

April 1, 2020

Barbara Buffaloe  
Sustainability Manager  
P.O. Box 6013  
Columbia, MO 65205  
Barbara.buffaloe@como.gov  
(573) 817-5025

**RE: Award Agreement for Heartland Carbon Drawdown Initiative**

Dear Barbara:

On behalf of the Urban Sustainability Directors Network (USDN) we are pleased to provide an Innovation Fund grant of \$145,835 USD to the City of Columbia, MO in partnership with the Heartland Network (“Grantee”) to implement the **Heartland Carbon Drawdown Initiative** project. This effort will develop analytic and economic valuation tools to equip cities with new capabilities in urban landscape carbon management in order to help them achieve carbon mitigation objectives. The work is described in greater detail in the Final Project Proposal, Appendix 3.

The independent subcontractor Urban Drawdown Initiative (UDI) will provide some of the project deliverables to the Grantee. USDN will enter into a separate agreement with UDI for the payment of their services. \$130,000 of the grant funds for this project will be paid from USDN to UDI directly. However, the City of Columbia will be considered the grantee and project lead, and will be responsible for all invoice approvals, deliverables, and reporting. A sub-agreement detailing this arrangement will be executed separately between USDN and the subcontractor.

**Section 1. Involved Cities and Partners**

- **Project Title:** Heartland Carbon Drawdown Initiative
- **Grant Amount:** \$145,835
- **Lead City and Primary Contact:**
  - **Lead City:** Columbia, MO
  - **Project Lead:** Barbara Buffaloe, Sustainability Manager, USDN Core member  
Address: P.O. Box 6013, Columbia, MO 65205, [Barbara.buffaloe@como.gov](mailto:Barbara.buffaloe@como.gov). (573) 817-5025
  - **Project Manager:** Danielle Fox, Community Conservationist  
Contact information: 701 E. Broadway, Columbia, MO 65205, [danielle.fox@como.gov](mailto:danielle.fox@como.gov), (573) 441-5526

*Note: The Grantee will notify fund management staff of any anticipated staff changes to Project Lead or Project Manager, with as much advance notice as possible.*

- **Project Participants. Primary Participating Local Governments:**
  - Barbara Buffaloe, Sustainability Manager, USDN Core member, Columbia, MO
  - Brenda Nations, Sustainability Coordinator, USDN Core Member, Iowa City, IA
  - Frank Uhlarik, Sustainability and Compliance Administrator, USDN Core Member, Lincoln, NE
- **Observing Participating Heartland Network local governments:**
  - Catherine Werner, Sustainability Director, St. Louis, MO, USDN Core Member
  - Ashley Krug, Market Develop. & Sustainability Coordinator, Springfield, MO, USDN Core Member
  - Eric Holthaus, Sustainability Coordinator, Cedar Rapids, IA, USDN Core Member
  - Jasmin Moore, Sustainability Director, Lawrence, KS/Douglas Co., USDN Core Member
  - Becky Soglin, Sustainability Coordinator, Johnson Co., IA
- **Additional participating Heartland Network members at Columbia convening:**
  - Gina Bell, Sustainability Community Coordinator, Dubuque, IA USDN Core Member
  - Brian Alferman, Sustainability Program Manager, Johnson Co., KS
  - Miles Brainard, Planner, Rock Island, IL
  - Debra Knoble, MOGreenFuture, St. Peters, MO
  - Jerry Shechter, Sustainability Coordinator, Kansas City, MO
  - Mona Menezes, Environmental Specialist, Branson, MO
  - Merry Rankin, Sustainability Director, Ames, IA
- **Outside Department Participants:**
  - It is anticipated that the three pilot cities will collaborate with departments within their cities such as parks, forestry, landfill (composting) and any other associated departments to collect and distribute necessary data for the project.
- **Primary Partners:**
  - Brett KenCairn, Senior Policy Advisory for Climate and Resilience, Boulder, CO and Director, Urban Drawdown Initiative
  - Brendan Shane, Climate Director, Trust for Public Land
- **Project Term:** 12-months from award notification (April 1, 2020 – April 1, 2021)

## **Section 2. Project Scope: Deliverables, Timeline, Reporting and Payment Schedule**

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Project activities, deliverables, and due dates are scheduled below in Table 1. Proactively notify [fund management](#)<sup>1</sup> if it is anticipated that any deliverable due dates will shift after this award agreement is executed, so schedules can be adjusted accordingly. Submitted deliverable files should be named against to this schedule, so it is clear the products of this grant agreement are submitted. Table 1 also becomes the project’s Deliverables Report. Each time a deliverable is received, it is returned with

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<sup>1</sup> USDN contracts with [Sutherland & Associates](#) to manage their [Family of Funds](#). The USDN fund management team consists of a fund manager, ([Susanna Sutherland](#)), and fund program coordinator ([Liz Holliday](#)). Susanna is the point of contact for troubleshooting any schedule changes or issues with the work flow or deliverables. She assists with any decision-making that impacts this agreement. Liz manages workflow throughout the life of the grant, receiving, confirming, and processing deliverables, quarterly reports, and invoices. Both Liz and Susanna actively support grantees during the life of the project. When reaching out to one, please copy the other.

notes/links as a receipt to the Grantee. This method keeps each party knowing progress against the scope of work.

Project clarification requested from the IF Steering Committee:

- Please build refundable arrangements into the July travel plan:
  - *We have tentatively rescheduled the in-person convening for September 2020. If the current situation with COVID-19 has not improved substantially, we are exploring options to have the convening be held virtually, with the potential of virtual tours and small gatherings in participating cities to attend together.*
  - *Also of note, we are exploring options in the post COVID context and may need to reprogram the community challenge and research funding depending on how we can best serve local communities and work within available staff and institutional capacities*
  
- Please provide more detail on how the team will integrate equity into project work and make the connection between sequestration and climate resilience clear.
  - *Consider bringing on additional partners to strengthen equity and resilience facets of the work. This could include USDN staff and/or contractors, such as Kristin Baja and/or Desiree Williams-Rajee.*
  - *We reached out to USDN Equity staff but they do not currently have the bandwidth. Instead of bringing in an outside / potentially-unknown partner to the host cities, each City is bringing their local equity partner into the discussion to inform the best steps forward for each community.*
  - *The TPL tool that is being developed is starting from the equity & climate work that is the base of their Climate Smart Cities and ParkServe tools.*
  - *A major initial focus in the exploration of local carbon drawdown/sequestration opportunities is going to be urban forestry. It's where the accounting mechanisms are already developed. There is a direction connection here in this way: developing a carbon drawdown strategy based on planting and managing urban forests also enables us to manage forest canopy for shade and urban heat island management. This is going to be one of the most significant climate change resilience issues facing cities in the next several decades. Finding ways to more effectively demonstrate the multiple benefits of significantly increasing urban forest canopy through both quantifying the carbon, shade and urban heat management properties is a significant resilience action.*
  - *This doesn't count in the water infiltration benefits trees also provide, thus helping addressing storm water management—another resilience benefit.*
  
- Please add a section to the project work on rationalizing when to sell carbon credits (and not claim them for local mitigation efforts) and when to retire those credits so they can use them for their own offsets
  - *An important point not effectively conveyed in the proposal is that part of our objectives is to build a local carbon market—whether the cities choose to hold (count and retire) the offsets created, or sell them into that market. This will be a choice each city will need*

to consider. Until recently, cities may have placed more value on reducing their carbon emissions and would thus choose to hold and retire those credits. In a future of constrained resources and a city’s need to leverage additional funding to do climate resilience projects, cities may choose to sell the offsets.

