Public Works Department	
City-Wide LED Lighting Conversion	City of Rapid City	The Monument, Public Works, and Parks & Rec Departments	
School Weatherization	City of Rapid City	Rapid City Area Schools (RCAS) District	X
Non-Profit Organization Energy Efficiency	City of Rapid City	Local non-profit organizations	X
Water District Net Zero/Low Energy Study	City of Rapid City	Western Dakota Regional Water System (WDRWS)	X
City Water Reclamation Facility Solar PV Pilot Project	City of Rapid City	Public Works Department – Water Reclamation Division	
SD Mines Solar Pilot Projects	City of Rapid City	South Dakota School of Mines and Technology (SD Mines)	X
Solid Waste Methane Gas Conversion	City of Rapid City	Public Works Department – Solid Waste Division	

Below are the tasks, milestones, and timelines for general project administration of each of the GHG reduction measures (see attached Budget Narrative for more specific timeline information):

Tasks	Implementer	Milestones
<b>General Project Administration:</b>		
1. Hire new grant staff	Sustainability Program Manager	<u>By the end of 2024</u> , both the grant manager and the administrative assistant positions will be hired.
2. Execute subawards	Grant Manager & Administrative Assistant	<u>By the end of the first quarter of 2025</u> , subawards agreements will be executed.
3. Manage all GHG reduction measures		<u>From mid-2025 to mid-2029</u> , staff will complete all necessary tasks and responsibilities to ensure the grant is completed in compliance with EPA requirements.
4. Conduct community engagement	Sustainability Program Manager & Grant Manager	<u>For the entirety of the grant period</u> , staff will engage with residents, stakeholders, and LIDAC to gather their input on the GHG reduction measures. Staff will also continually inform the public on the vision, goals, status, and successes of the overall project in compliance with EPA grant requirements.
5. Submit semi-annual reports		<u>Semi-annually (every six months) throughout the five-year period of performance</u> , progress reports will be submitted to EPA.
6. Submit final report		<u>Within 120 days of the completion of the period of performance (ending September 30, 2029)</u> , a final progress report will be submitted to EPA.

City-Owned Building and Facility Retrofits:		
1. Conduct energy assessments	Grant Manager & Public Works Department staff	By <u>mid-2025</u> , the City will have completed project planning and selected a consultant to perform energy assessments at 10 city-owned buildings and facilities.
2. Develop municipal buildings retrofit plan		By <u>mid-2026</u> , the City will have identified and prioritized the energy efficiency upgrades needed at each facility and to be retrofitted over the course of this grant period.
3. Install municipal buildings retrofits		By <u>early 2027</u> , all bids will be awarded to qualified contractors. Energy efficiency installations will be <u>completed by early 2029</u> .
City-Wide LED Lighting Conversion:		
1. The Monument LED lighting conversion	The Monument staff	Project planning will begin <u>during the last quarter of 2024</u> , after the award of the grant. RFPs and bids will be released <u>in early 2025</u> to procure lighting, materials, and contractors. LED conversion will begin <u>in 2025</u> and will be phased over three years, with all work completed <u>by mid-2028</u> .
2. City-owned Street lights LED conversion	Public Works Department - Traffic Operations Division staff	Project planning will begin <u>during the last quarter of 2024</u> , after the award of the grant. Bids will be released, <u>starting in 2025</u> and continuing periodically throughout the grant period, for fixtures and contractors to install. LED conversion will begin <u>in mid-2025</u> and will be phased throughout the grant period, with all work completed <u>by mid-2029</u> .
3. Sports field LED lighting conversion	Parks & Recreation Department staff	Project planning will begin <u>during the last quarter of 2024</u> , after the award of the grant. Bids will be released <u>in early 2025</u> to procure lighting and a contractor. LED conversion will <u>begin in mid-2025</u> and phased over two years with all work completed <u>by end of 2027</u> .
School Weatherization:		
1. Award subawards	Grant Manager	By <u>the end of the first quarter of 2025</u> , the City will award RCAS with a subaward in the amount of \$17,377,917 for geothermal exchange and HVAC systems and a subaward in the amount of \$2,552,045 for LED lighting upgrades at North Middle School.
2. Install geothermal exchange and HVAC systems and LED lighting	RCAS staff	By <u>early 2026</u> , bids will be awarded to qualified contractors. By <u>the end of 2026</u> , the LED lighting and controls project will be completed, and <u>by the end of 2028</u> , the geothermal HVAC system will be installed and operational.
3. Submit quarterly progress and final reports	RCAS staff	<u>Quarterly</u> , RCAS will submit subaward progress reports. By <u>the beginning of 2029</u> , RCAS will have completed a final subaward report detailing the project’s results and shared its findings with the City and community.



