

Appendix A:
Suncor Settlement Supplemental Environmental Project
APPLICATION COVER SHEET

Project Title: Commerce City Community Air Monitoring Network Pilot Program
Organization: City of Commerce City
Address: 7887 E 60th Avenue
City, State, Zip: Commerce City, Colorado, 80022
Email Address: dmartinelli@c3gov.com **Website Address:** www.c3gov.com
Phone Number: 3032893670
Fax Number: N/A
Federal Tax Identification Number: 84-6006924
Legal Tax Status (check one): Nonprofit* Governmental Entity/School
Fiscal Sponsor organization, if applicable N/A
Fiscal Sponsor contact name & information, if applicable N/A

*If nonprofit, you must attach a copy of your IRS tax exempt letter to this SEP Application

By signing and submitting this application, the applicant agrees to operate the program as described in the SEP Application and in accordance with the department's SEP Policy. The applicant agrees that the information provided in this application is, to the best of the applicant's knowledge and based on reasonable inquiry, true, accurate, and complete. The applicant understands that knowingly submitting any false information on this application could result in the project not being considered for funding or voiding any current or future contracts with the department of Public Health and Environment.

Print name of Authorized Official: Jason R. Rogers, Community Development Director

Signature of Authorized Official:

*Please insert electronic signature into the box on the right



Date: 1/4/2021 **Title:** Community Development Director

Project Manager or Main Project Contact:

Name: Domenic Martinelli **Title:** Environmental Planner
Address: 7887 E 60th Avenue **Email:** dmartinelli@c3gov.com
Phone: 303-289-3670

Total Amount of SEP Funds Requested: \$388,250

Total Matching/In-Kind Contributions (if any):	\$5,000. Additional in-kind contribution of Commerce City Staff time will be anticipated during this process, from the City's Community Development Department, Planning Division, GIS Division, and Communications Division.
Total Project Cost:	\$393,250

Suncor Settlement Supplemental Environmental Project APPLICATION FORM

Project Title	Commerce City Community Air Monitoring Network
Geographical Area to Benefit Most Directly From Project	<p>Most monitoring locations funded under this application will be placed within areas defined as Geographic 1st Tier in Section 3.1 (areas within 2 miles or less of the Suncor property boundary) that are within the City of Commerce City's jurisdictional boundaries.</p> <p><i>See Appendix B - Project Boundary & Land Use Map</i></p>
Community Applicant or Partnership	<p>The City of Commerce City will be the primary applicant in this grant proposal. The City will be utilizing an authorized subcontractor to conduct monitoring services on behalf of the City. The city may additionally utilize authorized subcontractors for portions of community engagement surrounding monitoring location selection, and eventually analysis of monitoring data collected.</p> <p>All monitoring data that is collected will be made available through a publicly accessible interactive portal hosted on the City's domain (www.c3gov.com), as well as being made available to the Colorado Department of Public Health & Environment, Tri-County, Health Department, surrounding jurisdictions (Adams County, Denver), and Suncor for their use and analysis. Public display of continuous monitoring data will be managed and facilitated by FTE employees of the City and its contractors, if necessary.</p>
Eligible SEP Category	<p style="text-align: center;"> <input type="checkbox"/> Pollution Prevention <input type="checkbox"/> Environmental Restoration <input checked="" type="checkbox"/> Environmental Education and Training <input type="checkbox"/> Public Health and Safety </p>
Project Summary	<p>The City of Commerce City proposes to utilize a total of \$393,250 allocated through the State's Supplemental Environmental Project fund in order to develop a low cost air quality monitoring network for areas in Commerce City's jurisdiction within 2 miles of the Suncor property boundary. Monitors would capture PM_{2.5} and Total VOC's, and data would be displayed on a public interface hosted and maintained by the City of Commerce City on its main website. The City would take an intentional and thoughtful approach to engaging priority community members and residents disproportionately impacted by air pollutants in shaping the design of the program. This includes the overall count and location of community monitors, how information received from monitoring is disseminated and distributed to the public, and any other considerations that arise from the community engagement process. Following the conclusion of an initial 2 year pilot project term, the City would publish a random population sample survey to assess the effectiveness of its engagement strategies around monitoring, analyze the data collected, make a series of policy recommendation around air quality impacts received from the data and recommendations for a future permanent monitoring network in the City.</p>