- o Ideally, we’re building a rationale and process by which other parties can offset their carbon obligations by drawing on the methodology we’ll be developing to quantify benefits from different types of actions. Thus, a corporation could then invest in a local tree planting campaign and take credit for the additional carbon—and ideally—ecosystem services those actions created. Initially, this may be largely a local market, but as we build this methodology and validation, we can hopefully help kickstart regional, state and national markets.

- Please clarify how each of the three cities will achieve the "Community Drawdown Research/Pilot Projects" deliverable
  - o The TPL commitment is to build a carbon management tool for all three cities.

**Table 1. Schedule of Grant Deliverables and Payments (see Attached Appendix A)**

Snapshot below

| Heartland Cities Carbon Drawdown Initiative -- WORKPLAN  |  |                                       |        |           |   |
|--|--|---------------------------------------|--------|-----------|---|
| Activity   | Deliverable  | Due Date                              | Budget | Payment   | Payment Details   |
| <b>Activity 0:</b> Project kickoff with Cities and UDI team and UDI Communications Briefing with USDN. | <b>Deliverable 0:</b> Agreements signed. Set up meeting with USDN Communications Director Julia Peek to discuss how to frame and message this work.  | By June 1st, 2020                     |        |           |   |
|  | <b>Payment #1:</b> \$35,000 to UDI, with receipt of Deliverable 0  | June 1, 2020                          |        | \$ 35,000 | Includes pre-payment of 50% of Activities 2 & 3   |
| <b>Quarterly Report #1</b>   | <b>250 word update</b> compiled by UDI and submitted by Lead City contact  | Q1: July 31, 2020                     |        | \$ 400    | Included in payment #2  |
| <b>Activity 1:</b> Strategic planning support for Columbia, Lincoln and Iowa City                      | <b>Deliverable 1:</b> DRAFT carbon management strategy for each city with associated task plans, timelines and milestones for implementing their carbon management project   | Date: July 31, 2020                   |        | \$ 22,000 | \$22,000 to Urban Drawdown Institute (UDI); \$10,000 in payment 1, \$5,000 in payment 2, \$5,000 in payment 3 and \$2,000 in payment 7  |
| <b>Activity 2:</b> Carbon Management Tool development-Beta Version                                     | <b>Deliverable 2:</b> Beta version of Carbon Management Decision Support Tool developed by TPL and UDI. Cities will provide written feedback identifying additions or changes.                                     | Date: August 31, 2020                 |        |           | \$10,000 to UDI in Payment 2  |
|  | <b>Payment #2:</b> \$17,400 to UDI, with receipt of Deliverable 1  | August 1, 2020                        |        | \$ 17,400 | Includes payment for quarterly report, work on deliverable 1 & 2  |
| <b>Activity 3:</b> Delivery of Final carbon management plans for Columbia, Lincoln and Iowa City       | <b>Deliverable 3:</b> Final version of carbon management plan for each city. Each city has developed a written strategy with task plans, timelines and milestones for implementing their carbon management project | Date: Sept 1, 2020                    |        |           | \$5,000 to UDI for completion of carbon management plans for 3 core cities included in Payment 3  |
| <b>Activity 4:</b> Convening in Columbia, MO with Heartland Network, Urban Drawdown Initiative & TPL   | <b>Deliverable 4:</b> Gathering of Heartland Cities Carbon Management Cohort (Tentatively set for mid-September). Deliverable will be slide decks, agendas, and participant lists                                  | Date: Mid-Sept 2020                   |        | \$ 15,835 | \$15,835 USDN holds for payment to cities for convening costs (including upfront payment to Columbia for on-site expenditures) included in Payment 3. See tab "Convening Costs" for estimates   |
| <b>Activity 5:</b> Delivery of final version of data/decision support tool                             | <b>Deliverable 5:</b> Final version of carbon management decision support tool for each city.  | Date: Sept 30, 2020                   |        | \$ 50,000 | \$50,000 to UDI \$25,000 in Payment 1, \$10,000 in Payment 2, \$10,000 in Payment 3, and \$5,000 in payment 7   |
|  | <b>Payment #3:</b> \$30,835 with receipt of bundled convening reimbursements, and Deliverables 3 & 5.  | September 30, 2020                    |        | \$ 30,835 | Includes \$14,060 to local governments of convening participants including UDI travel/judging costs and Host City expenses. To be held by USDN until event is scheduled.  |
| <b>Activity 6:</b> Community drawdown research/pilot projects  | <b>Deliverable 6:</b> Set up replicated trials of carbon drawdown treatments on parks or other publicly controlled sites for 3 participating cities.   | Date: Late Fall 2020 - March 31, 2021 |        | \$ 25,500 | \$25,500. Funding paid to UDI for distribution to local partners (\$8,500 per city * 3 cities for materials and local tech support) based on review and approval by each core city and project lead. Expenditures staged in three payments starting late fall 2020 / early 2021 |
| <b>Quarterly Report #2</b>   | <b>250 word update</b> compiled by UDI and submitted by Lead City contact  | Q2: October 31, 2020                  |        | \$ 400    | In payment #8   |
|  | <b>Payment #4:</b> \$15,400 to UDI, with progress payments for Deliverable #6  | November 1, 2020                      |        | \$ 15,400 | Includes payment for Q2 report, and local expenditures towards Deliverable 6 (estimated)  |
| <b>Activity 7:</b> Local pilot projects (Challenge) and research project implementation strategy       | <b>Deliverable 7:</b> Written plan for Challenge projects for 3 host cities.   | Date: Nov 30, 2020                    |        | \$ 5,000  | UDI support \$5,000 (40 hours @ \$125) to plan community challenge projects   |
| <b>Quarterly Report #3</b>   | <b>250 word update</b> compiled by UDI and submitted by Lead City contact  | Q3: January 31, 2021                  |        | \$ 400    | In payment #5   |
|  | <b>Payment #5:</b> \$5,400 to UDI, upon delivery of Deliverable 7 & Q3 report  | Date: February 2, 2021                |        | \$ 5,400  | Includes payment for Q3 report, and technical assistance from UDI to cities in developing Challenge projects  |
| <b>Activity 8:</b> Community carbon drawdown "challenges"  | <b>Deliverable 8:</b> Initiate Challenge projects in core cities   | Date: January 1 - April 1, 2021       |        | \$ 25,500 | Funding paid to UDI Consultant for disbursement. \$8,500 for each of three cities for local coordination and materials. Payment to UDI. Expenditures staged in three payments starting late fall 2020 / early 2021  |
|  | <b>Payment #6:</b> \$15,000 towards Deliverable 8 accomplishments  | Date: February 2, 2021                |        | \$ 15,500 | Partial payments for Challenge project expenditures (estimated)   |
| <b>Final Grantee Report, Photos, and Budget Reconciliation</b>   | <b>Deliverable:</b> Final grantee report, high resolution photos (.jpg format) and final budget  | Date: April 30 2021                   |        | \$ 800    | In payment #7   |
|  | <b>Payment #7:</b> \$26,300, upon delivery of Final Report   | Date: April 30, 2021                  |        | \$ 26,300 | Includes remaining payments for tool and strategy development   |
| <b>Grant de-brief call and possible webinar scheduling</b>   | A call with USDN and possible scheduling of grantee PPT presentation to the network  | Dates to be set at grant close        |        |           |   |

**\*Project Term.** USDN IF allows 12 months to complete the work from issue of the grant award letter. If more than 12 months are required to complete the work, the grantee must submit an extension request per the USDN IF Award Guidelines and Policies.