<b>Non-Profit Organization Energy Efficiency:</b>		
1. Open non-profit subaward competition	Grant Manager	<u>During the fourth quarter of 2025</u> , non-profit organizations will submit their applications for this competitive subaward.
2. Select non-profit subawards and execute agreements	Sustainability Program Manager, Grant Manager, & other City staff	<u>By early 2026</u> , the City will identify the non-profit organizations that will be awarded subawards to complete their energy efficiency projects and execute subaward agreements with those non-profits.
3. Perform energy assessments	Grant Manager	<u>By mid-2026</u> , the City will select a consultant to perform energy assessments at the five selected non-profits organizations' facilities through the <u>end of 2026</u> . <u>In early 2027</u> , energy efficiency improvements will be identified and prioritized.
4. Install non-profit energy efficiency upgrades	Non-profit organization staff	<u>By mid-2027</u> , the non-profit organizations will procure contractors to install energy efficiency improvements. <u>By the end of 2028</u> , all energy efficiency upgrades will be completed.
5. Submit quarterly and final progress reports	Non-profit organization staff	<u>Quarterly</u> , the non-profit organizations will submit subaward progress reports. <u>By the middle of 2029</u> , the non-profits will complete a final subaward report and shared their findings with the City and community.
<b>Water District Net Zero/Low Energy Study:</b>		
1. Award subaward	Grant Manager	<u>By end of the first quarter of 2025</u> , the City will award WDRWS with a subaward in the amount of \$592,200.
2. Complete energy study	WDRWS staff	<u>By mid-2025</u> , WDRWS will have procured a consultant to complete the net zero/low energy study. <u>By early 2027</u> , the net zero/low energy study will be completed.
3. Submit quarterly and final progress reports	WDRWS staff	<u>Quarterly</u> , WDRWS will submit subaward progress reports. <u>By mid-2027</u> , WDRWS will complete a final subaward report detailing the project's results and shared its findings with the City and community.
<b>City Water Reclamation Facility Solar PV Pilot:</b>		
1. Conduct feasibility study and site assessment	Public Works Department - Water Reclamation Division staff	<u>By the end of 2025</u> , the City will release an RFP for a consultant to conduct a feasibility study and site assessment to be completed <u>by mid-2026</u> .
2. Installation of solar PV pilot project		<u>During the last half of 2026</u> , bids will be advertised and a contractor will be selected for the project. <u>By the end of 2027</u> , the project will be installed and operational. <u>During the end of 2027/early 2028</u> , relevant staff will be trained on solar operations and maintenance. <u>Throughout the remainder of the grant period</u> , the contractor will also perform annual maintenance.

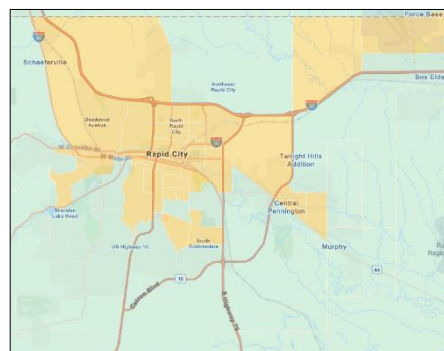
<b>SD Mines Solar PV Pilot:</b>		
1. Award subaward	Grant Manager	<u>By the end of the first quarter of 2025</u> , the City will provide SD Mines with a subaward in the amount of \$2,801,250.
2. Install solar pilot projects on campus	SD Mines staff	<u>By mid-2025</u> , SD Mines will complete the project planning and design phase. <u>By the end of the first quarter of 2026</u> , SD Mines will procure a contractor to install the solar projects. <u>During the summer of 2026</u> , the rooftop solar project on the residence hall will be installed and operational. <u>By the end of 2028</u> , the rooftop/carport solar project at the laboratory building will be installed and operational.
3. Submit quarterly and final progress reports	SD Mines staff	<u>Quarterly</u> , SD Mines will submit subaward progress report. <u>By the end of 2028</u> , SD Mines will complete a final subaward report detailing the project's results and shared its findings with the City and community.
<b>Solid Waste Methane Gas Conversion:</b>		
1. Plan and award bid	Public Works Department – Solid Waste Division staff	<u>By the end of 2025</u> , the project planning and design phase will be completed and bids will be released. A contractor will then be selected <u>in early 2026</u> .
2. Gas conversion system installed		<u>In mid-2026</u> , construction of the pipeline and installation of the hot water boiler system will start and the project will be fully complete <u>by the end of 2027</u> .