<p>Project Narrative</p>	<p>The City of Commerce City formally requests that the evaluation committee review the submitted application for a proposed low cost air quality monitoring network in the southern portion of our City. Compared to other locations in the Denver Metro Area, a significant gap in continuous air monitoring technology exists within the area defined as the Geographic First Tier in the RFA scope, specifically those lands that are contained within Commerce City’s Jurisdictional boundaries. Neighborhoods in this geographic region (Rose Hill, Derby, Adams City, DuPont, Clermont) have a combined median household income of \$44,908, have a majority population of 66% Hispanic or Latino, has 32% of its population under the age of 18, and has 27% of its population commute to work via some means other than single occupancy vehicle (SOV). These communities have been disproportionately exposed to stationary and nonstationary sources of air pollution associated with industrial land use patterns, the Suncor Refinery and vehicular traffic, and have lacked quantitative data necessary to inform public health research and policy development aimed at alleviating air quality impacts. The proposed monitoring network would aim to fill four primary goals:</p> <ol style="list-style-type: none"> 1. To fill a gap in air monitoring technology in the core area of Commerce City 2. Address a commonly articulated need for additional information and community education on air quality conditions in the community 3. Provide information regarding air quality which will empower community members to make decisions regarding their health 4. Develop a series of findings during the initial pilot program that would provide a series of qualitative and quantitative recommendations for the development of a permanent monitoring network. <p>Monitoring technology utilized in the monitoring network would consist of low cost monitors capable of reading PM_{2.5}, PM₁₀, and total Volatile Organics Compounds (tVOC). The sensors will use Photoionization Detectors (PID) detectors for the measurement of tVOC. Recent studies conducted with these low-cost sensors have shown they are relatively stable and can be used as an indicator of the occurrence of a VOC pollution event. The selected VOC sensor will be solar-powered with data transmission by cellular communication which will allow for remote operation. Up to 10 sensors will include an Ultrasonic Anemometer for measurement of wind speed, wind direction, temperature, humidity, and pressure. The overall monitor count and locations would be determined through significant community engagement and outreach efforts, but in no circumstances would exceed 50 monitors. Monitors would be placed exclusively within the geographic extent of the defined project boundary. Monitoring would be conducted on behalf of the City through its subcontractor Pinyon Environmental, working closely with City staff to communicate information and insights in a meaningful way to the residents of Commerce City.</p> <p>The proposed monitoring network would be launched as an initial 2 year pilot program with anticipated equipment deployment in Quarter 4 of 2021, utilizing leased equipment. Following the initial term of the pilot period, the City would develop the final completion report as required by CDPHE following the conclusion of the project term, to include a series of quantitative and qualitative analyses, and recommendations for the development of a permanent monitoring network in the City.</p> <p>The City would plan to leverage existing communication tools and community engagement strategies that are utilized by the City regularly, in addition to newly proposed strategies to reach interested residents and residents of disproportionately impacted and priority communities. Outreach efforts would occur during the initial planning stages to help inform development of the program, and following the launch of the program to provide residents with meaningful and accessible information on the data collected from monitoring technology.</p>
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	<p>The primary method of displaying frequent, up to date readings from monitoring locations would be through the development of a public data portal managed by the City. Monitors will have the ability to transmit readings in 1 minute intervals through csv or json output, to be displayed in tabular and spatial formats on a dedicated page on the City’s website. Using the ArcGIS online platform, a map and a digital dashboard depicting spatial locations of the monitoring stations and current pollutant readings would be available on the designated page, with readings for all locations depicted in a table format below the map.</p> <p>In addition to display of continuous data via the City’s website, tVOC, PM₁₀, & PM_{2.5} data collected from monitoring locations would be consolidated into summaries and easy to disseminate reports for regular distribution to community members utilizing methods such as:</p> <ul style="list-style-type: none"> • Facebook, Twitter, Nextdoor & other official social media platforms • Commerce City Connected newsletter (hard copy monthly publication by the City that is mailed to every home in the City) • Oil and Gas Monthly Update (A monthly presentation given by Commerce City staff during the first regularly scheduled City Council meeting of the month, broadcast live on Channel 8 & streaming online) • Any other relevant communication channels identified by community members (i.e., newsletters, Facebook live, flyers at different community events, etc.). <p>Additional methods to disseminate information from monitoring locations would be determined through engagement with priority communities (youth, older adults, monolingual Spanish speakers, and any others identified throughout the project), which is defined in detail in the <i>Inclusion of Priority Communities</i> section. Additional methods would result directly from the feedback received from these groups regarding how they best receive information in a way that is meaningful and useful to them, and tailor an approach that aims to fulfil those needs.</p>
<p>Expected Environmental or Public Health Benefits</p>	<p>The City anticipates the expected Environmental and Public Health Impacts to emerge from <i>future</i> efforts that result from the utilization of data collected during the pilot period. The collection of monitoring data during the 2 year term, as well as various insights discovered during the community engagement aspects of the project, will be made publicly available and distributed to other government regulatory agencies. Data collected during this period may be utilized during future community health studies, leading to more specific research studies and sampling of specific VOC concentration levels, black carbon and other Hazardous Air Pollutants (HAPS), which could be conducted by the City, other regulatory agencies, or private entities with the purpose of informing public health policy and outcomes.</p> <p>The collection of this data will influence overall policy direction that the City plans to take related to a number of environmental issues. The City is working towards finalizing a contract with its selected finalist for providing Environmental Consulting Services, which will commence in Quarter 1, 2021. This consultant will be responsible for developing overall environmental policy direction for the City, and specifically providing a number of recommendations around Air Quality policies the City can implement through development of future ordinances or incentive strategies. While air monitoring is not covered under the proposed 2021 budget allocation for this request, having a community monitoring network as described in this application, may lead to more accurate, targeted, and specific recommendations that the City’s consultant would be able to develop. A strategically placed monitoring network would be able to identify areas within the City that are regularly showing statistically significant levels of increased VOC, PM₁₀, or PM_{2.5} levels, and allow for proper regulatory considerations to be evaluated to remediate impacts. The City also believes that an additional public health</p>

	<p>impact would come as a result of increased knowledge and understanding of how air quality impacts community health especially with priority populations in the Core City.</p> <p>The City will work with Pinyon Environmental on these efforts, who has 26 years of local expertise in with air quality compliance, including ambient air monitoring, and other aspects of environmental consulting. Pinyon is managing large-scale monitoring projects for government entities such as the Bureau of Land Management, and has completed monitoring specific to oil and gas for local municipalities, such as the Town of Erie.</p>
<p>Inclusion of Priority Communities</p>	<p>The City understands the significance and the importance of engaging its priority communities as part of this process; engaging communities adversely affected by poor air quality is a key component to understanding the existing conditions and developing recommendations that promote public health. If awarded funding, the City would utilize proven methods, as well as innovative approaches and aim to plan <i>with</i> the community, as opposed to seeking approval for a community air-monitoring program that has largely been developed <i>ahead</i> of seeking input and feedback. Community involvement as it relates to this proposal will aim to seek these primary objectives:</p> <ul style="list-style-type: none"> • Determine the appropriate location and quantity of monitoring locations (not greater than the maximum possible number of monitors anticipated under the project budget), in conjunction with CDPHE & EPA regulatory guidelines • Identify additional pollutants to be measured • Determine appropriate additional methods to disseminate continuous monitoring data to the community • Alert directly impacted residents with available access to SMS capable phone or internet access in a timely and meaningful manner, in the event PM_{2.5}, PM₁₀, or Total VOC readings indicate the presence of potentially hazardous air conditions • Inform interested community residents about findings and takeaways associated with air monitoring in a format and manner that is meaningful and accessible to them, including the format and frequency of such updates • Create awareness around the existence of the community air monitoring program, provide education of the insights and takeaways derived from monitoring data, and empower community organizers to disseminate information to community members who typically aren't active or have been excluded from community engagement processes in the past • Assist community members in making informed decisions regarding their health and activity on high pollutant days <p>A critical component of achieving the outcomes listed requires engaging populations in the City that are disproportionately impacted by exposure to air emissions resulting from the Suncor refinery and other industrial uses. Insights received from community members during public engagement processes associated with this effort will be prioritized based on their ability to meet two or more of the following criteria:</p> <ul style="list-style-type: none"> • The community member is a permanent resident within the project boundary (see exhibit B) • The community member speaks a primary language other than English • The community member lives in a household that makes less than 60% of the Average Area Median Income (AMI) • The community member commutes to work in some form other than single occupancy vehicle (SOV)

- The community member has currently or previously experienced cardiovascular or respiratory disease, various forms of cancers, or other ailments reasonably expected to be associated with long term exposure to air pollutants

The City plans to engage these specific populations to not only inform where monitoring locations are installed, but also in disseminating collected data and analyses that occur throughout the process. The City additionally feels that a critical component of success for this outreach process includes creating equitable engagement opportunities for residents that have typically have not been involved in community processes in the past. This includes residents who may have been discouraged in the past due to poor outcomes, having provided unrealized or unconsidered feedback, or have felt skeptical of government processes. The City will also prioritize feedback from youth and elderly community members to ensure that their concerns and feedback are integrated into the project approach.