### Project Management Tips:

- **Keep it simple:** Bundle activities into ~2-5 major deliverables; more than that is too many
- **Estimate high:** Add a month more than you think each one will take
- **Use the Calendar:** give yourself appointments for all due dates when this agreement is signed
- **Stay in touch:** Notify fund management staff if schedules change
- **Communications Briefing:** Reach out to schedule a 30-minute call with USDN Communications Director **Julia Peek** to discuss and build out a messaging approach upon award notification. This action is built into Table 1, and the grantee should let fund management know the call date so it can be marked complete.

Failure to notify the [fund management staff](#) of anticipated delays, or to provide the above deliverables by the listed due dates may result in payment delay. Severe delays may result in cancellation of future payments, and grantee performance will be considered in future funding rounds.

### Section 3. Key Grant Requirements

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The City of Columbia, as lead grantee, has agreed to meet five key grant requirements:

- **Communications Briefing.** Schedule a 30-minute call with USDN Communications Director [Julia Peek](#) to discuss and develop a framing and messaging approach to this work as it develops.
- **Quarterly Updates.** Submit a one or two paragraph update describing progress to date on outputs, timeline, budget, and metrics is due at the end of each quarter, until the grant completes.
- **Final Products and Reporting.** By April 1, 2021, submit:
  - **Project Products / Outputs.** All substantial products and outputs produced as high-quality deliverables for posting to the USDN website.
    - These products will have been influenced by from the Communications Briefing;
  - **Final Grant Report.** A final grant report (reference the form in Appendix 1);
  - **High Resolution Photos.** High resolution .jpg photographs of project work, to potentially be used in USDN communications; and
  - **Grant Budget and Expenditures.** A detailed record of grant fund expenditures, including a comparison of original budget (Section 2) to actual expenditures. Use the Final Report Budget Template linked in Appendix 2 and submit this in Microsoft Excel.
- **Debriefing Call.** The lead city – with key team members, if desired - has a debriefing call with the Fund Manager and USDN staff to understand what worked, what could be improved, and what insights the work lends to the USDN and the IF.<sup>2</sup>
- **USDN Webinar.** The Grantee may be asked to present on a USDN teleconference, webinar, or at an in-person meeting on project outcomes at some point in time, but this is not guaranteed. This request is subject to the quality of work and USDN’s communications schedule.
- **1-Year Impact Report.** The Grantee will be asked to submit a 1-page report 1 year after the project close out that notes any impacts that were not known at the time of grant close.

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<sup>2</sup> Additionally, the lead city may also be asked for an interview when USDN conducts impact assessments.

#### **Section 4. Grant Budget and Payments**

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- Grant funds must be expended per the proposed budget, in accordance with the terms in this letter and to fulfill the scope of the final and awarded proposal (Appendix 3). Budget variances above 10% for any particular line item require written permission from fund management.
- Invoices must be submitted by the party receiving payment, including local governments. Invoices paid by USDN to any party must follow the payment schedule outlined in Table 1 of this agreement and reflected in the fully executed independent contractor agreement.
- Local-government contractor invoices must be approved by the lead local government and submitted to fund management for review against the project budget. Fund management will initiate processing of approved invoices with USDN.

#### **Section 5. Intellectual Property Rights**

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- Intellectual property created, made, or originated from this grant project by the Grantee or its subcontractors or partners shall be jointly owned by the Grantee and USDN, so that the finished products/deliverables may be shared publicly by USDN. USDN reserves the right to share and post both privately with members and funders, and publicly to advance the field of urban sustainability. See examples [here](#).

#### **Section 6. Additional Grant Terms**

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- Grant funds cannot be used for lobbying.
- The project must be a collaboration with the cities described in the “Lead and Participating Cities” section in this letter.
- The grant products as described in Table 1 will be delivered in full by April 1, 2021.
- The grantee is aware that failure to deliver, significant timeline extensions, and/or over budget projects will jeopardize future applications to the fund from this grantee.
- The City of Columbia, MO will provide project management and coordination.
- The city’s project manager, Danielle Fox, will be the primary Innovation Fund contact.

If you agree with the terms and conditions of this grant agreement, complete the attached Acceptance of Grant Terms form, and email back to the Fund Manager and [Mia Arter](#).

**By signing the Acceptance of Grant Terms Form, the City of Columbia, MO accepts the terms and conditions of this grant agreement.**

Sincerely,



Mia Arter  
Operations Director, USDN

CC: Nils Moe, USDN Managing Director

CC: USDN Innovation Fund Manager

**Acceptance of Grant Terms**

**The City of Columbia, MO accepts the grant conditions of this letter.**

**Name:** Barbara Buffaloe

**Title:** Sustainability Manager

**Signature:** 

**Instructions for Check Issuance:** Invoices will be submitted for each payment by the organization receiving

funds and will include payment instructions.

**City Tax ID Number:** 43-6000810

**Project Lead:**

Barbara Buffaloe, Sustainability Manager, USDN Core member

P.O. Box 6013, Columbia, MO 65205

[Barbara.buffaloe@como.gov](mailto:Barbara.buffaloe@como.gov)

(573) 817-5025

**Project Manager Contact Information:**

Danielle Fox, Community Conservationist

701 E. Broadway, Columbia, MO 65205

[danielle.fox@como.gov](mailto:danielle.fox@como.gov)

(573) 441-5526



## Appendix 1

### USDN Innovation Fund Grants - Final Grantee Reporting Form

Remove blue text as you complete this report within 5-7 pages or less

**Final Grantee Report Writing Tips.** As the questions below are answered, consider what is news-worthy, and write concisely to those main points. The nut graf “tells the reader what the writer is up to; it delivers a promise of the story's content and message. It's called the nut graf because, like a nut, it contains the ‘kernel,’ or essential theme, of the story...reporters and editors call it the ‘you may have wondered why we invited you to this party?’ section.” The reason for asking that the final grantee reports are crafted like this is because both qualitative and quantitative data are collected with each closing grant. This data allows for a better understanding field-building funding impact. These antidotes from grantees strengthen network funding proposals by showing clear investment impacts.

#### 1. Did your local government take any significant actions as a result of participating in this project?

The following nine local government action categories are provided to help identify “significant” actions. Feel free to include significant government actions related to this project that may not fit neatly within these categories at the end, however.

**Enter any actions under the applicable categories below.** Don’t worry about getting the category match exactly right, as that can be adjusted later if needed. The name of the action and a 1-2 sentence description and/or a web link is all that is needed. Do not focus on lessons learned or general developments. Be specific, focusing on the consequential actions taken by local governments (primary, observing, or other local governments/partners) as a result of this work. Items a – j will not all apply to all closing grants. If there are no actions in a category, simply note “N/A” or “none known” and move on.

