

**DuluthWWHR Budget**

A. **Budget Detail-** DuluthWWHR has two GHG measures representing 98% of requested grant funding and two additional expenses for project outreach and grant/project management. City staffing for grant and project management, and a subaward to the project's Environmental Justice community-based organization Ecolibrium3, is listed below in Table 1 as a separate component along with each of the GHG reduction measures.

Table 1. BUDGET BY PROJECT COMPONENT		
Component Name	Total Cost	% of Total
Measure 1- Wastewater Heat Recovery	\$48,038,781	96%
Measure 2- Commercial REE Grant	\$1,000,000	2%
Staff and EJ Outreach Subaward	\$876,844	2%
<i>Total</i>	\$49,915,625	100%

**Consolidated Budget Table**

Table 2. BUDGET BY YEAR						
CATEGORY	2024	2025	2026	2027	2028	TOTAL
<b>Direct Costs</b>						
TOTAL PERSONNEL	\$78,853	\$80,667	\$82,361	\$84,008	\$85,688	\$411,576
TOTAL FRINGE BENEFITS	\$29,176	\$29,847	\$30,473	\$31,083	\$31,705	\$152,283
TOTAL TRAVEL	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL EQUIPMENT	\$0	\$575,438	\$5,439,968	\$1,666,253	\$262,542	\$7,944,201
TOTAL CONTRACTUAL	\$0	\$656,480	\$1,977,821	\$1,773,930	\$648,342	\$5,056,573
TOTAL CONSTRUCTION	\$60,000	\$4,724,009	\$16,636,928	\$10,803,092	\$2,813,977	\$35,038,007
TOTAL OTHER	\$310,000	\$561,380	\$312,608	\$63,860	\$65,136	\$1,312,984
TOTAL DIRECT	\$478,029	\$6,627,820	\$24,480,159	\$14,422,226	\$3,907,390	\$49,915,625
<b>Indirect Costs</b>						
TOTAL INDIRECT	\$0	\$0	\$0	\$0	\$0	0
% of total						
<b>Total</b>	<b>\$478,029</b>	<b>\$6,627,820</b>	<b>\$24,480,159</b>	<b>\$14,422,226</b>	<b>\$3,907,390</b>	<b>\$49,915,625</b>

Table 2 represents the breakdown of expenses for each year in alignment with the SF-424A and in response to the project schedule. Additional breakdown of each of these costs can be found in the BudgetCalcs\_City of Duluth.xlsx document. The following should be noted for Table 2 and Table 3 which represents Budget Detail Summary:

Narrative Note 1- Overall: Please refer to the project narrative for further details regarding the distinctive opportunity presented by the implementation of a district energy hot water network in Lincoln Park if the project can be accomplished in conjunction with the reconstruction of W Superior St. This district energy network will utilize heat pumps and wastewater effluent to produce hot water, providing space heating, domestic hot water, and process heating to the Lincoln Park community. Additionally, the system will connect to an established adjacent district energy hot water system (Duluth Energy Systems) and provide for small grants to businesses through a Commercial Renewable Energy and Efficiency Grants Program. Inflation is calculated for year-over-year expenses at 2.3% for 2025, 2.1% for 2026, 2.0% for each year after 2026. Inflation has been applied to all current cost estimates, subawards, and staffing costs.

Narrative Note 2- Personnel: Project and grants management personnel from the City will include the hiring of 1 FTE. Budget determined through recent hiring of similar positions under DOE funding.

Narrative Note 3- Fringe Benefits: 37% is the labor burden for alike City of Duluth positions. It includes health, retirement, PTO, unemployment, workers compensation. Rate remains the same year-over-year, but dollars increase due to inflation escalator on wage base.

Narrative Note 4- Travel: The City will absorb any travel expense for staff. Travel for contractors and subawardee are included within the appropriate line items.

Narrative Note 5- Equipment: Equipment includes major pieces of equipment and long-lead items that will be pre-purchased and provided to the contractor for installation. Procurement of equipment will precede its corresponding construction phase to insure the ability to meet schedule, including energizing phases to meet heating season needs.

Narrative Note 6- Contractual: The Contractual category covers consulting and engineering fees. The project heavily relies on engineering and will require the generation of request for proposals/bids for material procurement documents, as well as the issuance of construction and implementation documents for structural, architectural, civil, electrical, mechanical, and plumbing. Additionally, the staffing plan includes a project manager and administrative staff

throughout the project's duration, overseeing each component, including plant, distribution, and building connections. Additionally, during construction phases, a full-time project representative (superintendent) will be onsite to supervise the work on the plant, distribution, and buildings to ensure quality, on schedule performance with limited cost overruns.

Narrative Note 7- Construction: These are the construction costs for the buildout of a new district heating system. It includes the construction of a central plant facility to house heat pumps, hydronic pumps, and balance-of-plant equipment; the excavation and installation of underground insulated hot water piping; and the completion of building connections and HVAC system conversions. Major equipment will be purchased separately and is included in the Equipment section.