A requested component of the aforementioned Environmental Consulting Services will include significant public engagement and outreach during the initial stages of these efforts. It is anticipated that significant costs savings can be realized by conducting public engagement associated with determining monitoring locations and providing education and assessments of data received, at the same time that outreach efforts planned for overall environmental policy development for the City are occurring. The City anticipates that the depth, detail, and overall reach of engagement around this air monitoring grant will be enhanced significantly by utilizing this structure. The city additionally plans to leverage such consulting services to help define additional specific community engagement strategies and techniques to be utilized in association with this proposal. None of the allocated funding for Environmental Consulting Services would be utilized for actual Air Monitoring technology or equipment that could be funded under this application.

To build upon existing methods utilized by the city (community meetings, surveys and outreach materials), the City will work with community leaders and Advisory Council members identified through the Environmental Consulting Services contract to determine any additional outreach method best suited for the Commerce City community. Some techniques that may be used include, but are not limited to: Photo Voice, ESRI Story Maps, and Red/Green Framing. To ensure these outreach methods are successful, the City will leverage existing partnerships with organizations such as Cultivando, and established ongoing partnerships with local schools, community organizations, and others identified during the initial development of the program. All public outreach efforts associated with this proposal would include dual English & Spanish presentation materials, meeting minutes, live translation services and meeting notifications & communications.

In addition to seeking input on the overall monitoring network program design during initial stages, the City intends to provide ongoing outreach and education to the community about the monitoring program, leveraging the previously aforementioned community engagement frameworks. A critical focus for the City in this effort is a dual focus on ensuring residents both have access to information, as well as understanding what that information *means*, and what impacts it may have on their health. This may include:

- Weekly Bi-Weekly, or Monthly Summaries of monitoring information by location, including peak levels of pollutant levels measured
- Summaries of acute and long term health risks associated with exposure to the measured pollutants
- Individual actions that residents can take to protect themselves from exposure to measured pollutants

	<ul style="list-style-type: none"> • Discussion of potential policy measures that can be implemented to reduce levels of measured pollutants
<p>Community Impact</p>	<p>The City conducted its own separate public engagement process to help guide which priorities the City should focus on in its RFA Submittal. One critical piece of information received during this process was that many Latino and Spanish speaking residents in the Core City emphasized a need and desire for information and education around the <i>impacts</i> associated with exposure to air pollutants coming from high intensity industrial activities. While this proposal does not aim to derive detailed quantitative analysis of health impacts associated with VOC's or Hazardous Air Pollutants, it does aim to determine the presence of pollutants in certain areas of geographic concern, notify members of the community in the event pollutant levels exceed a significant threshold, and provide opportunities for community education regarding local air quality. Appendix C provides an additional summary of the feedback received during the City's community engagement process.</p> <p>During that community engagement process, the City found that many of the surveyed residents felt that the City's proposal for SEP funds should focus on Air Quality issues, as well as Community Education & Information. This proposal aims to adequately narrow in and focus on those two issues, through the creation of a community focused Air Monitoring program that is would provide basic, and real time up to date information on basic Air Quality measures in the Core City. This proposed monitoring network aims to inform some of the additional goals that the City has heard from the community. This includes understanding the health impacts from exposure to specific VOC's by gaining data points on <i>where</i> higher levels of Total VOC's are present and <i>how frequently</i> these circumstances are occurring, which can lead to targeted deployment of more specific sampling analyses that conducted by other parties (such as CDPHE's CAMML mobile lab). While this proposal will initially utilize leased monitoring equipment for an initial 2 year term, this will lead to the City and community gaining a greater understanding of what the primary geographic areas of concern are and the relationship the community ultimately has with the program. This will then lead to strong quantitative and qualitative insights that can be incorporated into a more permanent, long-term air monitoring program for the City after the closing of the pilot period.</p> <p>AMBG Consulting was founded in 2019 with the belief that those who are most impacted by funding and planning decisions should be the key stakeholders informing and making these decisions. Consultants at AMBG bring experience in community outreach, engagement, and organizing, as well as capacity building, strategic planning, data collection, and evaluation. Their work is informed by professional training in public health, psychology, sociology, and urban and regional planning. Notable projects that have been completed by AMBG Consulting include: The Longmont Equitable Carbon-Free Transportation Roadmap (estimated completion in 2021), Larimer County Latinx Leadership Development Scan (2019) and the Landscape Assessment of Community Organizers (2020). Consultants at AMBG have also conducted strategic outreach and evaluation through the Sun Valley Food Access Collaborative Food Summit (2019) and the Montbello Freshlo Walkable Loop (2020).</p> <p>Lotus Engineering and Sustainability, LLC, has been supporting sustainability and climate action planning, projects, and programs for local governments and communities since 2015. Their team is skilled in sustainability planning, stakeholder facilitation and community engagement, data analysis, public policy, and greenhouse gas accounting.</p>
<p>Project Evaluation and</p>	<p>Evaluation of the project outcomes and determining recommendations for a permanent monitoring network will be conducted via a number of selected quantitative metrics, as well as through a random population sample survey evaluating project outcomes following the conclusion of the pilot period. Insights derived from the key project indicators and the final</p>