- a. **Education and Outreach Campaign.** Was there an organized effort designed to inform the public about the issue? Please provide a brief description or link.
- b. **Plan Development.** Was a plan developed or modified as a result of the project? If yes, provide the plan title and a brief description of or link to the plan that was developed.
- c. **Policy and Code Adjustment.** Were policies or codes developed or adjusted as an outcome of this project? If so, provide the title, adoption date, and a brief description or link for policies or codes developed or modified.
- d. **Formal Partnerships and Collaboration.** Was an on-going partnership or collaboration established as a result of this project? If so, provide the name of the group or partnership, year established and/or joined, and a brief description or link.
- e. **Practice Improvements.** Were any operational changes<sup>3</sup> implemented because of this work? Please provide the date begun, and a brief description or link.
- f. **Inventory, Assessment, or Survey.** Was any data collected or assessed as a result of this

<sup>3</sup> For example: establishing a new monitoring or reporting system, augmenting a decision process with new or formalized criteria, providing specialized staff training or incentives, pursuing certification of a project by a third party, establishing a special staff liaison or new staff positions.

project? If so, provide the year undertaken and a brief description or link.

- g. **Enforcement and Incentives.** Were any incentives or enforcements<sup>4</sup> undertaken as a result of this project? Please provide the name of the enforcement or incentive, year begun, and a brief description or link.
  - h. **Programs and Services.** Were any new programs or services begun as a result of this project? Please provide the program name, year created, and a brief description or link.
  - i. **Facility and Infrastructure Improvements.** Were any new facility or infrastructure improvements<sup>5</sup> undertaken as a result of this project, or are any in the planning stages now? If so, provide the year undertaken/to be undertaken, and a brief description/link.
  - j. **Other.** List here any significant actions by the primary grant lead’s local government that do not fit the above categories. List actions taken by other local governments/partners related to this project. List any additional thoughts that might be helpful for capturing significant outcomes of this grant.
2. **Outcomes and Impacts Summary.** Based on your responses above and compared to the original proposal in the appendix of your grant agreement, did the project achieve its intended results? Why or why not? Consider the outcomes from the project overall (big picture) as well as major impacts by project output (specifics). Were all planned outputs produced? Were they well-received? Did your outputs create the desired impact(s)?
  3. **Impact on Grant Leader.** What has changed in how the grant lead approaches their work because of this grant? This question is looking for development of the project lead. Reflect on what was learned personally and professionally as a result of leading this project.
  4. **Impact on Other Project Team Members.** What has changed in how the other local government and project partners approach their work because of this grant? This question is looking for development of project team members. Request feedback from each on what was learned personally and professionally as a result of participating in this project. Some grantees have found that a quick online survey gathers city feedback effectively and is easy to process.
  5. **Follow-on Work and Leverage.**<sup>6</sup> What additional work, if any, is happening as a next step(s)? Who is doing this work? Have any funds been raised, in addition to the initial award for this project? Note if there are plans for another phase of this work, and if partners are spreading or building on the work. Note how any follow-on work will be administered and funded, if known.
  6. **Product Dissemination.** How is the work being shared, and who is planning to use it? Note dissemination efforts and name any other local governments that you know are using the products

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<sup>4</sup> These might include clarifying lines of enforcement authority, changing enforcement priorities, changing pricing structures, adding fines, or adding incentives like expedited permitting, reduced development fees, grants or loans, tax abatements, special investment zones, etc.

<sup>5</sup> These might include creating or upgrading facilities, street upgrades, public transit improvements, joint-use agreements, requiring health impact or other special assessments for infrastructure projects, demonstration projects, natural resources restoration, etc.

<sup>6</sup> This can be dollars donated by other organizations or governments, donated time through in-kind work, or reduced/donated facilities and services. Note amount of funds, time, or facilities/services donated to the project, and include a calculated dollar amount if possible.

to improve their own circumstances.

7. **Lessons Learned.** What are 2-3 key lessons learned from this project for how to advance practice on the topic? This is an opportunity to give advice to peers. Reflect on the grant process and note the biggest challenges and surprises during the grant work. What do others who follow need to know?
8. **Metrics.** Outputs from this grant are classed against fund metrics shown in Table 1. Additionally, each proposal has a specific set of stated impact metrics. Were the performance goals committed to in the proposal met? Review the project proposal and note measurable outputs from each of the stated metrics.

Please submit this report to [Liz Holliday](#), and also attach:

- A detailed record of expenditures of grant funds, budgeted versus spent, in Excel
- Final grant products, including outputs like presentations, final reports, guidebooks, toolkits, etc.

**Table 1. USDN Innovation Fund Performance Metrics for Grantees.**

| Performance Goal                             | Metric Target Statement   | Measurable Output (At Grant Completion)  |
|--|---|--|
| <b>1. Innovation Idea Development</b>        | A. % of IF grants that support brand new concept development, noting if they reflect topic-specific network priorities                | ✓ List of concepts that are new or untested in the field of urban sustainability, and if they are network priorities in terms of equity, resilience, or GHG reductions   |
|  | B. % of USDN Peer Learning Groups that have an associated USDN grant  | ✓ Name of USDN Peer Learning Group(s) and / or USDN Partner Networks that participated in this collaborative effort (list of Groups, <a href="#">here</a> )  |
| <b>2. Innovation Advancement</b>             | A. % of IF grants that support prototyping and refinement of an innovation  | ✓ List of previous USDN projects that this work builds upon  |
|  | B. % of IF grants that exhibit cross-sector and departmental field and champion building partnerships                                 | <ul style="list-style-type: none"> <li>✓ List of on-boarded partners by name, sector, department, and activity</li> <li>✓ List of participating city departments that denote cross-departmental collaboration</li> </ul>   |
| <b>3. Collaborative Member Participation</b> | A. % of USDN member communities that have led/participated in a collaboration   | ✓ List project participants by participation level and role in project outcome   |
|  | B. % of USDN member communities NEW to the IF (for a current list of these communities, please contact <a href="#">Liz Holliday</a> ) | ✓ Number and names of USDN members who have not yet led or participated in an IF grant that are participating on this proposal (by participation level)  |
| <b>4. Product Use and Leverage</b>           | A. % of IF grants that result in product use <sup>7</sup>   | <ul style="list-style-type: none"> <li>✓ Number/type of policy(ies) modified by city name</li> <li>✓ Number/type of regulatory changes by city or state</li> <li>✓ Number/type of outreach efforts/people reached</li> <li>✓ Number of member local governments interested in taking the innovation to the next level (by name)</li> <li>✓ Observing cities in the wings, ready to adopt an innovation according to their local timelines</li> </ul> |
|  | B. % of IF grants that leverage products through proposal development, during product development, or follow-on work <sup>8</sup>     | <ul style="list-style-type: none"> <li>✓ Types of support used to develop grant products</li> <li>✓ In-kind leverage, including service type (facility, staff time, etc.) and amount by partner name/sector</li> <li>✓ List of next steps, including partners/funding</li> </ul>   |

<sup>7</sup> Product use is defined by the number of grantees that report policy adoption or operational changes in their communities.

<sup>8</sup> Follow-on work can be supported by the IF or by other funding sources and can occur during or post grant term.

