

Summary Information Cover Letter

ENVIRONMENTAL PROTECTION AGENCY (EPA) Solid Waste Infrastructure for Recycling Cooperative Agreement 2022 EPA-I-OLEM-ORCR-23-03

- 1. Project Title:** Community-wide Transition to Automatic Recycling Services with Tipper Carts in Dubuque, IA
- 2. Application Name:** City of Dubuque
- 3. Eligible Entity Type:** Political subdivision of state
- 4. Qualification for Program Track:** Track 1 – The City is pursuing Track 1 resources to serve its Washington (Census Tract 1), Point (Census Tract 3), North End (Census Tract 5), and West End (Census Tract 12.02) neighborhoods, identified as disadvantaged by the Climate and Economic Justice Screening Tool. Minorities comprise 18.3%, 14.9%, 31.0%, and 14.6% of Census Tracts 1, 3, 5, and 12.02, respectively, compared to 13.1% across Dubuque. Median household incomes are also 30-50% lower in these neighborhoods than the national level. Poverty is nearly twice as high than the United States rate in Census Tract 1 and 5. Disability rates also range between 15.0-23.7% in these disadvantaged areas. See attached map and description.
- 5. UEI Number:** FK75GL4E3DN6
- 6. Project Summary:** Dubuque seeks Solid Waste Infrastructure for Recycling (SWIFR) funding to conduct a community-wide transition from opt-in to automatic recycling services, with tipper carts instead of 18-gallon bins. SWIFR funding will support the purchase of 18,000 tipper carts and 4 automated, side-loader recycling trucks. The proposed project will help Dubuque to eliminate participation barriers, increase recycling rates, generate efficiencies and cost savings, curb greenhouse gas emissions, increase community aesthetics, and reduce injuries of Public Works Department staff.
- 7. Contact Information:** Jake Jensen, Resource Management Supervisor, City of Dubuque, Municipal Services Center, 925 Kerper Court, Dubuque, IA 52001; jjansen@cityofdubuque.org; (563) 594-8640
- 8. Project Location:** Dubuque, IA
- 9. Total Project Cost:** \$2,550,000
- 10. EPA Funding Requested:** \$2,550,000
- 11. Project Period:** 2 years
- 12. Program Objective Elements:** “Establish, increase, expand, or optimize collection and improve materials management infrastructure” and “Demonstrate a significant and measurable increase in the diversion, recycling rate, and quality of materials collected for municipal solid waste.”
- 13. Strategic Plan Elements:** Goal 1: Tackle the Climate Crisis, Objective 1.1 Reduce Emissions that Cause Climate Change; Goal 2: Take Decisive Action to Advance Environmental Justice and Civil Rights, Objective 2.1: Promote Environmental Justice and Civil Rights at the Federal, Tribal, State, and Local Levels; Goal 5: Ensure Clean and Safe Water for All Communities, Objective 5.2: Protect and Restore Waterbodies and Watersheds; and Goal 6: Safeguard and Revitalize Communities, Objective 6.2: Reduce Waste and Prevent Environmental Contamination
- 14. Cooperative Partners:** Dubuque Metropolitan Solid Waste Agency, Dittmer Recycling

I. PROJECT SUMMARY AND APPROACH

The City of Dubuque seeks \$2,550,000 in U.S. Environmental Protection Agency (EPA) Solid Waste Infrastructure for Recycling (SWIFR) funding to conduct a community-wide transition from opt-in to automatic recycling services, with tipper carts instead of 18-gallon bins. Currently, Dubuque residents must elect to participate in local recycling collections. The City uses a mix of 18-gallon bins (10,000-15,000 households) and a limited number of 96-gallon carts (3,400 households). Households with 96-gallon carts have been shown to recycle significantly more materials in Dubuque. SWIFR funding will support the purchase of 18,000 tipper carts and 4 automated, side-loader recycling trucks. Due to Dubuque's hilly terrain and feedback from the community, these 18,000 tipper carts will include capacity varieties between 35-gallon (94% increase) and 96-gallon (433% increase) in lieu of an 18-gallon bin option. The proposed project will help Dubuque to eliminate participation barriers (particularly among disadvantaged populations as defined by the Climate and Economic Justice Screening Tool), increase recycling rates, generate efficiencies and cost savings, curb greenhouse gas emissions, increase community aesthetics, and reduce injuries of Public Works Department staff.