#### 4. LOW-INCOME AND DISADVANTAGED COMMUNITIES

##### a. Community Benefits

Of Rapid City's 20 census tracts, 12 (60%) are considered disadvantaged by the EPA's EJScreen tool, as seen on figure 2 (see attached Excel spreadsheet for a list of Census Tract IDs). Similarly, the Climate and Economic Justice Screening Tool (CEJST) designates eight Census tracts in Rapid City as disadvantaged. In determining the GHG reduction measures proposed in this application, the City of Rapid City made a conscientious effort to ensure these measures would directly and/or indirectly benefit the low-income and disadvantaged communities (LIDAC) in these census tracts.

Figure 2. EJScreen map of disadvantaged census tracts in Rapid City, SD.



Forty-four percent (44%) of grant funds will be used to support GHG reduction measures that directly impact LIDAC. These include the School Weatherization and the Non-profit Organization Energy Efficiency projects. The total GHG reductions in LIDAC resulting from this grant will be more than 5,000 MTCO<sub>2</sub>e.

For the school weatherization project, North Middle School was chosen because, not only is it the only middle school without air conditioning in the school district, it is also the most disadvantaged middle school. According to the South Dakota Department of Education, 80% of the students are a minority, compared to 50% in the district. All students (100%) at this school are economically disadvantaged, compared to 40% in the district. Students at the school perform lower in both reading and math when compared to the district overall. Only 22% of students are reading at or above their grade level. Finally, the average attendance at the school is 60%, compared to 81% for the district. This stat may be the most consequential for this project, as students are currently missing an average of two to three additional days for “heat days” due to the lack of air conditioning. This constitutes an environmental justice issue that will be addressed through this project.

LIDAC members are also the primary users of civic facilities like libraries, schools, recreation centers, museums, and event centers. The majority of the city-owned facilities, sports fields, and The Monument are all located in CEJST disadvantaged tracts. Upgrading such facilities generates more climate resilient spaces while also creating interiors that are more comfortable. The entire community also benefits from public building energy efficiency and weatherization upgrades. The City’s GHG reduction measures to retrofit municipal facilities, a middle school, and non-profit organization buildings with HVAC systems and other weatherization and energy efficiencies will result in environmentally resilient spaces the entire Rapid City community will be able to enjoy.

Cost savings will also be an indirect benefit to Rapid City’s LIDAC communities. The energy savings gained from building retrofits, LED lighting conversion, and solar/geothermal projects at City facilities, schools, and non-profit organizations have the potential to save expenses city-wide.

The outputs and outcomes realized through this grant are not expected to produce any negative impacts to LIDAC. If any such impacts were to arise, the City will take immediate action to mitigate and remove these negative effects.

### **b. Community Engagement**

Recognizing the importance of centering the perspectives of those likely to be most interested and affected by the implementation of the GHG reduction measures proposed in this application—and as part of fulfilling the requirements of the CPRG planning grant—the City of Rapid City has developed an inventory of more than 190 community contacts. This inventory includes representatives from health and wellness, academia, community organizations, business and economic development, government, and utilities, as well as individuals from eight organizations serving or representing LIDAC, including Tribal communities. During PCAP development, a select number from this list were contacted for pre-engagement interviews, which is an activity embedded in the International Association of Public Participation planning protocol. These individuals helped the City identify preferences for engagement, community groups that might otherwise be missed, and potential issues and opportunities for the engagement process. The results of the pre-engagement activities revealed that relational forms of engagement are preferred, as are small group conversations; and partnering with existing groups and utilizing platforms that are familiar to the community when communicating project updates and happenings. These findings will be used to tailor the community engagement process for this grant.