**Appendix 2.**  
**Final Report Budget Template (here)**

USDN Innovation Fund  
Project Budget  
[Project Name]

\*Adjust line items based on original project budget

| Line Item/Activity    | Costs (USD) | Budgeted       |                | Total Project Budget | Actuals for USDN IF Grant | Actuals for Other Sources* | Describe Deviations Actual from Budgeted / Other Notes |
|-----------------------|-------------|----------------|----------------|----------------------|---------------------------|----------------------------|--|
|                       |             | Funding Source |                |                      |                           |                            |  |
|                       |             | USDN IF Grant  | Other Sources* |                      |                           |                            |  |
| Activity 1            |             |                |                |                      |                           |                            |  |
| Activity 2            |             |                |                |                      |                           |                            |  |
| Etc.                  |             |                |                |                      |                           |                            |  |
| Convenings/Events     |             |                |                |                      |                           |                            |  |
| Travel                |             |                |                |                      |                           |                            |  |
| Airfare**             |             |                |                |                      |                           |                            |  |
| Hotel***              |             |                |                |                      |                           |                            |  |
| Meals***              |             |                |                |                      |                           |                            |  |
| Ground Transportation |             |                |                |                      |                           |                            |  |
| Materials             |             |                |                |                      |                           |                            |  |
| Other                 |             |                |                |                      |                           |                            |  |
| <b>TOTAL</b>          | <b>\$0</b>  | <b>\$0</b>     | <b>\$0</b>     | <b>\$0</b>           | <b>\$0</b>                | <b>\$0</b>                 |  |

\*List other sources in notes

\*\*USDN grant funds can only cover economy class tickets

\*\*\*Daily Hotel & Meal costs must not exceed maximum daily per diem rates at [https://aoprals.state.gov/web920/per\\_diem.asp](https://aoprals.state.gov/web920/per_diem.asp)

### Appendix 3 Full Project Proposal

**Project Title: Heartland Carbon Drawdown Initiative**

**Amount Requested:** \$145,835 (USD)

**Local Government Lead:** Barbara Buffaloe, Sustainability Manager, USDN Core member

Address: P.O. Box 6013, Columbia, MO 65205, [Barbara.buffaloe@como.gov](mailto:Barbara.buffaloe@como.gov). (573) 817-5025

**Project Manager:** Danielle Fox, Community Conservationist

Contact information: 701 E. Broadway, Columbia, MO 65205, [danielle.fox@como.gov](mailto:danielle.fox@como.gov), (573) 441-5526

**Visualization of Impact Summary Statement.** Through the collaboration of the Heartland Regional Network cities, the Urban Drawdown Initiative (UDI) and Trust for Public Land (TPL), cities are equipped with new capabilities in urban landscape carbon management that achieve carbon mitigation objectives while simultaneously making significant improvements to climate change resilience and local environmental quality. The analytic and economic valuation tools developed in this project will also open new funding streams and economic and community development opportunities particularly in portions of the community most impacted by climate change and at risk due to limited economic opportunities. This includes building new opportunities for urban-rural partnerships that expand the implementation of carbon drawdown and sequestration work across both urban and rural landscapes. The work conducted in this project will inform and enable many additional cities in USDN to take similar action. It will also help inform the development of a standardized protocol for urban carbon sequestration activities that will be incorporated as part of the standardized Global Protocol for Community-Scale Greenhouse Gas Emissions Inventory (GPC).

- **Project Participants. Primary Participating Local Governments:**

Barbara Buffaloe, Sustainability Manager, USDN Core member, Columbia, MO

Brenda Nations, Sustainability Coordinator, USDN Core Member, Iowa City, IA

Frank Uhlarik, Sustainability and Compliance Administrator, USDN Core Member, Lincoln, NE

- **Observing Participating Heartland Network local governments:**

Catherine Werner, Sustainability Director, St. Louis, MO, USDN Core Member

Ashley Krug, Market Develop. & Sustainability Coordinator, Springfield, MO, USDN Core Member

Eric Holthaus, Sustainability Coordinator, Cedar Rapids, IA, USDN Core Member

Jasmin Moore, Sustainability Director, Lawrence, KS/Douglas Co., USDN Core Member

Becky Soglin, Sustainability Coordinator, Johnson Co., IA

- **Additional participating Heartland Network members at Columbia convening:**

Gina Bell, Sustainability Community Coordinator, Dubuque, IA USDN Core Member

Brian Alferman, Sustainability Program Manager, Johnson Co., KS

Miles Brainard, Planner, Rock Island, IL

Debra Knoble, MOGreenFuture, St. Peters, MO  
 Jerry Shechter, Sustainability Coordinator, Kansas City, MO  
 Mona Menezes, Environmental Specialist, Branson, MO  
 Merry Rankin, Sustainability Director, Ames, IA

- **Outside Department Participants:**

It is anticipated that the three pilot cities will collaborate with departments within their cities such as parks, forestry, landfill (composting) and any other associated departments to collect and distribute necessary data for the project.

- **Primary Partners:**

Brett KenCairn, Senior Policy Advisory for Climate and Resilience, Boulder, CO and Director, Urban Drawdown Initiative  
 Brendan Shane, Climate Director, Trust for Public Land

### Project Narrative.

- **Problem Statement.** Most cities focusing on climate action concentrate on methods to reduce emissions, but recent scientific assessments show that climate stabilization now depends on the rapid development of carbon drawdown systems. While there are standardized methods for calculating urban carbon emissions, there are not yet accepted protocols for cities to track and understand the impact of ecosystem-based carbon management activities in the urban setting. This project aims to assist in the critical tool development for urban settings in the Midwest by collaborating with the Urban Drawdown Initiative ([UDI](#)) in developing an urban carbon drawdown assessment and management tool and associated implementation effort. UDI is currently working with a number of larger urban centers including Cleveland, OH. However, through the inclusion of three small to medium sized Midwest cities-- Columbia, MO; Lincoln, NE and Iowa City, IA--this project can adapt and customize the tools and systems being developed in ways that will make them accessible to a larger number of cities in the Midwest and elsewhere.
- **Affecting Action.** The Urban Drawdown Initiative (UDI) has partnered with the Trust for Public Land to build a data and decision support tool to enable cities to optimize carbon drawdown strategies to achieve both carbon sequestration and climate resilience enhancing ecosystem services. An intended outcome of this action is the ability to both quantify carbon benefits and ecosystem services values in ways that enable monetizing these benefits in voluntary carbon and ecosystem services markets.
- **Influencers.** Very little scientific analysis has been done on the carbon drawdown potential of urban land and land types. Local governments have an impact on urban tree canopy, compost application, open space and parks, publicly owned prairies and wetlands and green infrastructure and stormwater features and other green infrastructure. Quantifying how these have an impact on carbon sequestration and ecosystem services with a standardized approach and methodology will assist in making better decisions on how we can most rapidly reduce carbon emissions and prepare municipalities for accounting the carbon drawdown potential of a range of different action options. With these tools, local

governments will be better equipped to project and communicate the costs and benefits of these types of actions. Through also creating opportunities for active community engagement in this process, cities can also build community understanding and support for prioritizing these actions as part of local government activities.

- **If/then statement.** If three cities in the Midwest can pilot this work and gather data in a broader geography, creation of a carbon sequestration and ecosystem services enhancement methodology can be more standardized. Participating Heartland Members can better position their Cities to quantify and understand the most impactful carbon sequestration practices for their locality. If this carbon quantification tool existing, then it will also be possible for cities to quantify the carbon benefits projected in the Global Protocol for Community Greenhouse Gas (GPC) accounting. If project are planned in accordance with these protocol, then it will also lay the foundation for creating revenue streams based on the financial value of these services. The information gathered in this project will also inform the development of new protocol GPC protocol being developed by ICLEI and the WRI related to soil-based sequestration.
  