<p>Communication</p>	<p>survey will be incorporated into the Final SEP Completion report, and published on the City’s website for public inspection. Proposed indicators will focus strongly on communication reach, aiming to quantify <i>how</i> many members of the community had regular access to the monitoring data, which communication mediums were most successful in providing information to the greatest number of interested persons, and which mediums were most successful in regularly and consistently reaching members of priority community groups. Metrics for measuring communications are proposed as follows:</p> <ul style="list-style-type: none"> • Engagements - Facebook, Twitter, Nextdoor & other social media platforms: Typical metrics like total reach, likes, shares, and comments would be analyzed regularly for the proposed monitoring summaries. This includes posts shared by other community non-profits on behalf of the City. • Attendance Counts - in person or remote: How many individuals attended a community meeting where development of the proposed community monitoring network were discussed? How many individuals attended meetings where outcomes from a weekly or monthly monitoring report were discussed? This may include attendee counts from City Council meetings, other City Boards & Commission meetings, or community meetings where the monitoring program is specifically discussed in detail. • Page views: how many times was the public monitoring portal viewed on a daily, weekly & monthly basis? How many unique viewers saw the page in comparison to other pages on the City’s website? • Survey responses - following the conclusion of the pilot program, a random population sample survey is proposed that would measure the effectiveness of the communication methods in the community. Questions would revolve around assessment of the awareness of the program, assessment of user functionality and ease of access to the information, if access to information has impacted their decision making, what insights the user took away from the provided data, if they feel their understanding of air quality issues has increased, and recommendations and critiques the user had of the City’s approach to community air monitoring (in general). <p>In addition to utilizing the aforementioned communication metrics, the City would evaluate a variety of metrics generated from the air quality data collected from monitoring locations during the pilot period term. In the final SEP Completion report, this data will be compared to an initial set of hypotheses and anticipated outcomes, as well as the intended goals that were set for the pilot project. Recommendations would then be incorporated into the final report for a future permanent low cost monitoring network to be developed in the City.</p>
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	Budget Category	Description	SEP Cost	Matching or In-kind Funds	Total Cost
<p>Project Budget</p>	<p>Personnel (Salaries, Benefits, Wages)</p>	<p>City Staff Time Contribution (Community Development, GIS, Communications, Parks, Recreation & Golf other departments as needed).</p>	<p>\$0</p>	<p>Undetermined \$ amount, but significant staff time contribution anticipated.</p>	<p>\$0</p>
	<p>Materials and Supplies</p>	<p>Community Engagement / Education Materials & Supplies</p>	<p>\$10,000</p>	<p>\$5,000</p>	<p>\$15,000</p>
	<p>Major Equipment</p>	<p>PM_{2.5}, PM₁₀ & tVOC Monitors (50 max @ \$2,300 / unit)</p>	<p>\$117,500</p>	<p>\$0</p>	<p>\$117,500</p>

		Humidity, anemometer, & wind direction equipment (10 max @ \$2,000 / unit)	\$20,000	\$0	\$20,000
		SUMMA Canister (24 deployments @ \$1,625 per deployment, incl labor & lab costs)	\$39,000	\$0	\$39,000
	Contractors/ Subcontractors	Community Engagement Consulting Budget - AMBG	\$30,000	\$0	\$30,000
		Air Quality Data Analysis & Consulting Budget - Pinyon	\$75,000	\$0	\$75,000
	Other Direct Costs	Data hosting (\$10/month/monitor x 50 monitors x 2 years)	\$12,000	Contribution of hosting public data portal on City Website	\$12,000
		Ongoing equipment maintenance, upkeep & calibration costs	\$49,000	\$0	\$49,000
	Indirect Costs (limited to no more than 10%)	Contingency fund (cost overruns, change orders, unexpected costs that arise during the pilot period)	\$35,750	\$0	\$35,750
	Total:		\$388,250	\$5,000	\$393,250

