

Budget Narrative

The City of Missoula is requesting **\$3,525,201** in federal funding from the 2024 Climate Pollution Reduction Grants Program (CPRG). The MissoulaTREE project is an effort between several City of Missoula departments: Parks and Recreation, Climate & Sustainability, and Public Works & Mobility. The primary greenhouse gas (GHG) reduction measure for this grant request is for Carbon Reduction through an enhanced and expanded urban forest, however there are other co-measures that will benefit from increasing our tree canopy in downtown Missoula. As this project is focused on revitalizing Missoula's collapsing downtown tree canopy, the primary GHG reduction measure is **carbon removal and avoidance**. Trees in urban areas not only sequester carbon but they also reduce energy consumption (carbon avoidance) by shading adjacent buildings, increasing walkability, and maximizing the lifespan of other infrastructure. A comprehensive model of projected GHG reduction measures for the first 40 years of a trees 80 to 100-year life was provided by Davey Resource group and is supplied with the application. Co-measures for GHG reduction include sustainable **transportation benefits and pollution and stormwater absorption, reduced long-term maintenance costs, and sustainable materials management**. Thus, the budget is not broken out for each GHG reduction measure, as it is challenging to parse out the other GHG reduction measures into a quantifiable form. For instance, the introduction of a healthy urban canopy and prevention of heaved sidewalks means walkability will increase, and the lifespan of the sidewalk will be increased. This is a co-benefit of the primary GHG reduction measure: trees. "Trees" and the subsequent carbon removal is the primary GHG reduction measure that are associated with the following costs.

Expenditure of Awarded Funds

The City of Missoula is in a good position to deliver this project in a timely and efficient manner. The City's strong Public Involvement and Planning efforts to date on related projects, such as the DowntownSAM and Northside Pedestrian Bridge projects have readied this project for streamlined delivery. Delivering on other federally awarded grants, such as the 2019 FEMA Rattlesnake Dam Removal Grant, the 2022 US Economic Development Administration Caras Park River Access grant, 2021 Land & Water Conservation Fund Grant for Westside Park and Playground improvements, and the 2022 SS4A South Avenue grant, has put the City in a position to similarly deliver on this grant, especially in coordination with the DowntownSAM Front and Main Street construction.

Immediately after notification of grant award, the city will begin discussions with the EPA to finalize the grant funding agreement. When the grant agreement has been finalized the city will select a consultant through an RFQ/RFP process to lead the project delivery and engineering work. In year's 1&2 years of the project, design and engineering consultants will survey all 108 proposed suspended pavement locations and prepare construction plan sets. City staff will work closely with consultants on the development of these documents. The Project manager will competitively bid the project for construction in year 3. In years 3-5, demolition of existing tree pits, construction of suspended pavement and installation of irrigation for all trees in suspended pavement locations will occur. This work will begin along Front & Main streets and at the entrances to Missoula Riverfront Parks in conjunction with the DowntownSAM grant project. The final sites to be constructed will be along Railroad Street, at the Northern end of the project area. All trees installed into suspended pavement systems will be a minimum of 2" caliper and average of 6-8ft in height. Irrigation will ensure that these trees will survive and thrive.

In year 1, the City's Urban Forester will acquire all supplies and competitively award a contract for planting of the 49 trees to be installed in the landscaped boulevards along Railroad and Pattee Streets. These 49 trees will not require design/engineering or major reconstruction of other infrastructure. Contracted planting of these 49 trees will occur in year 2 and be overseen by the City's Urban forester. All trees installed into boulevards will be a minimum of 2" caliper and average of 6-8ft in height. Following planting, a seasonal City Forestry worker will water each of these 49 trees weekly in July & August for two seasons. In our climate, we have learned that deep

watering during the hottest months of the year is essential for successful establishment of boulevard trees. Post-establishment, these boulevard trees will be able to thrive from natural rainwater and the supplementary water received from private irrigation systems maintained by adjacent businesses & residences. By year 5, all 157 trees will be formatively pruned by a City Forestry worker. Early formative pruning is the industry standard for establishing good growth patterns for trees in an urban environment.