Rapid City’s racial demographic is predominantly white, non-Hispanic (75.8%, ACS 1-Year Estimates, 2022), but Native Americans make up between 9.3% and 13.2% of the city’s population. Native American residents largely reside in the northern portion of the city, an area that is considered disadvantaged by

both the CEJST and EPA's EJScreen tool. Environment and climate resiliency are key concerns among Tribal nations, yet pre-engagement interviewees warned Native American involvement in any climate-related project should not be tokenized. Rather, hosting positive engagements with these residents should involve respecting cultural practices, building trust by maintaining open and direct channels of communication, and engaging in meaningful discussions. The City is actively taking steps to engage various Tribal entities to ensure this population has numerous opportunities to share its cultural knowledge and expertise and bring a valuable perspective to Rapid City's climate action efforts.

The goal with all community engagement throughout this implementation grant is to connect with key interested and affected parties and community influencers to hear from diverse perspectives. The City aims to focus especially on community outreach and education, using a "go-to-the-people" approach and sharing information while also gathering input that will inform continued climate resiliency actions.

For the projects intended to benefit LIDAC, City staff will work closely with those sub-awardees to tailor community engagement for the populations served. This will include building relationships, listening to community wants and needs, involving a broad representation of the community, using community-preferred engagement techniques, and documenting and sharing their input and impact on decisions. Existing relationships will be leveraged and communications personnel with LIDAC project partners will be utilized to ensure the community engagement methods are meaningful, appropriate, and considerate of a variety of perspectives. A project planning meeting will be held prior to the start of projects to gather input, address concerns, and answer questions. This will help to ensure the development and implementation of the GHG reduction measures are representative of LIDAC individuals' perspectives. During project implementation and following completion, additional community input will be gathered, milestones will be reported, and results will be shared using methods best-suited for the individual project. Throughout the entire process, media channels will be used to help educate and engage residents as well.

In addition to these broader community engagement activities, the City will continue meeting with the Task Force it created for the development of [Rapid City's PCAP](#). This Task Force is made up of key community stakeholders and leaders identified in the initial inventory of interested and affected parties. These individuals will be regularly informed of project progress and will further assist in engaging the public and creating more opportunities for community outreach and education.

## **5. JOB QUALITY**

The hiring practices adopted by the City of Rapid City align with the Department of Commerce and Department of Labor's Good Job Principles. The City is an equal opportunity employer. Discrimination and harassment of any type are prohibited and equal employment opportunities are afforded to employees and applicants without regard to race, color, religion, sex, sexual orientation, gender identity or expression, pregnancy, age, national origin, disability status, genetic information, protected veteran status, or any other characteristic protected by law. The policy of equal employment opportunity (EEO) and anti-discrimination applies to all aspects of the relationship between the City of Rapid City and its employees, including recruitment, employment, promotion, transfer, training, working conditions, wages and salary administration, employee benefits, and application of policies. For each GHG reduction measure proposed in this application, steps will be taken to ensure all contractors, consultants, and sub-awardees incorporate similar strong labor standards as those adopted by Rapid City.

The GHG reduction measures proposed in this application have the potential to generate high-quality jobs with a diverse, skilled workforce. Public building upgrades, for instance, create jobs in the contractor and building energy assessor trades. Technical jobs also are likely for solar PV installation, operation, and maintenance. For this grant, two City staff will be hired to administer and manage the various GHG reduction measures, and numerous other City and community jobs will likely be created in the energy, building, and waste management sectors to ensure implemented energy efficiencies and projects are maintained beyond the grant period. All opportunities will be open to individuals in LIDAC communities, and the area's technical colleges and universities may realize the prospect of developing and offering internship and apprenticeship programs to educate and serve this growing workforce.

## 6. PROGRAMMATIC CAPABILITY AND PAST PERFORMANCE

### a. Past Performance

The City of Rapid City has experience implementing federally funded grant projects and complying with federal contract and procurement requirements, including the Build America Buy America Act, Americans with Disabilities Act, Davis-Bacon Act, and others. As illustrated below, the City has direct experience with successfully delivering projects of varied size, scope, and complexity, and will have the capacity to complete this the activities included in this project within the obligation and expenditure deadlines.

The following tables list five federally funded grants and/or cooperative agreements the City is currently performing or has performed in the last three years, including details on how the City is or was able to successfully complete and manage the listed agreements.