- **Project Deliverables.**
  - 1) TPL and UDI will create a streamlined version of the existing Decision Support tool for three mid-west cities: Columbia, MO; Lincoln, NE and Iowa City, IA
  - 2) The process used in creating this tool will create a replicable model to more rapidly and cost effectively produce similar tools for other communities.
  - 3) UDI will provide technical support for these three cities to identify high impact sequestration opportunities for each city.
  - 4) Each city will establish at least one replicate trial of carbon drawdown treatments on parks or other publicly controlled sites contributing to critical knowledge development in effective carbon sequestration treatments.
  - 5) UDI will coordinate support for each community to launch a community carbon drawdown “challenge” that engages dozens to hundreds of local residents.
  - 6) UDI will provide face-to-face training and capacity building to Heartland Network members in Columbia, MO in mid-July 2020 to increase functional knowledge in carbon sequestration, the linkages between carbon sequestration and ecosystem services, and methodologies for identifying and implementing high impact carbon sequestration and ecosystem services projects. This training will also identify strategies for integrating equity-based community development as part of the development and ongoing implementation of carbon sequestration and ecosystem services undertaken in a Midwestern urban setting.
  
- **Support of a USDN Priority.** The goal of this project is to find effective urban carbon sequestration methods to reduce greenhouse gas emissions. Carbon sequestration is an emerging field and is not yet identified as one of USDN’s High Impact Practices, although this project could tie into Organic Waste Management through composting and other soil

modification practices such as biochar<sup>9</sup>. This project also addresses all four of USDN's Climate Resilience goals by helping members work together to accelerate effective action, integrating climate resiliency into existing plans, helping external stakeholders and partners to more effectively support USDN members, and positioning USDN as a leading network. This project will cover resiliency topics by identifying opportunities to utilize carbon sequestration in ways that enhance ecosystem services critical to climate change resilience-- shading, storm water management, local air quality improvement, biodiversity protection and enhancement. Equity will be integrated throughout the project through both improving the environmental quality of at-risk communities, and through designing implementation strategies to create new economic opportunities for economically disadvantaged residents.

- **Maturation.** This project spans the concept development and prototyping stages of the Innovation Pathway. It builds on work funded through the IF in which five cities are developing linkages between urban organic wastes and carbon sequestration by helping to develop a platform that can integrate this information into a carbon drawdown and ecosystem services planning and implementation tool that will help cities optimize carbon drawdown actions to achieve both climate stabilization (carbon mitigation) and climate resilience (through ecosystem services) objectives.
- **Potential Uptake.** The three lead cities in the Heartland Network will work with TPL and UDI to collect data and prototype the rapid carbon assessment and management tools. The application of the tool will be customized to the particular circumstances and existing initiatives and opportunities of each of the three cities. This work will provide a critical reference point for midwestern cities, enabling the rapid refinement and deployment of these approaches to other cities in the region and around the Country. Over 60 cities and counties have signed up to participate in a USDN carbon drawdown working group in 2020. The work accomplished through this grant will accelerate the capacity to support these next wave cities in scoping and developing similar carbon drawdown action plans. A convening in Columbia, MO will take place in July for all members in the Heartland Network to receive an orientation on the basic features of the carbon management tool and to provide feedback on key applications and features that will be useful to member cities. This feedback will be integrated in TPL's tool refinement process. We anticipate working versions of the tool to be available for a follow up training session in Q4 of 2020. Many of the members in the Heartland Network are not USDN members, but still have a desire to use a decision tool like this.
- **Measurement of Success and Impact Metrics.** Specific measures of project success will include:
  - **Plans and projects** – Each of the three lead cities will have completed a draft

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<sup>9</sup> Biochar is charcoal produced from plant matter and stored in the soils as a means of removing carbon dioxide from the atmosphere.



drawdown action plan and identified a minimum of 1-3 projects which it plans to implement within the next 6-12 months.

- **Research** – Each city will develop relationships with researchers supporting 1-3 carbon drawdown treatment tests relevant to the most promising carbon drawdown opportunities in their respective communities.
- **Community Engagement** – Each city will have planned and scheduled for implementation at least one community “challenge” or similar program creating opportunities for community participation in carbon sequestration activities.
- **Carbon drawdown** – Within 3 years of this project, each city will have initiated carbon drawdown actions that are projected to achieve thousands of tons of carbon drawdown over a 10-year period.
- **Equity** – Each lead city will identify at least one opportunity for developing implementation strategies that create substantive environmental and economic opportunities for disadvantaged constituencies in their communities.
- **Replication** – The collaboration between Heartland Cities, TPL and UDI results in a streamlined process for developing carbon sequestration and ecosystem services planning tools and systems that are adopted by 20 or more cities over the next 3-5 years.

**Project Management.**<sup>10</sup>

| Key Output   | Measure of Success  | Responsible Party  | Due Date  | Cost/Source <sup>11</sup>               |
|--|---|--|---|---|
| <i>Strategic planning support for Columbia, Lincoln and Iowa City</i>              | <i>Each city has developed a written strategy with task plans, timelines and milestones for implementing their carbon management project</i>  | <i>Urban Drawdown Initiative</i>   | <i>July = Draft 1<br/>Final drafts =<br/>Sept 1st</i> | <i>\$2,000 from USDN IF, upon award</i> |
| <i>Data collection for rapid assessment tool</i>                                   | <i>Columbia, Lincoln and Iowa City gather data for beta version of streamlined assessment</i>   | <i>Staff in Columbia, Lincoln, and Iowa City with technical support from Urban Drawdown Initiative</i> | <i>Sept 30th 2020</i>                                 | <i>\$20,000 from USDN IF</i>            |
| <i>Convening in Columbia, MO with Heartland Network, Urban Drawdown Initiative</i> | <i>Participants react to streamlined version of the Carbon Management Decision Support Tool identify additions or changes. Heartland Network also visits sites in Columbia with Urban Drawdown Initiative staff</i> | <i>Urban Drawdown Initiative and Trust for Public Land revises with input from participants</i>        | <i>July 15-17, 2020</i>                               | <i>\$15,835 from USDN IF</i>            |
| <i>Develop a streamlined version of the TPL climate Smart Cities Decision</i>      | <i>The streamlined assessment will be a beta version that three Heartland cities will use to quantify urban drawdown in their</i>   | <i>Urban Drawdown Initiative and Trust for Public</i>  | <i>Beta version by October of 2020.</i>               | <i>\$50,000 from USDN IF</i>            |

<sup>10</sup> Shading indicates recipient of funds from USDN. Orange = UDI. Purple = USDN holds for payment to cities for convening costs (including upfront payment to Columbia for on-site expenditures)