	2024			2025			2026			2027			2028	2029	2030
Grant Award															
Grant Agreement															
Procurement															
Engineering & Design (structural)															
Preliminary Design															
Public Involvement															
Final Design															
Permitting & Approvals															
Grant Funding Obligation															
Advertisement/Bidding (structural)															
Planting (grass boulevards)															
Construction & Planting of Structural Soil Systems															

Table 1. Project Schedule & Milestones

Reasonableness of Costs

The below spreadsheets delineate the budget for the GHG reduction measure that the budget is based on, as discussed above. These budget estimates are based on recently completed projects, and current personnel costs. The City of Missoula has worked closely with private developers in downtown Missoula to install trees within suspended pavement systems. These past experiences and real costs were used in estimating the construction costs for the MissoulaTREE project. Additionally, City Landscape Architects have overseen design and installation of dozens of irrigations systems within our public parks. Cost estimates were prepared by licensed Landscape Architects employed by the City of Missoula with extensive experience working on public infrastructure planning and construction projects.

The City's Urban Forestry's tree planting program is almost exclusively focused on planting and establishing trees in boulevards and public rights of ways. Contractors and City Arborists conduct all manner of tree work annually. Costs estimates for all tree work in this proposal were developed by International Society of Arboricultural certified City Foresters.

The following description of the budget outlines specific items included in the budget to reforest downtown Missoula. The costs listed below directly relate to the project goal of reducing and sequestering carbon and other greenhouse gas pollutants.

Direct Costs:

Personnel Costs: The Senior Project Manager will be hired as a temporary employee to manage the overall project. This position is funded by the Downtown SAM project at .8FTE, and the MissoulaTREE project at .2FTE for 5 years.

The Landscape Architect and Urban Forester positions are existing City of Missoula staff who will participate in the design, and construction administration of the MissoulaTREE project. Estimated costs are based on actual salaries and estimated time required to manage and administer the project.

The Seasonal Forestry Worker will be responsible for overseeing establishment and maintenance of the newly planted trees. Duties will include weekly watering, monitoring, and condition assessment for the first 2 years after implementation. Estimated costs are based on actual salaries and estimated time required to perform these duties.

Fringe benefits: Are estimated based on the City's actual current fringe rates for Professional Full-Time and Seasonal (10-month) Forestry Workers.

Supplies: include the 49 2" caliper trees ball & burlap (for boulevard planting) as well as tree protection supplies (tree supports and guards), slow-release water bladders, with a small allowance for repair and replacement of these materials. These are budgeted at \$300/tree. The remaining 108 2" caliper ball & burlap trees which will be planted into suspended pavement systems are budgeted at \$200/tree. These prices are based on actual costs for trees and tree materials purchased by the City's Urban Forestry Program annual tree order. Prices do vary depending on species, availability, and delivery costs.

Contractual: Design & Engineering represents cost to hire a qualified 3rd party design firm to develop construction documents for the installation of the trees and associated infrastructure for the 108 suspended pavement systems. All work on City Sidewalks and road Right-of-ways requires engineered stamped plans for permitting and construction. Plan sets will include material estimating to allow for competitive bidding of the construction project, and the design team will be selected through a public RFQ/RFP process following state and federal regulations.

Other installation costs are estimated costs to install the project components including labor and materials: removal of existing trees, excavation, suspended pavement system installation, soils and amendment, irrigation system, base course, curb, gutter, and sidewalk. These costs were prepared by a licensed Landscape Architect employed by the City of Missoula with extensive experience working on public infrastructure planning and construction projects.

Indirect Costs: These costs represent estimated costs for City of Missoula staff working to administer the grant including ongoing reporting, reimbursement requests and other requirements. Rather than prepare a full approved indirect cost rate proposal, the City is limiting IDC to only the de minimis rate of 10% to cover administrative expenses such as financial system management, reporting, and other indirect expenses related to managing the MissoulaTREE project outside of identified personnel costs.