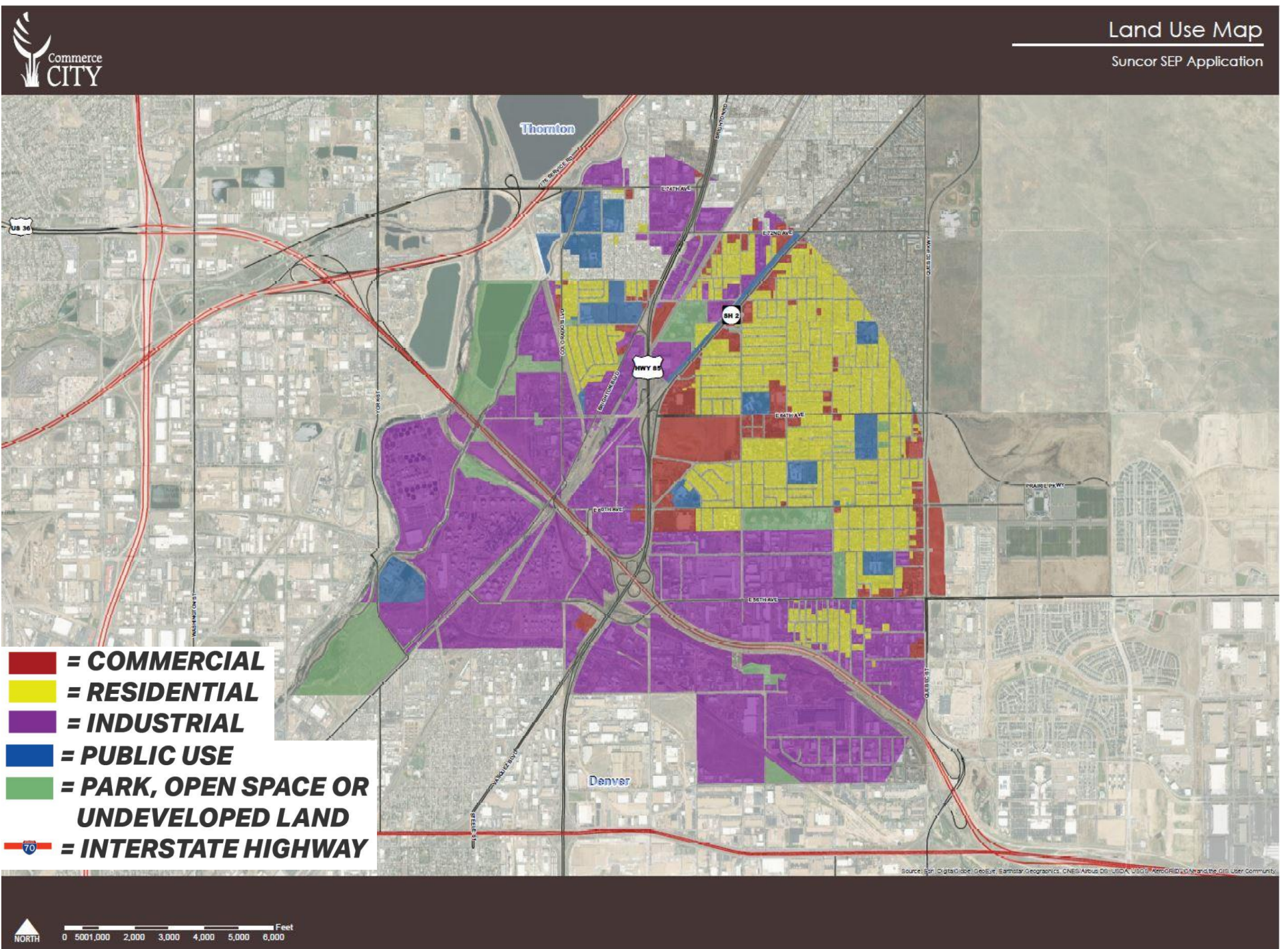
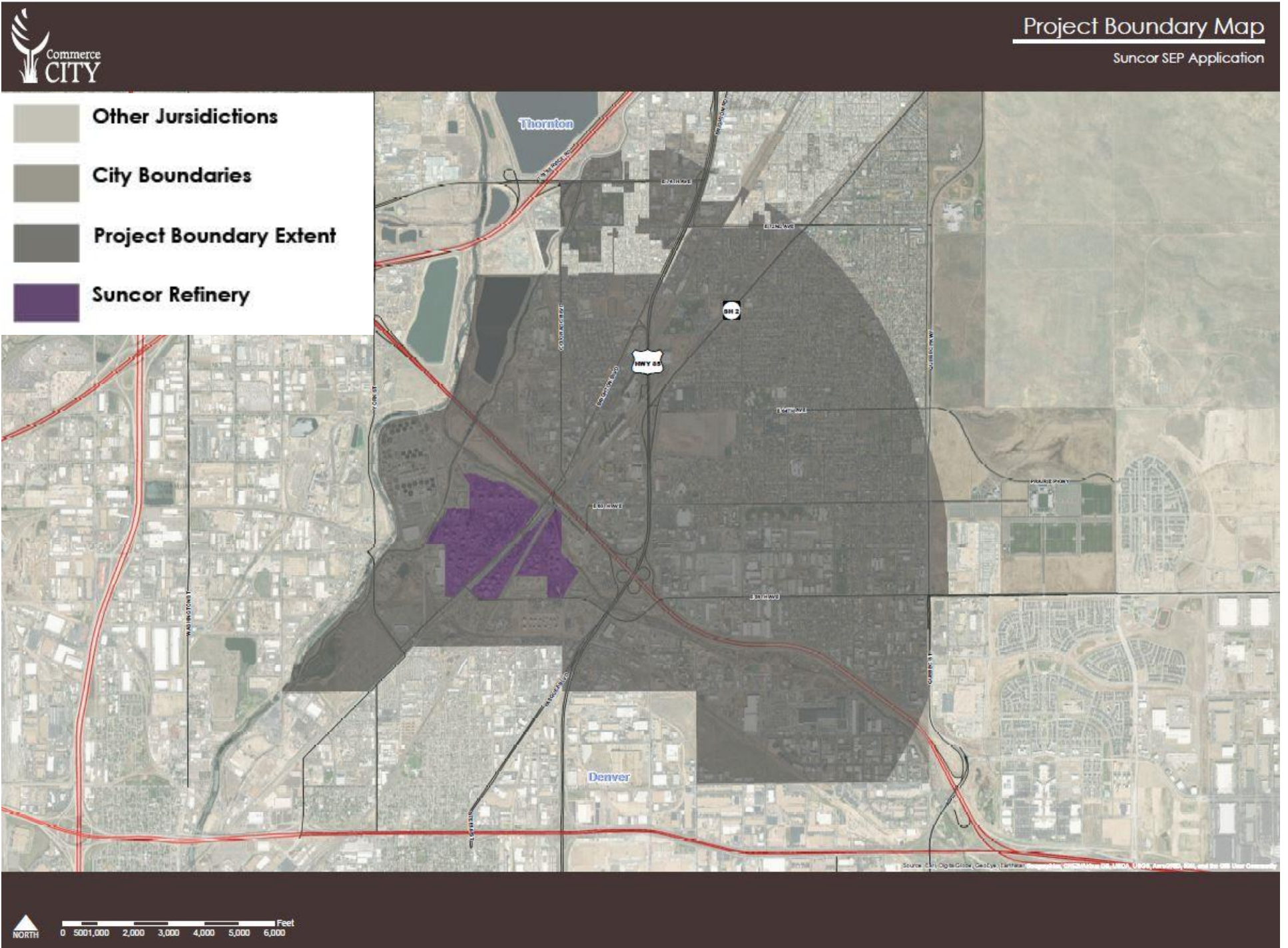
Budget Narrative

The proposed project budget includes all anticipated equipment costs, labor costs, and data hosting costs expected to be associated with the grant. The cost breakdown for each budget category is as follows:

- **Personnel** - a dollar amount estimate is not provided, but all necessary staff time from City employees in the Community Development, GIS, Communications, Parks, Recreation & Golf, & other necessary departments necessary to facilitate the grant will be provided as in-kind contributions.
- **Materials and Supplies** - an estimated \$10,000, plus an in kind contribution of \$5,000 for a total of \$15,000 is anticipated in order to carry out community engagement efforts as described in the application.
- **Major Equipment** - All necessary equipment to conduct monitoring as proposed in the application is listed under this category, for a total of \$176,500. The total number of monitors and locations will be determined through the community engagement process, and the value listed represents the *maximum* value that would be assigned to monitoring equipment costs. Spec sheets for monitoring equipment are listed separately in Appendix D.
- **Contractors / Subcontractors** - This includes the consulting budget for community engagement and community outreach efforts to be provided by AMBG, and the consulting budget for analysis of recorded air monitoring data to be provided by Pinyon Environmental, for a total of \$105,000.
- **Other Direct Costs** - Other direct costs reasonably expected with execution of the grant, include the cost of hosting collected air quality data online in a manner that can be easily translated to a publicly accessible database, and the cost of ongoing equipment maintenance, upkeep, and calibration costs, expected over the two year pilot program, for a total of \$61,000.
- **Indirect Costs** - A contingency budget of \$35,730 is proposed to account for potential cost overruns, change orders, or any unexpected costs that arise during the pilot period. This fund represents 9% of the total project cost.