Project Title: Water Reclamation Facility South Plant Improvements		
Contract Number	CFDA Number	Contact from Funding Organization
2022G-ARP-187	21.027	Abbey Larson, SD DANR, Environmental Funding Program
<b>Description:</b> This five-year agreement, awarded by the U.S. Environmental Protection Agency (passed through the South Dakota Dept. of Agriculture and Natural Resources) in the amount of \$43,500,000, provides funding to update the City's Water Reclamation Facility to replace old equipment, increase the system capacity, and alleviate pressures put on the system by continued population growth and economic expansion.		
<b>Completion and Management:</b> The City project manager is in charge of managing the grant agreement at the project level. The PM prepares reimbursement packages to be submitted to the State on a quarterly basis. The local planning district, Black Hills Council of Local Governments (BHCLG), provides assistance to the City in reviewing the reimbursements packages and coordinating with the State to ensure the City has the proper documentation in place. BHCLG also provides oversight of the necessary Davis-Bacon Act requirements. The City's Deputy Finance Director is aware of all reimbursement requests and monies received, and the Finance Department has audited and will audit the project as needed.		

Project Title: Community Based Violence Intervention and Prevention Initiative		
Contract Number	CFDA Number	Contact from Funding Organization
15PBJA-22-GG-04722-CVIP	16.045	Calvin "Curtis" Cannon, Grant Manager, Office of Juvenile Justice and Delinquency Prevention (OJJDP)

**Description:** This three-year agreement, awarded by the U.S. Dept. of Justice in the amount of \$2,000,000, provides funding for the Rapid City Police Department (RCPD) to build upon efforts to employ trusted, credible messengers to prevent and disrupt cycles of violence and retaliation, deliver services that address trauma, and strengthen community response and resilience. The grant has allowed the creation of six positions within Native-led community partner Journey-On that focus on youth mentorship, responders to violence, and service navigation.

**Completion and Management:** To successfully manage this agreement, the RCPD budgeted for additional capacity building support through an on-the-ground consultant to ensure staff can sustain the program work created under this grant. Project staff have met their first-year goals. Staff have built program infrastructure, provided professional development support to local nonprofits, conducted financial process audits, developed key organizational policies and program manuals, developed position descriptions and hiring practices/policies, etc. They have also engineered a new risk assessment process for the City to better understand the scope of capacity of sub-grantees receiving City general funds or grant dollars and have participated in a data cohort with peer sites from across the nation to learn more about data infrastructure and collection.

**Project Title: Airport Improvement Program (CARES Act)**

Contract Number	CFDA Number	Contact from Funding Organization
3-46-0048-54-2020	20.106	David Anderson, Deputy Manager, Dakota Minnesota Airport District Office

**Description:** This four-year agreement, awarded by the U.S. Dept. of Transportation (passed through South Dakota Dept. of Transportation) in the amount of \$9,282,023, provides funding to help offset a decline in revenues arising from diminished airport operations and activities as a result of the COVID-19 Public Health Emergency.

**Completion and Management:** The City's Airport successfully manages all Airport Improvement Program (AIP) grants by submitting timely reimbursement for the operational and maintenance expenses. Management of the CARES Act AIP grant also includes a local match for a separate AIP grant. Because of the Airport's capacity to meet grant deliverables and reporting requirements, the City has received recurring AIP funding since 2018.

**Project Title: Federal Transit Formula Grants (CARES Act)**

Contract Number	CFDA Number	Contact from Funding Organization
SD-2020-006-00	20.507	Peter Hadley, Community Planner, FTA Region 8

**Description:** This two-year agreement, awarded by the U.S. Dept. of Transportation in the amount of \$3,173,903 provided funding to prevent, prepare for, and respond to COVID-19.

**Completion and Management:** The City's Transit System successfully manages all transit formula grants by following the requirements within each grant agreement and following through on guidance given during tri-annual site visits and internal monitoring. Because of Rapid Transit's success in managing formula grants, the City has received recurring awards since 1989.

**Project Title: Community Development Block Grant**

Contract Number	CFDA Number	Contact from Funding Organization
B-22-MC-46-0002	14.218	Jemine A. Bryon, Principal Deputy Assistant Secretary, Community Planning and Development

**Description:** Awarded annually in the amount of \$514,500, just one of several CDBG allocated awards granted to the City by the U.S. Dept. of Housing and Urban Development (HUD), provides funding to address diverse community development needs. The City prioritizes activities that benefit low- and



moderate-income individuals and conducts work that supports affordable housing, providing essential services to vulnerable individuals, sustaining public facilities, and promoting economic development opportunities.