Detailed Project Summary – Dubuque (population 59,119) offers curbside collection services for trash, yard waste, recyclables, food scraps, electronics, and large items to all single-family through six-plex multi-family households. The City's Pay-As-You-Throw (PAYT) system incentivizes recycling as solid waste customers are charged a monthly volume-based fee for trash collection, ranging from \$15.38 for 35-gallon carts to \$29.00 for 96-gallon carts. Residents also must pay \$1.50 for excess trash stickers when their carts are full and they need extra bags picked up. Single-stream recycling services are provided at no charge to solid waste customers. The current recyclables collected include plastics (1 through 5), cardboard, scrap metal, and paper.

Currently, customers are required to contact the City to opt into the recycling program. Residents must either make an online request or visit/call Dubuque's Public Works Department to receive a recycling container. When a resident moves out of their home and new residents move in, the City does not have a process to verify the residence has a recycling container. If the residence does not have a recycling container at move-in, the new resident may not know how to request one.

For years, only 18-gallon yellow recycling bins were available. More recently, Dubuque has piloted the introduction of 96-gallon blue tipper carts. However, demand for the larger recycling containers outpaces supply. Every year, the Public Works Department purchases approximately 400 more carts as budgets allow. There is a consistent list of customers seeking wheeled containers. Some households request to have wheels and rope retrofitted to their 18-gallon bin to assist with participation in recycling. As supplies and budget allow, the City obliges.

Opt-in recycling services have created barriers to resident participation in Dubuque. Residents must take the initiative to figure out how they can participate in recycling. Households without Internet service are not able to request recycling containers online. Some residents may not realize that there is a City recycling program if their neighbors are not participating. In addition, customers who do not speak English well are challenged by the opt-in process. Nationally, the estimated participation rate for opt-in recycling programs is 38 percent compared to a participation rate of 60 to 80 percent for programs that automatically provide curbside collection.

Like many communities, Dubuque has also seen its recycling rates decline recently. A 5-year recycling activity report prepared by the City's Public Works Department in 2022 demonstrated

that Dubuque collected 277.8 fewer tons of recyclables in 2021 than it did in 2017. Opt-in confusion and frustration with the physical burden and lack of capacity provided by the 18-gallon recycling bins are contributing factors to Dubuque's falling participation rate.

In 2022, Dubuque contracted with HDR to develop an action plan to increase recycling and diversion in the community. HDR studied the City's recycling system and recommended a full community-wide conversion to automatic services with 96-gallon tipper carts. Studies have shown that a switch from opt-in containers to automatically distributed carts removes barriers to recycling participation and increases participation rates by up to 30 percent.¹

Research conducted in 2019 by Circular Matters found that the roll-out of automatic cart programs led to renewed interest in recycling not only for those who weren't previously enrolled but also for those who were already participating. The study realized that when a city brings their residents new carts, it provides municipal leaders with an opportunity for proper education about the importance of recycling. Cart drop-off can be paired with educational materials to increase awareness. The study also mentioned the effects of residents seeing their neighbors participating in the program, driving them to also recycle.²

With SWIFR resources, Dubuque seeks to purchase 18,000 various-sized tipper carts and 4 new side-loader recycling trucks with fully automated arms that can empty the containers. The City is pursuing Track 1 resources to serve its disadvantaged Washington (Census Tract 1), Point (Census Tract 3), North End (Census Tract 5), and West End (Census Tract 12.02) neighborhoods. A transition to automatic recycling services to all households with larger carts is expected to produce multiple economic, environmental, and social benefits, including:

- More convenient and less physically taxing for residents to utilize wheeled carts;
- Increased quantities of recyclable materials collected due to more resident participation as well as larger container capacity;
- Decreased amount of solid waste disposed of at the landfill, increasing the facility's lifespan and saving the City money;
- Improved aesthetics by reducing the amount of litter caused by overflowing bins in windy conditions or pests scavenging recyclable materials;
- Reduced trash accumulation on private property, illegal dumping, and potential litter affecting the Mississippi River;
- Less replacement of recycling containers as the 18-gallon bins are often missing when new residents move into a home;
- After implementation, fewer collection routes will be needed to cover the same amount of coverage, which will lead to less money spent on operations and maintenance;
- Greenhouse gases will decrease and climate change mitigated with fewer vehicle miles traveled by recycling trucks; and
- Worker and resident injuries will decrease due to no longer repetitively lifting and lowering



¹ www.gobroomecounty.com/sites/default/files/dept/dpw/pdfs/Issue%20Paper%20%2310%20-%20Bins%20vs%20Carts%20Final.pdf

² www.red-wing.org/DocumentCenter/View/3229/Circular-Matters---Red-Wing-Cart-Transition-Report-PDF

non-wheeled containers.