	Activities	Staff Responsible	Completion Date
Project Schedule/Work Plan	Initial Public Engagement - Program Evaluation & Selection of Monitoring Locations	Commerce City Staff, Lotus Engineering & Sustainability, AMBG Consulting, Pinyon Environmental	Q2 - Q3 2021
	Obtaining & Deploying Community Monitoring Technology	Commerce City Staff, Pinyon Environmental	Q3 2021
	Development of Public facing data portal	Commerce City Staff	Q3 2021
	Program Launch - Press Release. Detailed description of ongoing engagement efforts, methods to access information	Commerce City Staff	Q4 2021
	Initial Monitoring Period	Commerce City Staff, Pinyon Environmental	Q4 2021 - Q4 2023
	Ongoing Public Engagement - community education, dissemination of monitoring information collected	Commerce City Staff, Lotus Engineering & Sustainability, AMBG Consulting	Q4 2021 - Q4 2023
	Development of project report, set of overall policy recommendations on air quality regulations	Lotus Engineering & Sustainability, Pinyon Environmental	Q4 2022- Q2 2024
	Final SEP project support submitted	Commerce City Staff, Lotus Engineering & Sustainability, Pinyon Environmental	Q2 2024
	Reporting	<div data-bbox="451 1052 1365 1144" style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p style="color: red; text-align: center;">The applicant has reviewed the reporting requirements below and if selected for SEP funding, agrees to adhere to these requirements.</p> </div> <p>Applicant’s Biannual Status Reports The applicant will submit a biannual project status report to the department’s SEP Coordinator. Status reports will be submitted using the department’s template and include the following information:</p> <ul style="list-style-type: none"> ● A description of activities completed to date; ● A budget summary table listing funds expended to date by budget category; and ● A discussion of any anticipated changes to the project scope or timeline. <p>Applicant’s Final SEP Completion Report The applicant will submit the SEP Completion Report to the department’s SEP Coordinator within 30 days of project completion. The applicant’s Final SEP Completion Report will be submitted using the department’s template, and will contain at a minimum:</p> <ul style="list-style-type: none"> ● A detailed description of the project as implemented; ● A summary table identifying project deliverables and tasks along with the associated completion date; ● A description of any operating problems encountered and the solutions thereto; ● A full expense accounting including itemized costs, documented by copies of purchase orders, contracts, receipts or canceled checks; ● Demonstration that the SEP has been fully implemented in accordance with the SEP application; ● A description of the environmental or public health protection and improvement resulting from implementation of the SEP along with quantification of the outcomes and benefits; ● Examples of brochures, educational or outreach materials developed or produced as part of the SEP; and ● Photographs documenting both project implementation and results. 	

Appendix B:
Suncor Settlement Supplemental Environmental Project
 Project Boundary and Land Use Maps



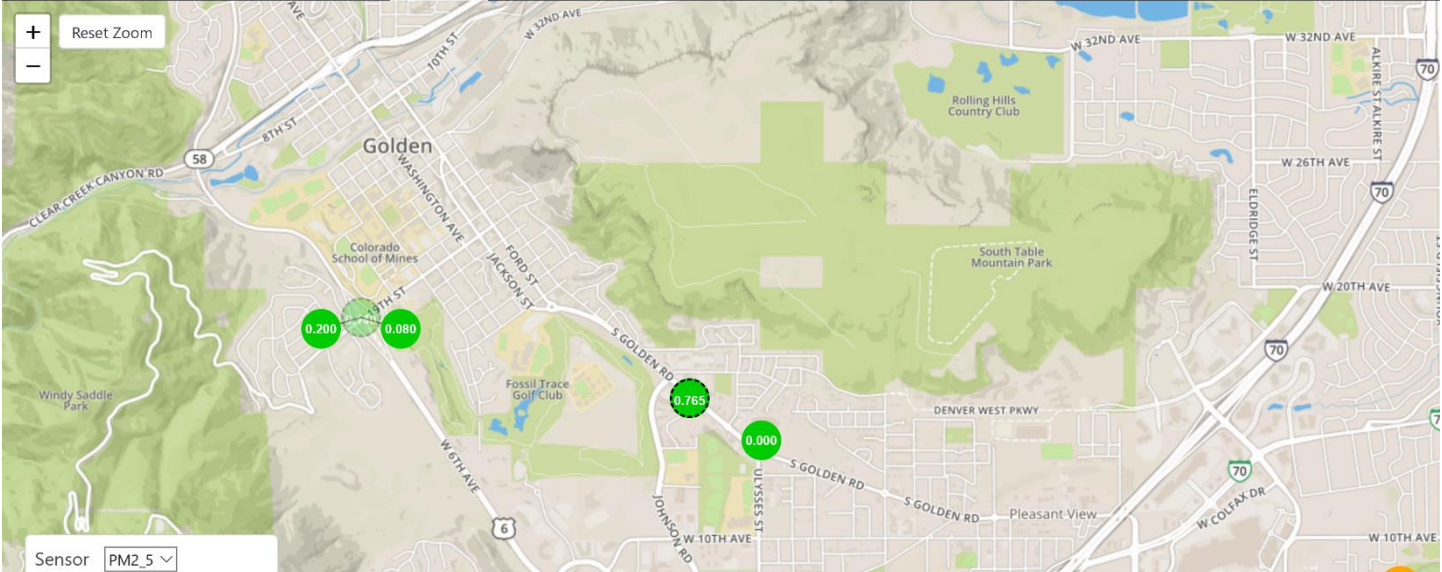
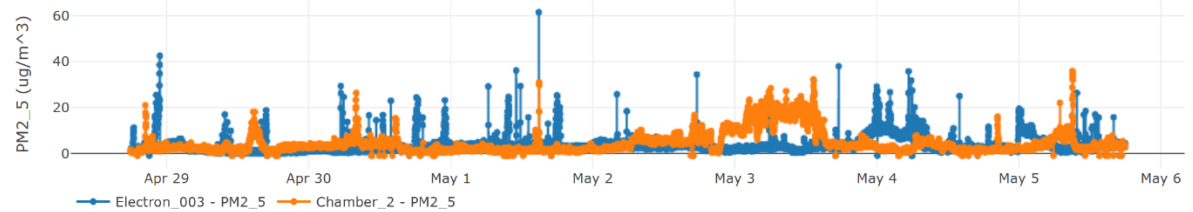
Appendix C: Suncor Settlement Supplemental Environmental Project Examples of Potential Air Quality Data Dashboard Configurations