**Completion and Management:** The City's Community Enrichment Division successfully manages CDBG agreements by submitting required plans, evaluating past performance, and tracking annual goals, objectives, and outcome indicators, thus meeting HUD requirements for reporting. Because of its success in following grant deliverable expectations and reporting, the City has received recurring CDBG awards since 2019.

## **b. Reporting Requirements**

The City of Rapid City has a Deputy Finance Director who works directly in grant compliance and financial reporting and addresses all federal compliance requirements: processing reimbursements, preparing documentation for audits, and ensuring City departments follow proper financial recording. Every year, the City goes through a federal audit review and posts its findings and a summary of actions taken on the City Finance Department's website. The Deputy Finance Director also works closely with the Grants Division in overseeing and managing federal grant awards. The Grants Division monitors various departments' progress during a grant period and ensures timely and proper submittal of all progress reports and related deliverables. The Deputy Finance Director is overseeing over \$132 million in grant funding currently.

Below are details on how City departments are managing reporting requirements for each of the assistance agreements listed above.

1. Water Reclamation Facility South Plant Improvements
  - a. Timely Reporting: The project manager has submitted all applicable documents for securing the grant and reimbursements. In the past, grant closeout documents have been submitted to the State when projects are complete.
  - b. Tracking Progress: All timelines have been met on the grant, and the City is on track to complete drawdown of all funds by August 2026. All grants received related to this project have met the expected outcomes of the agreement.
2. Community Based Violence Intervention and Prevention Initiative
  - a. Timely Reporting: The project manager submits quarterly reports including sub-grant reporting through the Bureau of Justice Assistance (BJA) performance measurement tool on time every quarter. The Rapid City Police Department Youth Outreach Team also provides weekly reporting, which contributes to the information supplied to BJA.
  - b. Tracking Progress: When elements of the project have not come to fruition for various reasons (e.g., project partners dropping out, staffing issues, City Council timelines, etc.), the project manager has worked with the Technical Assistance Advisor to pivot planning and implementation in a way that helps the RCPD continue to meet the goals of the project. Project staff also work closely with BJA to submit budget modifications if changes need to be made to the original budget, again due to unforeseen circumstances, such as those mentioned above. This transparency has allowed the RCPD to stay in compliance with the agreement's parameters and requirements.
3. Airport Improvement Program (CARES Act)
  - a. Timely Reporting: The Airport's experienced finance team has ensured all AIP reporting requirements are met and reimbursement requests are submitted in a timely manner.

- b. Tracking Progress: When project progress or goals need to change, the Airport's team coordinates with the district office to make amendments. This grant is nearly complete and remaining funds will be repurposed for operational expenses.
- 4. Federal Transit Formula Grants (CARES Act)
  - a. Timely Reporting: The City's Transit Division manager ensures all formula grant reports are submitted to FTA according to agency deadlines. The CARES Act grant's reporting requirements included submitting a Federal Financial Report and Milestone Progress Report every October during the life of the grant. To meet the requirements of closing the grant once all funds were expended, the division manager submitted final financial and milestone progress reports, in compliance with the CARES Act grant.
  - b. Tracking Progress: The City's Transit System has tri-annual site visits from the FTA in which an internal monitoring/review occurs in addition to external compliance audits. All suggestions and recommendations are implemented following these visits to ensure the City's Transit System remains compliant with agency requirements.
- 5. Community Development Block Grant
  - a. Timely Reporting: For the City's CDBG program, the project manager and staff ensure reports/plans are submitted to HUD on time. Reports include an annual timeliness (spend-down) test, an annual action plan, consolidated plans every five years, and consolidated annual performance and evaluation reports (which include a summary of financial expenditures). Periodic reports include an analysis of impediments to fair housing, resident participation plan, a semi-annual labor standards enforcement report, and a minority business enterprise report.
  - b. Tracking Progress: The consolidated annual performance and evaluation reports assess the program's success and ability to meet agreement parameters and requirements. On occasions when expectations are not met, the project staff has ensured that such items are accomplished the following fiscal year. Continual communication with HUD ensures the City's CDBG program remains compliant.