Meeting EPA Requirements – The project will meet the following objectives under SWIFR Section I.G. Scope of Work: “Establish, increase, expand, or optimize collection and improve materials management infrastructure” and “Demonstrate a significant and measurable increase in the diversion, recycling rate, and quality of materials collected for municipal solid waste.” The conversion of 18-gallon recycling bins to 96-gallon tipper carts addresses the following goals and objectives of the *FY 2022-2026 EPA Strategic Plan*:

- Goal 1: Tackle the Climate Crisis, Objective 1.1 Reduce Emissions that Cause Climate Change – Fewer carbon emissions will be generated after project implementation because recycling collection routes will be optimized;
- Goal 2: Take Decisive Action to Advance Environmental Justice and Civil Rights, Objective 2.1: Promote Environmental Justice and Civil Rights at the Federal, Tribal, State, and Local Levels – Distributing tipper carts to all residents will remove opt-in barriers to participation among disadvantaged populations and potentially save low-income families money through a reduction in their monthly solid waste bill per increased diversion under a PAYT system;
- Goal 5: Ensure Clean and Safe Water for All Communities, Objective 5.2: Protect and Restore Waterbodies and Watersheds – Improved waste management and less potential for littering will help to protect the Mississippi River; and
- Goal 6: Safeguard and Revitalize Communities, Objective 6.2: Reduce Waste and Prevent Environmental Contamination – Increased recycling participation rates will reduce solid waste disposed of at the landfill.

Finally, the project aligns with following objective of the *National Recycling Strategy*: “Increase collection and improve materials management infrastructure.”

Description of Specific Actions and Methods to Be Undertaken – The proposed scope of work for the project involves:

- Procuring 18,000 recycling tipper carts in sizes ranging from 35-gallons to 96-gallons;
- Purchasing 4 side-loader recycling trucks with automated arms that can empty the carts;
- Delivering new recycling carts to all residents; and
- Transitioning from opt-in recycling services to automatic curbside collection.

The City will conduct an extensive outreach and educational campaign to make residents aware of recycling opportunities. A kick-off meeting will be hosted to share information and gather feedback. Ongoing outreach efforts will be conducted to instruct the community on how the carts should be used. This outreach will target low-

income and minority populations who have not traditionally participated in local recycling, particularly in Census Tracts 1, 3, 5, and 12.02 (identified as “disadvantaged” by the Climate and Economic Justice Screening Tool). Dubuque will also affix stickers in English, Spanish, and Marshallese to the carts with helpful information on what can be recycled.

Timeline – Dubuque anticipates a 2-year project timeframe. A kick-off public meeting will launch



project activities. The tipper carts will be procured upon grant award through a tiered approach. The City will distribute the new tipper carts to all residents upon their receipt. An ongoing outreach and educational campaign will follow the distribution of the carts. Due to production delays, it is expected that the delivery of 4 new recycling trucks will take approximately 18-24 months. Dubuque will measure project results following deployment of the recycling trucks. The City will also seek opportunities to share project findings with regional and national audiences through webinars, conferences, and other events.

Major project milestones include:

- Month 1 – Organize and host kick-off public meetings; finalize cart size options, order 18,000 recycling carts in a tiered approach and 4 trucks with fully automated arms that can empty the carts
- Month 4 – Receive the first tier of approximately 6,000 recycling tipper carts and assemble
- Months 5-7 – Distribute recycling carts to residents beginning with Census Tracts 1, 3, 5, and 12.02; launch of ongoing outreach and educational campaign
- Month 8 – Receive the second tier of approximately 6,000 recycling tipper carts and assemble
- Months 9-11 – Distribute recycling carts to residents
- Month 12 – Receive the last tier of approximately 6,000 recycling tipper carts and assemble
- Months 13-15 – Distribute recycling carts to remaining residents
- Month 18 – Delivery of 4 recycling trucks
- Months 19-24 – Performance measurement
- Months 22-24: Regional and national promotion of project results
- Month 24 – Project closeout

II. ENVIRONMENTAL JUSTICE

Universal carting is one of the great drivers of equity, providing every household with the equal opportunity to recycle. The proposed project is intended to reduce recycling participation barriers, which are experienced more acutely by disadvantaged populations (e.g., language barriers, trust in government). A tipper cart will be distributed to every residential address in Dubuque. Extensive stakeholder feedback has led to the development of this application, with residents requesting larger recycling containers through surveys, public meetings, and direct contact with the Public Works Department. The City will continue to engage with residents through an outreach and education campaign that provides instruction on the carts' use as well as what can be recycled. Those efforts will focus on neighborhoods in Census Tracts 1, 3, 5, and 12.02 that are identified as "disadvantaged" by the Climate and Economic Justice Screening Tool.