Narrative Note 8- Other: Other costs include participant expenses represented by the Commercial REE Grant program and subaward to Ecolibrium3 for EJ Outreach and coordination with Main Street Lincoln Park. The Commercial REE Grant program anticipates 25, \$10,000 analysis and design grants in each of 2025 and 2026, and 25 implementation grants in each of 2026 and 2027. Procurement and award of grants will be in alignment with EPA and grant principles and include a competitive process.

Narrative Note 9- Indirect Costs: The City of Duluth has exceeded the level of federal funds that would qualify the application for indirect costs at a de minimis 10% on MTDC. Indirect expenses will be absorbed by the City of Duluth, as Duluth does not have an authorized indirect cost rate.

Narrative Note 10- Supplies: No significant supplies are required, so have not been included in the application as a separate line item. The Subaward to Ecolibrium3 will include limited supply costs for community outreach and community education. The City will absorb any printing and marketing costs for measure 2, and administrative supply costs related to procurement for measure 1.

Narrative Note 11-Measure 1: BudgetCalcs\_City of Duluth.xlsx is provided with addition budgetary breakdown including the separation of Measure 1- Heat Recovery System into the main four components including the Central Heat Recovery Plant (\$12,910,499), LNPK Distribution Loop (\$14,084,844), LNPK Building Connections (\$9,696,378) and DES Connection (\$11,347,060).

Table 3. BUDGET SUMMARY <small>Note 1</small>		
COST-TYPE	CATEGORY	TOTAL
Direct Costs	Personnel	
	<i>Project Manager 1 FTE@ \$78,853 Y1</i>	\$411,576
Note 2	<b>TOTAL PERSONNEL</b>	<b>\$411,576</b>
	Fringe Benefits	
Note 3	<i>Full-time Employees @ 37% of salary- includes health, retirement, PTO, unemployment, workers comp, rate established through union negotiations</i>	\$152,283
	<b>TOTAL FRINGE BENEFITS</b>	<b>\$152,283</b>
Note 4	Travel	
	<b>TOTAL TRAVEL</b>	<b>\$0</b>
	Equipment	
	<i>Four 2 MW Heat Pumps Serving Lincoln Park @ \$736,614 per skid</i>	\$2,946,456
	<i>Lincoln Park Hot Water Piping, ~14,000 TF @\$101.56 per TF</i>	\$1,421,873
	<i>Hot water to Hot Water Energy Transfer Stations for Building Connections priced on anticipated size for 20 most connectable LP buildings, average cost \$98,112.50</i>	\$1,962,250
	<i>DES Connection Hot Water Piping, ~7,800 TF @ \$114.38/TF</i>	\$892,158
	<i>One 2 MW Heat Pump Added for DES Connection</i>	\$721,464
Note 5	<b>TOTAL EQUIPMENT</b>	<b>\$7,944,201</b>
	Contractual	
	<i>Competitively bid WLSSD wastewater connection and central heat pump plant - consultants, engineering, project management, and site supervision.</i>	\$1,308,575
	<i>Competitively bid Lincoln Park Hot Water Distribution System - consultants, engineering, project management, site supervision, and travel.</i>	\$1,871,133
	<i>Competitively bid System Connections and HVAC Conversion - consultants, engineering, project management, site supervision, and travel.</i>	\$1,270,317
	<i>Competitively bid DES connection and hot water to hot water interface - consultants, engineering, project management, site supervision, and travel.</i>	\$606,548
Note 6	<b>TOTAL CONTRACTUAL</b>	<b>\$5,056,573</b>
	Construction	
	<i>Competitively bid contract for the construction of the WLSSD Wastewater heat recovery system, and central plant. Scope of work includes the installation of supplied heat pumps.</i>	\$8,655,468
	<i>Competitively bid contract for the construction of the how water distribution system serving Lincoln Park.</i>	\$10,791,838

Note 7	<i>Competitively bid contracts for the construction of building connections and HVAC system conversions.</i>	<i>\$6,463,811</i>
	<i>Competitively bid contract for the construction of the interconnecting hot water piping between the Lincoln Park project limits and DES. Includes an energy transfer station at DES plant.</i>	<i>\$9,126,890</i>
	<b>TOTAL CONSTRUCTION</b>	<b>\$35,038,007</b>
	<b>Other</b>	
Note 8	<i>Subaward- Ecolibrium3: Community Outreach and Jobs Training Support- \$60,000 Y1 with yearly inflationary increase</i>	<i>\$312,984</i>
	<i>Commercial renewable and efficiency design/implementation grants- 50 design and 50 implementation grants @ \$10,000 per grant average</i>	<i>\$1,000,000</i>
	<b>TOTAL OTHER</b>	<b>\$1,312,984</b>
	<b>TOTAL DIRECT</b>	<b>\$49,915,625</b>
<b>Indirect Costs</b>	<b>Indirect Costs</b>	
Note 9	<b>TOTAL INDIRECT</b>	<b>\$0</b>
<b>TOTAL FUNDING</b>		<b>\$49,915,625</b>

## B. Expenditure of Awarded Funds-

The City provides a full range of governmental services including police and fire protection, street construction and maintenance, library and recreational facilities, and public utilities for water, gas, sewer, and storm water services. Certain economic development activities are provided through a legally separate entity, Duluth Economic Development Authority, a discretely presented component unit of the City. The City also is financially accountable for several legally separate entities including an airport, convention center, transit services, and recreation area, all of which are reported separately in the City's financial statements. Additional information regarding these legally separate entities is provided in Note 1 to the financial statements available online at the City Auditor page.