### **c. Staff Expertise**

The City of Rapid City sought the expertise of numerous staff in the preparation of this grant application. In the included Staff Bios attachment are biographical summaries of key personnel who played a role in determining GHG reduction measure project activities, timelines and budgets; these personnel will also be called upon during the implementation of this application's proposed GHG measures and will either be designating a portion of their time to the grant and/or will be offering expertise in some other capacity. In addition to key internal staff, the City relied upon several experts, including the PCAP Task Force, the Rapid City Sustainability Committee, local universities, sustainability experts, and community partners, to provide insight and guidance on this application. These individuals and groups will continue to advise on the projects, if awarded.

All GHG data and projections including the technical appendix and emissions reduction calculations were provided by Sustainability Solutions Group (SSG) based on data the City provided. They are a leading climate change consultancy that has been working with the City to develop its PCAP and CCAP as part of the CPRG planning grant. For over 20 years, SSG has supported governments of all levels with sophisticated climate action planning, policy development, scenario modeling, and program implementation. As a leading consultancy in this space, SSG has completed projects for nearly 100 governments across North America.

## 7. BUDGET

### a. Budget Detail

Please refer to the attached Budget Narrative and Budget Spreadsheet for a full description of costs for each GHG reduction measure.

### b. Expenditure of Awarded Funds

The City of Rapid City safeguards against improper use of awarded grant funds by following the City's Uniform Grant Guidance Policies and Procedures. These requirements, adopted in 2017, include ethical standards that align with federal uniform grant guidance under 2 CFR 200. Below is an overview, with content from the Uniform Grant Guidance document (*italicized*), explaining the City's approach, procedures, and controls for ensuring that awarded grant funds will be expended in a timely and efficient manner within the grant period.

#### Financial Management System:

The City of Rapid City's Finance Department maintains a sound financial management system that includes internal controls and federal grant management standards. The City's accounting system has the capability to identify the receipt and expenditure of award funds separately for each grant award and can record cost sharing separately as well to maintain documentation to support recorded match. The system also is able to record expenditures for each grant award by the budget cost categories shown in the approved budget. In this way, all expenditures of funds associated with each grant award are tracked according to the specific awarding agency's requirements.

#### Accountability Guidelines:

The City's financial management system has a high level of transparency and accountability. In addition to City departments, the Grants Division, and/or the Deputy Finance Director ensuring complete financial reporting, expenditures undergo a secondary review by the Finance Department's Accounts Payable to guarantee costs are budgeted and allowable. To further guarantee accountability, the City's financial management standards and procedures include the following:

- *Identification – The City must identify, in its accounts, all federal awards received and expended and the federal programs under which they were received.*
- *Financial Reporting – Accurate, current, and complete disclosure of the financial results of each federal award or program must be made in accordance with the financial reporting requirements of granting agency.*
- *Accounting Records – The City must maintain records which adequately identify the source and application of funds provided for federally-assisted activities.*
- *Internal Controls – Effective control and accountability must be maintained for all funds, real and personal property and other assets. The City must adequately safeguard all such property and must assure that it is used solely for authorized purposes.*
- *Budget Control – Actual expenditures or outlays must be compared with budgeted amounts for each federal award. Procedures shall be developed to establish determination for allowability of costs for federal funds.*

- *Cash Management – The City shall maintain written procedures to implement the cash management requirements found in 2 CFR Part 200, including payment requirements found in 2 CFR 200.305.*
- *Allowability of Costs – The City shall ensure that allowability of all costs charged to each federal award is accurately determined and documented.*

Time and Effort Reporting:

When a grant award includes budgeted costs for personnel and fringe benefits, City departments ensure employees track actual time spent performing work on the grant. The City's Finance Department maintains these records to account for the specific allocation of charges associated with each grant-funded employee. The financial management system also is capable of accurately allocating charges for employee salaries and wages. According to the City's Uniform Grant Guidance, the time and effort reporting conducted by City departments aligns with 2 CFR 200.430 Compensation – personal services and 2 CFR 200.341 – Compensation – fringe benefits.