<sup>11</sup> Cost / Source calculations shown in detailed budget of Attachment A: “2020\_USDN\_IF\_Heartland\_ATTACHMENT\_A”

|  |  |   |   |                       |
|--|--|---|---|-----------------------|
| support tool for three cities (Columbia, Lincoln, and Iowa City) | communities. This prototype will be a pilot that can be evaluated and revised for the use in other cities. This tool will lay the foundation for other Heartland communities to understand the impact of carbon sequestration of their urban resources | Land  | Final version by December 2020  |                       |
| Community drawdown research/pilot projects                       | Set up replicated trials of carbon drawdown treatments on parks or other publicly controlled sites (all three cities?)   | Urban Drawdown Initiative, Columbia, Lincoln and Iowa City staff                                      | Installation planning and material acquisitions for implementation in spring 2021 | \$25,500 from USDN IF |
| Community carbon drawdown “challenge”                            | Two on-site sessions with city staff and other stakeholders  | Urban Drawdown Initiative, Columbia, Lincoln and Iowa City staff                                      | UDI, Community campaigns ready for launch March 2021                              | \$30,500 from USDN IF |
| Quarterly Reports  | USDN receives a progress update that can be shared as needed   | UDI drafts, Columbia reviews and submits  | July 1, Oct 1, Dec 31st 2020  | \$1,200               |
| Final Grantee Report   | USDN receives a brief, internal facing report outlining project summary  | UDI drafts, Columbia submits on behalf of all Participants with assistance from Lincoln and Iowa City | April 1, 2021   | \$800                 |
| 1-yr Impact Reporting  | USDN receives a brief, internal facing report outlining lessons  | Cities track impacts; project team submits on behalf of all participants                              | January 1, 2022   | \$0                   |

**Proposed Budget:**

| USDN Innovation Fund Project Budget  |                  |                  |               |                      |                           |                           |  |
|--|------------------|------------------|---------------|----------------------|---------------------------|---------------------------|--|
| Heartland Drawdown Initiative  |                  |                  |               |                      |                           |                           |  |
| Line Item/Activity   | Costs (USD)      | Budgeted         |               | Total Project Budget | Actuals for USDN IF Grant | Actuals for Other Sources | Notes  |
|  |                  | USDN IF Grant    | Other Sources |                      |                           |                           |  |
| Strategic planning support   | \$2,000          | \$2,000          |               | \$2,000              |                           |                           | 15 hours of UDI Director time (5 hours/city) @133/hr. Payment to UDI   |
| Rapid Assessment of Carbon Drawdown Opportunities data collection and template development | \$20,000         | \$20,000         |               | \$20,000             |                           |                           | 160 hrs. at \$125/hr. paid to UDI upon approval by lead. 50% of funding will be provided at the outset of support (May-June). Remainder in 2 progress payments   |
| Convening in Columbia, MO  | \$15,835         | \$15,835         |               | \$15,835             |                           |                           | See Tab "Convening estimates" for detail. USDN holds for payment to cities for convening costs (including upfront payment to Columbia for on-site expenditures)  |
| Carbon Management Decision Support Tool  | \$50,000         | \$50,000         |               | \$50,000             |                           |                           | 50% paid up front to initiate project development (May 2020). Remainder in two progress payments based on lead approval. Payment to UDI  |
| Community drawdown research pilot projects   | \$25,500         | \$25,500         |               | \$25,500             |                           |                           | Funding paid to UDI for distribution to local partners (\$8,500 per city * 3 cities for materials and local tech support) based on review and approval by each core city and project lead. Expenditures staged in three payments starting late fall 2020 |
| Community carbon drawdown "challenge"  | \$30,500         | \$30,500         |               | \$30,500             |                           |                           | Funding paid to UDI Consultant support \$5,000 (40 hours @\$125), \$8,500 for each of three cities for local coordination and materials. Payment to UDI. Expenditures staged in three payments starting late fall 2020                                   |
| Report production  | \$2,000          | \$2,000          |               | \$2,000              |                           |                           | 3 quarterly reports @ 4 hours each @ \$100/hr<br>1 Final report @ 8 hours @ \$100/hr<br>Payments to UDI  |
| <b>TOTAL</b>   | <b>\$145,835</b> | <b>\$145,835</b> | <b>\$0</b>    | <b>\$145,835</b>     | <b>\$0</b>                | <b>\$0</b>                |  |

**Convening Cost Estimates:**

| Participant  | City           | Distance to COMO                            | Mileage Rate | Total Round Trip  | or Rental Car   | Air Fare          | Motel*            | Meals**           |                   | Total              |
|--|----------------|---|--------------|-------------------|-----------------|-------------------|-------------------|-------------------|-------------------|--------------------|
| Danielle   | Columbia       | 0   | 0.58         | \$0.00            |                 |                   |                   | \$139.00          |                   | \$139.00           |
| Barbara  | Columbia       | 0   | 0.58         | \$0.00            |                 |                   |                   | \$139.00          |                   | \$139.00           |
| Miles  | Rock Island    | 275   | 0.58         | \$319.00          |                 |                   | \$350.00          | \$139.00          |                   | \$808.00           |
| Brenda   | Iowa City      | 250   | 0.58         | \$290.00          |                 |                   | \$350.00          | \$139.00          |                   | \$779.00           |
| Frank  | Lincoln        | 320   | 0.58         | \$371.20          |                 |                   | \$350.00          | \$139.00          |                   | \$860.20           |
| Jerry  | KCMO           | 140   | 0.58         | \$162.40          |                 |                   | \$350.00          | \$139.00          |                   | \$651.40           |
| Debra  | St. Peters     | 100   | 0.58         | \$116.00          |                 |                   | \$350.00          | \$139.00          |                   | \$605.00           |
| Catherine  | St. Louis      | 150   | 0.58         | \$174.00          |                 |                   | \$350.00          | \$139.00          |                   | \$663.00           |
| Jasmine/Kim  | Lawrence/DC    | 175   | 0.58         | \$203.00          |                 |                   | \$350.00          | \$139.00          |                   | \$692.00           |
| Brian  | Johnson County | 175   | 0.58         | \$203.00          |                 |                   | \$350.00          | \$139.00          |                   | \$692.00           |
| Ashley   | Springfield    | 190   | 0.58         | \$220.40          |                 |                   | \$350.00          | \$139.00          |                   | \$709.40           |
| Mona   | Branson        | 220   | 0.58         | \$255.20          |                 |                   | \$350.00          | \$139.00          |                   | \$744.20           |
| Merry  | Ames           | 350   | 0.58         | \$406.00          |                 |                   | \$350.00          | \$139.00          |                   | \$895.00           |
| Gina   | Dubuque        | 350   | 0.58         | \$406.00          |                 |                   | \$350.00          | \$139.00          |                   | \$895.00           |
| Eric   | Cedar Rapids   | 275   | 0.58         | \$319.00          |                 |                   | \$350.00          | \$139.00          |                   | \$808.00           |
| Becky  | Johnson County | 250   | 0.58         | \$290.00          |                 |                   | \$350.00          | \$139.00          |                   | \$779.00           |
| 7 Columbia staffers  |                |   |              |                   |                 |                   |                   | \$973.00          |                   | \$973.00           |
| Local transportation, materials, incidentals for convening |                |   |              |                   |                 |                   |                   |                   | \$1,775.00        | \$1,775.00         |
| Brett  | Boulder        |   |              |                   | \$250.00        | \$500.00          | \$350.00          | \$139.00          |                   | \$1,239.00         |
| Brett's Asst.  | Boulder        |   |              |                   |                 | \$500.00          | \$350.00          | \$139.00          |                   | \$989.00           |
| <b>Total:</b>  |                |   |              | <b>\$3,735.20</b> | <b>\$250.00</b> | <b>\$1,000.00</b> | <b>\$5,600.00</b> | <b>\$3,475.00</b> | <b>\$1,775.00</b> | <b>\$15,835.20</b> |
| Assume allow half day for travel, two nights in motel.     |                |   |              |                   |                 |                   |                   |                   |                   |                    |
| *Tiger Motel at \$147/night plus taxes/fees x 2 nights:    |                |   | \$350        |                   |                 |                   |                   |                   |                   |                    |
| **Meals at GSA Rate:                                       |                | \$55/day and \$42 first/last day of travel: |              | \$139.00          |                 |                   |                   |                   |                   |                    |