Comparison

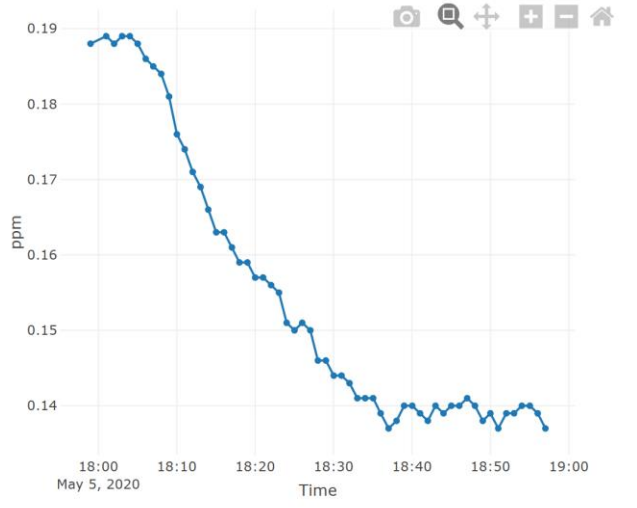
Chamber_2 x Electron_003 x PM2_5 x 1 Week

Update Graph Clear



Color Indicator: Good Moderate Unhealthy Time Format: Local

TVOC (ppm)



Appendix D:
Suncor Settlement Supplemental Environmental Project
 Monitoring Technology Specifications

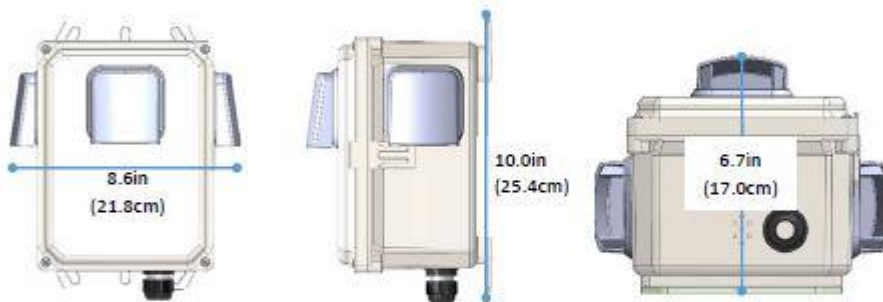


Gen 4 Revised: 12/17/19

I. Introduction

The Canary-S is a continuous solar powered air quality and meteorological monitoring system designed to be class leading in size, reliability, and flexibility. With cellular communication these systems can be placed nearly anywhere to provide measurements on particulate matter, targeted gases, and meteorological data. Multiple units can be deployed to create a network of real-time data integrated into existing customer databases or into Lunar Outpost’s platform.

II. Mechanical



A. Physical Properties

See Table 1.

B. Mounting Options

The Canary enclosure allows mounting to either tripods, large diameter poles, or DIN rails.

C. Certifications and Environmental

The Canary enclosure meets the following certifications: UL508A, UL 50, CSA-C22.2 No. 14, NEMA 1,2,3,3R,4,4X,5,6,6P,12,13, UL94V-0 Flame rating, and UL746C-F1 UV and submersion testing. The original enclosure before modification had an IP68 rating. The rating after modification is reduced due to the designed addition of vents for airflow, but the unit maintains protections against inclement weather when mounted correctly. The enclosure is UV-Stabilized Polycarbonate and the units have undergone extensive testing in a variety of outdoor environments to ensure robust functionality. Canary units have an operational temperature range of -20F to 140F (-28.89C to 60C).

Table 1: Physical Properties of air quality monitor

Dimension	Value
Width	8.6 in
Height	10.0 in
Depth	6.7 in
Weight	~4.3 lbs

III. Power

Table 2: Power characteristics of air quality monitor

Battery		Charging	
Chemistry	Lithium-Ion	Solar Panel	12V DC (20W)
Capacity	8000 mAh	Solar Charge Controller	12V DC
Run-time without power input	120 hours* <small>*under proper conditions</small>	Wall Charger	120V AC (US std) input to 12V DC output (24W)

IV. Communication and Data

Canary-S units communicate over commercial cellular bands and data is transmitted to a secure cloud. From the cloud, the data can be routed to the customer's database or Lunar Outpost's custom database. The connection to the cloud is database agnostic, allowing integration with a variety of commercial or custom databases. Table 3 and 4 outline the cellular data connection specifications of two of the cellular modems used in the Canary units.

A. Cellular Communication

Table 3: 2G/3G Cellular Data Connection Specifications

Network	2G/3G HSPA/GSM	Cellular Modem	Ublox SARA-U260
HSPA Bands	850/1900 MHz	GSM Bands	850/1900 MHz

Table 4: 4G Cellular Data Connection Specifications

Network	4G LTE Cat M1	Cellular Modem	Ublox SARA-R410M
LTE Bands	3, 4, 5, 8, 12, 13, 20, 28	2G/3G Bands	None

B. Data

The Canary-S allows for data integration into the platform of choice and puts data ownership and control in the customer's hands. JSON formatting is used for the data unless otherwise requested by the customer. Micro-SD capability allows for data-backups and redundancy storing up to 7 years of data locally.

- **Integrate to client database:** Canary-S data can be routed to a customer's existing database or routed to multiple databases simultaneously.
- **Lunar Outpost's custom database:** Lunar Outpost's custom database is an effective, user friendly platform that allows customers to view, interact with, analyze, and download data.