Community Benefits – Located along the Mississippi River, Dubuque is Iowa's oldest city. It is a compact, dense community with 24,151 households.³ The city is diverse, with a minority population of 13.1%. Dubuque is an aging community, with 18.9% of residents 65 years or over. A significant proportion of the population suffers with a disability (13.1%). Between 2017 and 2021, median household income in Dubuque was \$58,691



³ 2020 Census estimate

(compared to \$69,021 nationally) and 12.3% of residents lived below the poverty line.⁴

Dubuque's Washington (Census Tract 1), Point (Census Tract 3), North End (Census Tract 5), and West End (Census Tract 12.02) neighborhoods are significantly more diverse and low-income than the city as a whole. Minorities comprise 18.3%, 14.9%, 31.0%, and 14.6% of Census Tracts 1, 3, 5, and 12.02, respectively, compared to 13.1% across Dubuque. Median household incomes are also 30-50% lower in these neighborhoods than the national level. Poverty is nearly twice as high than the United States rate in Census Tract 1 and 5. Disability rates also range between 15.0-23.7% in these disadvantaged areas.⁵ SWIFR investment will directly support minority and low-income residents, as demonstrated in the chart below:

Demographic Info	Census Tract 1	Census Tract 3	Census Tract 5	Census Tract 12.02	Dubuque	Iowa	United States
Minority	18.3%	14.9%	31.0%	14.6%	13.1%	15.6%	40.6%
Median Household Income	\$44,799	\$47,750	\$36,047	\$35,679	\$58,691	\$65,429	\$69,021
Poverty	20.5%	16.2%	24.0%	16.9%	12.3%	11.0%	12.6%
Receive Food Stamps	21.2%	17.7%	35.7%	17.0%	11.1%	9.6%	11.4%
Language Other than English Spoken at Home	2.1%	2.5%	11.1%	4.5%	4.9%	8.6%	21.7%
Age 65 and Over	12.6%	20.9%	11.4%	21.7%	18.9%	17.0%	16.0%
Persons with Disabilities	23.7%	15.0%	17.8%	17.4%	13.1%	11.9%	12.6%

Source: U.S. Census Bureau, 2017-2021 American Community Survey

Dubuque's Washington, Point, North End, and West End neighborhoods are also identified as environmental justice areas of concern. According to the EPA's EJSCREEN tool, these areas range between the 66th and 94th percentiles for key Iowa pollution indicators, and between the 58th and 80th percentiles nationally. See results below:

Environmental Indicator	Percentile in Iowa	Percentile in United States
Particulate Matter (PM _{2.5})	94	67
Ozone (O ₃)	66	59
Diesel PM	86	58
Traffic Proximity and Volume	87	70
Lead Paint	89	78
Superfund Proximity	94	80
Risk Management Plan Facility Proximity	88	76
Hazardous Waste Proximity	87	59
Underground Storage Tanks	91	76

The proposed project meets the Justice40 Initiative's definition of disadvantaged neighborhoods experiencing low incomes, persistent poverty, racial segregation, and substandard housing. An automatic recycling program with larger carts will help to overcome inequality and improve quality of life. Automatic and free recycling service will provide opportunities for disadvantaged

⁴ U.S. Census Bureau, 2017-2021 American Community Survey

⁵ Ibid.

populations in Dubuque to reduce waste and save money. Unlimited recycling will reduce the volume of trash collected and enable these households to lower their solid waste collection fees. Residents who do not speak English well will have no barriers to entry and recycling instructions will be translated into Spanish and Marshallese. Older residents and persons with disabilities will be able to bring their recyclables more easily to the curb with wheeled carts. Larger capacity carts will also help to reduce litter in Census Tracts 1, 3, 5, and 12.02, as well as improve property values with less illegal dumping and trash accumulation on private property.

SWIFR investment in Dubuque's recycling infrastructure will build on local efforts to improve equity and reduce barriers to opportunity for disadvantaged residents. Based on U.S. Census data, the 2021 *Dubuque Equitable Poverty Reduction and Prevention Plan* notes that a staggering 56.1% of Black residents live in poverty, compared to 13.2% for White residents, and experience unemployment at a rate four times higher than Whites. The highest median household income among Black Dubuquers is found in Census Tract 5 with a value of only \$22,059.⁶ Federal investment that helps the City to benefit low-income and minority audiences directly supports Dubuque's poverty reduction goals.