**Heartland Cities Carbon Drawdown Initiative -- WORKPLAN**

| Activity   | Deliverable  | Due Date                              | Budget    | Payment   | Payment Details   |
|--|--|---------------------------------------|-----------|-----------|---|
| <b>Activity 0:</b> Project kickoff with Cities and UDI team and UDI Communications Briefing with USDN. | <b>Deliverable 0:</b> Agreements signed. Set up meeting with USDN Communications Director Julia Peek to discuss how to frame and message this work   | By June 1st, 2020                     |           |           |   |
|  | <b>Payment #1:</b> \$35,000 to UDI, with receipt of Deliverable 0  | June 1, 2020                          |           | \$ 35,000 | Includes pre-payment of 50% of Activities 2 & 3   |
| <b>Quarterly Report #1</b>   | <b>250 word update</b> compiled by UDI and submitted by Lead City contact  | Q1: July 31, 2020                     | \$ 400    |           | (included in payment #2)  |
| <b>Activity 1:</b> Strategic planning support for Columbia, Lincoln and Iowa City                      | <b>Deliverable 1:</b> DRAFT carbon management strategy for each city with associated task plans, timelines and milestones for implementing their carbon management project   | Date: July 31, 2020                   | \$ 22,000 |           | \$22,000 to Urban Drawdown Institute (UDI); \$10,000 in payment 1, \$5,000 in payment 2, \$5,000 in payment 3 and \$2,000 in payment 7  |
| <b>Activity 2:</b> Carbon Management Tool development-Beta Version                                     | <b>Deliverable 2:</b> Beta version of Carbon Management Decision Support Tool developed by TPL and UDI. Cities will provide written feedback identifying additions or changes.                                     | Date: August 31, 2020                 |           |           | \$10,000 to UDI in Payment 2  |
|  | <b>Payment #2:</b> \$17,400 to UDI, with receipt of Deliverable 1  | August 1, 2020                        |           | \$ 17,400 | Includes payment for quarterly report, work on deliverable 1 & 2  |
| <b>Activity 3:</b> Delivery of Final carbon management plans for Columbia, Lincoln and Iowa City       | <b>Deliverable 3:</b> Final version of carbon management plan for each city. Each city has developed a written strategy with task plans, timelines and milestones for implementing their carbon management project | Date: Sept 1, 2020                    |           |           | \$5,000 to UDI for completion of carbon management plans for 3 core cities included in Payment 3  |
| <b>Activity 4:</b> Convening in Columbia, MO with Heartland Network, Urban Drawdown Initiative & TPL   | <b>Deliverable 4:</b> Gathering of Heartland Cities Carbon Management Cohort (Tentatively set for mid-September). Deliverable will be slide decks, agendas, and participant lists                                  | Date: Mid-Sept 2020                   | \$ 15,835 |           | \$15,835. USDN holds for payment to cities for convening costs (including upfront payment to Columbia for on-site expenditures) included in Payment 3. See tab "Convening Costs" for estimates  |
| <b>Activity 5:</b> Delivery of final version of data/decision support tool                             | <b>Deliverable 5:</b> Final version of carbon management decision support tool for each city.  | Date: Sept 30, 2020                   | \$ 50,000 |           | \$50,000 to UDI \$25,000 in Payment 1. \$10,000 in Payment 2. \$10,000 in Payment 3, and \$5,000 in payment 7   |
|  | <b>Payment #3:</b> \$30,835 with receipt of bundled convening reimbursements, and Deliverables 3 & 5.  | September 30, 2020                    |           | \$ 30,835 | Includes \$14,060 to local governments of convening participants including UDI travel/lodging costs and Host City expenses. To be held by USDN until event is scheduled.  |
| <b>Activity 6:</b> Community drawdown research/pilot projects  | <b>Deliverable 6:</b> Set up replicated trials of carbon drawdown treatments on parks or other publicly controlled sites for 3 participating cities.   | Date: Late Fall 2020 - March 31, 2021 | \$ 25,500 |           | \$25,500. Funding paid to UDI for distribution to local partners (\$8,500 per city * 3 cities for materials and local tech support) based on review and approval by each core city and project lead. Expenditures staged in three payments starting late fall 2020 / early 2021 |
| <b>Quarterly Report #2</b>   | <b>250 word update</b> compiled by UDI and submitted by Lead City contact  | Q2: October 31, 2020                  | \$ 400    |           | In payment #4   |
|  | <b>Payment #4:</b> \$15,400 to UDI, with progress payments for Deliverable #6  | November 1, 2020                      |           | \$ 15,400 | Includes payment for Q2 report, and local expenditures towards Deliverable 6 (estimated)  |
| <b>Activity 7:</b> Local pilot projects (Challenge) and research project implementation strategy       | <b>Deliverable 7:</b> Written plan for Challenge projects for 3 host cities.   | Date: Nov 30, 2020                    | \$ 5,000  |           | UDI support \$5,000 (40 hours @ \$125) to plan community challenge projects   |
| <b>Quarterly Report #3</b>   | <b>250 word update</b> compiled by UDI and submitted by Lead City contact  | Q3: January 31, 2021                  | \$ 400    |           | In payment #5   |
|  | <b>Payment #5:</b> \$5,400 to UDI, upon delivery of Deliverable 7 & Q3 report  | Date: February 2, 2021                |           | \$ 5,400  | Includes payment for Q3 report, and technical assistance from UDI to cities in developing Challenge projects  |
| <b>Activity 8:</b> Community carbon drawdown "challenges"  | <b>Deliverable 8:</b> Initiate Challenge projects in core cities   | Date: January 1, - April 1, 2021      | \$ 25,500 |           | Funding paid to UDI Consultant for disbursement. \$8,500 for each of three cities for local coordination and materials Payment to UDI. Expenditures staged in three payments starting late fall 2020 / early 2021   |
|  | <b>Payment #6:</b> \$15,000 towards Deliverable 8 accomplishments  | Date: February 2, 2021                |           | \$ 15,500 | Partial payments for Challenge project expenditures (estimated)   |
| <b>Final Grantee Report, Photos, and Budget Reconciliation</b>   | <b>Deliverable:</b> Final grantee report, high resolution photos (.jpg format) and final budget  | Date: April 30 2021                   | \$ 800    |           | In payment #7   |
|  | <b>Payment #7:</b> \$26,300, upon delivery of Final Report   | Date: April 30, 2021                  |           | \$ 26,300 | Includes remaining payments for tool and strategy development   |
| <b>Grant de-brief call and possible webinar scheduling</b>   | A call with USDN and possible scheduling of grantee PPT presentation to the network  | Dates to be set at grant close        |           |           |   |

\$ 145,835 \$ 145,835