BUDGET BY PROJECT			
Project Number	Project Name	Total Cost	% of Total
1	Carbon Removal via Tree Canopy	\$3,525,201	100%
2	Name 2	\$0	0%
3	Name 3	\$0	0%
4	Name 4	\$0	0%
5	Name 5	\$0	0%
Total		\$3,525,201	100%

BUDGET BY YEAR							
COST-TYPE	CATEGORY	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL
Direct Costs	TOTAL PERSONNEL	\$28,950	\$32,316	\$32,316	\$29,792	\$29,792	\$153,166
	TOTAL FRINGE BENEFITS	\$8,975	\$9,580	\$9,580	\$9,126	\$9,126	\$46,387
	TOTAL TRAVEL	\$0	\$0	\$0	\$0	\$0	\$0
	TOTAL EQUIPMENT	\$0	\$0	\$0	\$0	\$0	\$0
	TOTAL SUPPLIES	\$14,700	\$0	\$5,800	\$15,800	\$0	\$36,300
	TOTAL CONTRACTUAL	\$85,000	\$234,300	\$724,763	\$1,118,491	\$806,321	\$2,968,875
	TOTAL OTHER	\$0	\$0	\$0	\$0	\$0	\$0
	TOTAL DIRECT	\$137,625	\$276,196	\$772,459	\$1,173,209	\$845,239	\$3,204,728
	TOTAL INDIRECT	\$13,762	\$27,620	\$77,246	\$117,321	\$84,524	\$320,472.84
TOTAL FUNDING		\$151,387	\$303,816	\$849,705	\$1,290,530	\$929,763	\$3,525,201

BUDGET BY YEAR							
COST-TYPE	CATEGORY	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL
Direct Costs	Personnel						
	Senior Project Manager @ \$104,000 annually, 0.2FTE with salary increase	\$20,800	\$20,800	\$20,800	\$20,800	\$20,800	\$104,000
	Landscape Architect, @ \$84,000	\$4,200	\$4,200	\$4,200	\$4,200	\$4,200	\$21,000
	Urban Forester @ \$79,000	\$3,950	\$3,950	\$3,950	\$3,950	\$3,950	\$19,750
	Seasonal Forestry Worker @ \$8418		3366	\$3,366	\$842	\$842	\$8,416
	TOTAL PERSONNEL	\$28,950	\$32,316	\$32,316	\$29,792	\$29,792	\$153,166
	Fringe Benefits						
	Full Time Employee, @ 31% of salary	\$8,975	\$8,975	\$8,975	\$8,975	\$8,975	\$44,873
	Seasonal Worker @ 18% of salary		\$606	\$606	\$152	\$152	\$1,515
	TOTAL FRINGE BENEFITS	\$8,975	\$9,580	\$9,580	\$9,126	\$9,126	\$46,387
	Travel						
							\$0
							\$0
							\$0
	TOTAL TRAVEL	\$0	\$0	\$0	\$0	\$0	\$0
	Equipment						
							\$0
							\$0
	TOTAL EQUIPMENT	\$0	\$0	\$0	\$0	\$0	\$0
	Supplies						
	2"caliper trees, watering & tree protection supplies for non-suspended pavement sites (quantity = 29)	14,700					\$14,700
	2"caliper trees for suspended pavement systems (quantity = 108)			\$5,800	\$15,800		\$21,600
	TOTAL SUPPLIES	\$14,700	\$0	\$5,800	\$15,800	\$0	\$36,300
	Contractual						
	Design & Engineering	\$85,000	\$200,000	\$20,016			\$305,016
	Irrigation install			\$172,930	\$327,970		\$500,900
	Tree install on non-suspended pavement locations		\$34,300				\$34,300
	Construction of suspended pavement systems w/ tree install			\$531,817	\$790,521	\$806,321	\$2,128,659
							\$0
	TOTAL CONTRACTUAL	\$85,000	\$234,300	\$724,763	\$1,118,491	\$806,321	\$2,968,875
	OTHER						
							\$0
							\$0
							\$0
	TOTAL OTHER	\$0	\$0	\$0	\$0	\$0	\$0
	TOTAL DIRECT	\$137,625	\$276,196	\$772,459	\$1,173,209	\$845,239	\$3,204,728
Indirect Costs	Indirect Costs						
	Project administration @10% of total grant direct costs	\$13,762.5	\$27,619.6	\$77,245.9	\$117,320.9	\$84,523.9	\$320,473
							\$0
	TOTAL INDIRECT	\$13,762	\$27,620	\$77,246	\$117,321	\$84,524	\$320,473
TOTAL FUNDING		\$151,387	\$303,816	\$849,705	\$1,290,530	\$929,763	\$3,525,201