V. Sensors

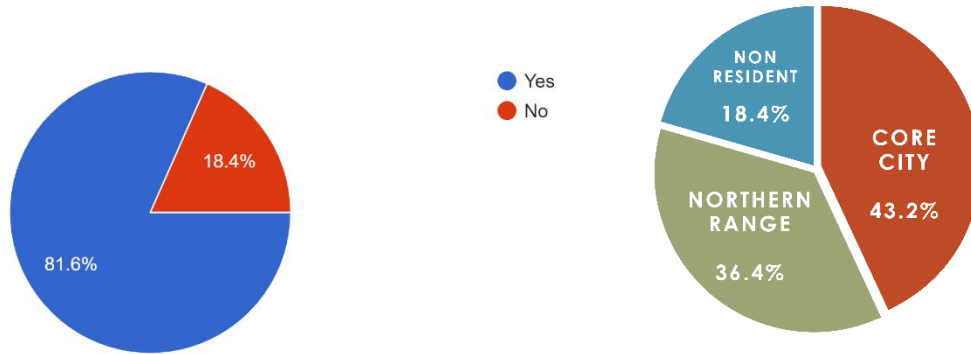
Table 5: Base Unit Sensor Specs

Property	Range	Resolution
PM2.5	0~1000 $\mu\text{g}/\text{m}^3$	1 $\mu\text{g}/\text{m}^3$
PM10	0~1000 $\mu\text{g}/\text{m}^3$	1 $\mu\text{g}/\text{m}^3$
Internal Temperature	-40 to 85 °C (-40 to 185°F)	+/-1.5 °C (2.7 °F)
Internal Humidity	0-100% RH	+/-3%
Atmospheric Pressure	300-1250 hPa (mbar)	+/-1.7 hPa (mbar)

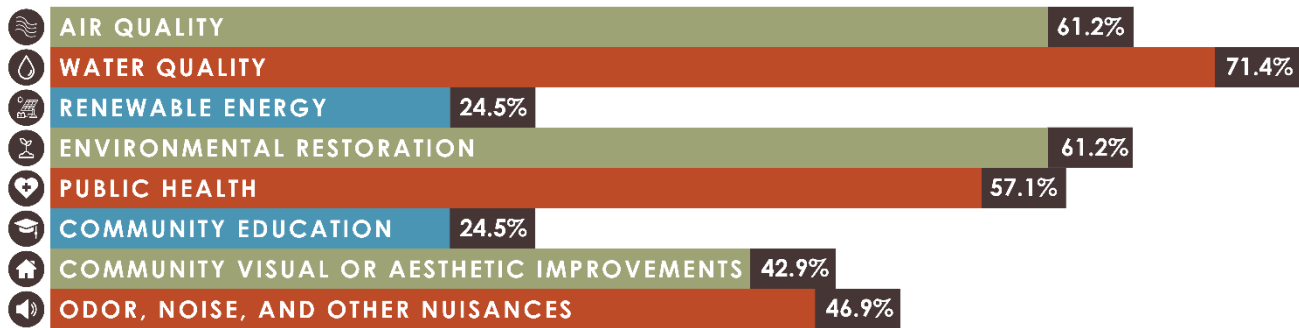
Appendix E: Suncor Settlement Supplemental Environmental Project Summary of Commerce City Public Engagement Efforts

Are you a resident of Commerce City?

49 responses



Which of the areas (or categories) listed below do you think the city should focus on in proposal(s) for the Suncor SEP Funds?



Which of the areas (or categories) listed below do you think the city should focus on in proposal(s) for the Suncor SEP Funds? (By category & geography)

	Air Quality	Water Quality	Renewable Energy Development	Environmental Restoration	Public Health	Community Visual or Aesthetic	Odor
Total Responses	30	35	12	30	28	21	23
Total Responses (%)	61.2%	71.4%	24.5%	61.2%	57.1%	42.9%	46.9%
Within 3 miles of Refinery	16	14	6	13	15	10	14
Within 3 miles of Refinery (%)	69.6%	60.9%	26.1%	56.5%	65.2%	43.5%	60.9%
Commerce City Only	25	25	10	22	21	16	20
Commerce City Only (%)	67.6%	67.6%	27.0%	59.5%	56.8%	43.2%	54.1%



December 23, 2020

Colorado Department of Public Health & Environment
4300 Cherry Creek S Dr,
Denver, CO 80246

Dear Alex,

On behalf of the City of Commerce City, we wanted to express our support for the City's submission for the Supplemental Environmental Projects (SEP) request for applications, as it pertains to additional air monitoring technology in the City.

We believe the City has put forward a strong proposal that has the potential to address key concerns that we have heard from our residents concerning environmental impacts in the City. The areas within Commerce City that would be considered as part of this grant submission have historically had a strong interface between residential and industrial land uses, and may be disproportionately impacted from air quality impacts compared to other communities in the Denver Metro Area. We recognize that there is currently insufficient data on air quality impacts, particularly in the overall quantity of monitoring technologies, as well as reasonably accessible and meaningful communication methods to the public about what impacts might be. We believe that if funds are indeed awarded, and air quality monitoring in the community is conducted as detailed in the grant submission, this would allow for objective and measurable data to inform state and local policy development, and provided informed data to community members about air quality conditions. We feel this would lead to an improvement in overall health impacts in our community.

If awarded the grant, the City looks forward and welcomes the opportunity to share data with CDPHE and other municipalities on this endeavor. Additionally, the City is committed to assisting in a robust public outreach process in our community to help determine the appropriate location of monitoring stations, and engage with our residents in an effective way to address other considerations that are raised during the process.

Thank you for your consideration. We look forward to a successful outcome.

Sincerely,

Roger Tinklenberg
Interim City Manager

Benjamin Huseman,
Mayor



December 23, 2020

Suncor Settlement SEP Evaluation Committee
Colorado Department of Public Health and Environment
4300 Cherry Creek S. Dr.
Denver, CO 80246

Dear Committee Members:

On behalf of Tri-County Health Department (TCHD), I would like to express our support for the City of Commerce City's proposal titled "Community Air Monitoring Network Pilot Program" that is being submitted for funding from the 2019-20 Suncor Settlement Supplemental Environmental Projects (SEP). This proposal, which is guided by community input, will provide much-needed air quality data to inform future policy changes that will impact community members located in close proximity to the Suncor facility.

TCHD is the local public health agency for Adams, Arapahoe and Douglas Counties. In this capacity, we provide a wide range of public health services to the 1.4 million residents in our jurisdiction, including collaborating regionally on air quality data collection, promoting best practices to address air quality for vulnerable populations, and advocating for equitable policy and system changes. The neighborhoods within Commerce City that would be considered as part of this grant submission have historically been and continue to be disproportionately impacted by poor air quality compared to other communities in the Denver Metro Area. The City's proposal will build a network of air monitoring to better educate residents about the environmental conditions in their community and provide measurable data to inform policy and regulatory decisions.

We believe that the City of Commerce City's project incorporates local community involvement and health equity and environmental justice principles. The successful implementation of a local air monitoring program will result in environmental and public health benefits. Thank you for the opportunity to express our support this application.

Sincerely yours,

A handwritten signature in black ink that reads "John M. Douglas, Jr., M.D." with a stylized flourish at the end.

John M. Douglas, Jr., M.D.
Executive Director