The City of Duluth has established effective financial management practices that ensure compliance with federal requirements. City of Duluth has annual financial and program monitoring, and has recently received an upgrade in bond rating. The City of Duluth is respected for our financial management and is required by state law to have a formal audit conducted within 180 days after fiscal year end. Duluth's most recent audit for fiscal year end December 31, 2022 received an unmodified opinion from the Minnesota Office of the State Auditor.

The Government Finance Officers Association (GFOA) has awarded a Certificate of Achievement for Excellence in Financial Reporting to the City of Duluth, for its Annual Comprehensive Financial Report (ACFR) for the fiscal year ended December 31, 2022. This was the forty-seventh consecutive year that the City has received this prestigious award. In order to be awarded a Certificate of Achievement, the City had to publish an easily readable and efficiently organized ACFR, whose contents conform to both generally accepted accounting principles and applicable legal requirements. In addition, the City of Duluth also received the GFOA's Distinguished Budget Presentation Award for its annual budget document for the year 2023. In order to qualify for the Distinguished Budget Presentation Award, a governmental unit's budget must be judged proficient as a policy document, a financial plan, an operations guide, and a communications device.

As demonstrated in the Project Narrative, the City of Duluth has successfully managed federal grants from multiple agencies including the EPA. The City has all controls, procedures, and capacity needed to effectively manage a CPRG grant and reporting requirements. To ensure awarded grant funds will be expended in a timely and efficient manner, the workplan has well-developed activities, milestones, and deliverables schedule, including time scheduled to follow applicable procurement processes. City of Duluth staff is well-qualified, follows an appropriate segregation of duties, and can successfully meet the EPA pre-award compliance reviews and the EPA's Administrative Capability Questionnaire.

### **C. Reasonableness of Costs-**

Cost reasonableness is illustrated throughout this proposal through three methodologies include 1) analysis of carbon savings options to prioritize the identified measures; 2) development of a detailed budget reflective of project outcomes and output that has been verified through initial quotes and research with multiple vendors; and 3) commitment to following responsible procurement procedures if award the grant, including establishing a workplan that reflects procurement timeline and professional expenses.

**Selection of Measures-** As demonstrated in the TechAppx\_City of Duluth.pdf and Workplan\_City of Duluth.pdf, significant analysis has occurred to choose the measures and project methodologies that can maximize the climate and environmental justice benefits per dollar spent. The project is proposed for CPRG funding because of the singular moment in time in which other investments can significantly reduce the cost of the project through climate-funding-supported transportation projects. Eight design scenarios were explored to establish the most reasonable rate of return and multiple elements were eliminated that could have community benefit, but would increase GHG emissions or costs beyond reasonableness.

DuluthWWRC has also taken a reasonableness approach in thinking of the project through time. Several design decisions have been made that will lower future public infrastructure costs by using a modularized approach and following the City of Duluth's "do-it-right" philosophy. Where possible, the project has been designed to allow for increased capacity over time to expand GHG reduction impacts. This includes a central plant building and piping sizes that will

allow some expansion, and working with other public partners to co-locate resources when possible (piping on bridges, heat pump plant with malodorous reduction equipment, etc.)

**Budget Development-** The budget has been developed to reflect anticipated actual costs of project execution. Methods reflected in budget development, per cost type, include:

Personnel- Reference to current staff costs and limiting number of staff positions covered under CPRG funding to 1. Any assistance needed by this staff member will be provided through other funding sources.

Fringe Benefits- Fringe benefit rate reflects actual for City staff.

Travel- Travel costs are limited to contractors and subawardees and will only be billable at current IRS mileage rate or GAO per diem rates by city travelled.

Equipment- Verbal quotes and current invoices for similar items were used to establish 2024 costs. Inflation escalator was used to reflect purchasing in a later budget period. Schedule reflects potential purchase of equipment before selection of installation contractor because of material lag times. Separate procurement processes will occur to insure cost competitiveness.

Supplies- Incidental supply reimbursement is limited to the EJ community partner and is incorporated in Other-subaward amount.

Contractual- Contractual costs are included at industry standard for like construction projects, supported through engineer cost estimates, and in line with City of Duluth project management experience.

Other- Participant costs are designed at an amount sufficient to nudge participation by businesses and supported with staff navigation capacity to assist the business in obtaining other resources like local conservation improvement programs, tax incentives, etc.

Indirect Costs- Indirect costs will be paid by the grantee and are not included in the CPRG application.

**Procurement-** This City of Duluth has experience and is committed to following state and federal procurement guidelines in conducting DuluthWWHR activities. The project timeline and professional services budgets are adequate to ensure capacity to complete procurement activities that will insure cost reasonableness and quality of labor and materials provided.

The application will be evaluated on the quality of the response and extent to which the proposed grant expenditures are reasonable for accomplishing the proposed goals, objectives, and measurable environmental outcomes described in the application.