Subrecipient Monitoring:

The City understands the differences between subawards and procurement contracts and the roles and responsibilities associated with each. When a portion of a grant award is designated for subawards, the City follows established procedures to monitor subrecipients and confirm subaward funds are allocated appropriately and used in compliance with federal, state, and local laws and the City's Uniform Grant Guidance standards. These standards comply with the requirements outlined in 2 CFR Part 200 and include measures designed to prevent making a subaward to an entity that is suspended or debarred.

Per the City's Uniform Grant Guidance, the City is responsible for the following:

- *Evaluating the entity for risk of noncompliance to determine appropriate monitoring practices.*
- *Entering into a contract with the subrecipient which sets forth the parties' obligations and responsibilities, including provisions concerning the parties' obligations related to the grant award and federal laws and regulations.*
- *Monitoring the subrecipient entity's implementation to ensure compliance with federal, state and local laws, conditions of the federal funding award, and City policy and procedures.*
- *Notifying the subrecipient entity of identified deficiencies found during the monitoring process and ensuring that identified deficiencies are corrected.*
- *Documenting and retaining records on subrecipient identification, notification, evaluation, monitoring, and corrective actions taken.*

Procurement:

The City of Rapid City follows procurement standards established by the Rapid City Municipal Code (RCMC) 3.04.030 – Purchasing System and South Dakota Codified Laws – Title 5 Public Property, Purchases and Contracts, Chapter 5-18A through 5-18D. Per these policies, the City follows stricter guidance for procurement than those set forth by the EPA. Formal competitive bidding (either sealed bidding or competitive proposals) is required for all purchases over \$25,000 for supplies or services and over \$50,000 for purchases of equipment and construction of public improvements. Procurement by noncompetitive proposals (from only one source) must comply with state law SDCL Chapters 5-18A to 5-18D and may be used only when one or more of the following circumstances apply (per the City's Uniform Grant Guidance, in alignment with EPA guidelines):

- *The item is available only from a single source;*
- *The public exigency or emergency for the requirement will not permit a delay resulting from competitive solicitation;*
- *The Federal awarding agency or pass-through entity expressly authorizes noncompetitive proposals in response to a written request from the non-Federal entity; or*
- *After solicitation of a number of sources, competition is determined inadequate.*

With all competitive procurement processes, the City ensures a full and open competition that avoids conflicts of interest and practices that may restrict competition. Bids are solicited from an adequate number of known suppliers, and invitations for bids are publicly advertised and include specifications and necessary attachments that define all parameters of the agreement. Similarly, requests for proposals are publicized and identify all evaluation criteria. Evaluations are completed in a timely manner and are documented and reviewed by the Finance Officer. The City maintains records detailing the history of procurement, rationale for the method of procurement, selection of contract type, contractor selection or rejection, and the basis for the contract price. The City also follows federal non-procurement debarment and suspension regulations in order to avoid contracting with entities that are suspended or debarred or whose principals are suspended or debarred.

Purchases under the \$25,000/\$50,000 bid limits require departments to obtain written or telephonic price or rate quotations from at least three sources. Micro-purchases (up to \$5,000) may be made without soliciting competitive quotations if a department's director considers the price to be reasonable. To the extent practicable, the City distributes micro-purchases equitably among qualified suppliers when the same or materially interchangeable products are identified and such suppliers offer effectively equivalent rates, prices, and other terms.

#### Payment Methods – Reimbursements:

The City of Rapid City understands that funding through federal grants is reimbursed according to actual expenditures incurred during a particular fiscal period, not obligations. The City's Finance Department initially charges federal grant expenditures to nonfederal funds and then requests reimbursement from the federal agency according to the agency's disbursement schedule. The Deputy Finance Director processes all reimbursement requests and ensures requests are completed on the appropriate form through the grantor-designated portal and submitted within the timeframes required by the grant agreement. Consistent with state and federal requirements, the City maintains source documentation supporting the federal expenditures (e.g., invoices, time sheets, payroll stubs, etc.) and makes such documentation available for review upon request.

#### **c. Reasonableness of Costs**

To ensure reasonableness of costs, the City requested that its various departments and sub-awardees follow best practices when obtaining cost estimates for their proposed GHG reduction measures. In all cases, qualified staff and consultants with experience in cost estimating and construction were involved in this process. Please refer to the attached Budget Narrative and Budget Spreadsheet, Technical Appendix and GHG Emission Reduction Calculations Spreadsheet for a full description of costs for each GHG reduction measure and how every budget item/cost relates to the workplan and specific activities.