Community Engagement – The planned transition to automatic recycling with various sized tipper carts in Dubuque is the direct result of community feedback. Residents have strongly expressed a desire to eliminate Dubuque's opt-in recycling services and shift to larger wheeled containers. In 2018, the City contracted with Foth to conduct a performance analysis of its solid waste operations. A survey was developed and promoted through social media, local newspapers and television, and community events. In total, 785 responses were received from Dubuque residents. Exactly 78% of respondents preferred a wheeled cart option for recycling. In addition, the survey revealed that curbside collection of recycling was the top-valued part of the collection system in Dubuque, making it clear curbside recycling collection is a strong part of Dubuque's identity.

Dubuque will continue its community engagement efforts with a kick-off public meeting at grant award to share news about its changing recycling services and gather resident feedback. A local outreach and education campaign will also be launched in conjunction with the delivery of new tipper carts to residents. That campaign will share information on the carts' use as well as what can be recycled, focusing on disadvantaged populations in Census Tracts 1, 3, 5, and 12.02.

III. MEASURING ENVIRONMENTAL RESULTS

In accordance with *EPA Order 5700.7A1 – Environmental Results under Assistance Agreements*, Dubuque expects the proposed project to achieve the following outputs and outcomes:

Anticipated Outputs – The project will produce:

- 18,000 tipper carts purchased and distributed to residents;
- 4 new fully-automated recycling truck procured and deployed; and
- Recycling outreach and educational materials produced (not funded with grant dollars).

Anticipated Outcomes – Quantitative outcomes include:

- 30% increase in recycling annual pounds per household – from 278 pounds per household in

⁶ www.cityofdubuque.org/DocumentCenter/View/48238/Dubuque-Equitable-Poverty-Reduction-and-Prevention-Plan

- 2022 to 360 pounds per households 2024 (measured with year-end reports);
- 30% increase in recyclables collected tonnage – from 2,832 tons in 2022 to 3,682 tons in 2024 (measured with year-end reports);
- 5% decrease in solid waste disposed of at the landfill – from 17,230 tons in 2022 to 16,380 tons in 2024 (measured with year-end reports);
- 5% reduction in landfill tipping fees – from \$620,798 to \$589,757
- 5% reduction in curbside collection violations relating to extra bags of trash in the right-of-way (measured by year-end reports);
- \$18,791 savings in 18-gallon recycling bin replacement expenses (measured by year-end reports);
- 27% drop in the number of collection-related injuries from 9.5 per year to 7 (verified by Human Resources Department);
- One fewer recycling routes due to improved operational efficiencies (2022 to 2027 comparison);
- Savings in operational and maintenance savings due to improved recycling collection efficiencies (measured with year-end reports); and
- Fewer carbon emissions released with associated vehicle miles traveled reductions by recycling trucks (determined with environmental modeling).

Qualitative outcomes include:

- Less litter in the neighborhoods (measured by survey);
- Improved neighborhood aesthetics (measured by survey); and
- Satisfaction with Dubuque’s automatic recycling services and the transition to larger capacity tipper carts (measured by survey).

IV. PROGRAMMATIC CAPABILITY AND PAST PERFORMANCE

Dubuque has an exemplary record of complying with federal grant requirements, including with the EPA Brownfields and Community Revitalization programs. Detailed work plans were established for previous federally-supported efforts. All obligations were met on budget and on time, including the filing of timely quarterly reports.

Past Performance

- 2018-2020 – Dubuque received a \$200,000 EPA Brownfields Cleanup grant to continue remediation at 411 East 15th Street (Cooperative Agreement # BF-97764401). The grant period was scheduled from October 1, 2018 to September 30, 2020. Soil contamination was addressed on the West Blum site. The project was successfully closed out with all federal dollars spent.
- 2019-present – Dubuque was selected for an \$800,000 EPA Brownfields Multipurpose grant to conduct 5 Phase I and 5 Phase II environmental site assessments, develop a cleanup and reuse plan, and clean up 3 catalyst sites (Cooperative Agreement # BF-97768801). Grant funds also will be used to support community engagement activities. The grant period is still open on this funding.
- 2021-present – Dubuque was honored with Building Blocks “Addressing Emerging Mobility” technical assistance from EPA’s Office of Community Revitalization. This expert support is helping the City to develop new, sustainable solutions to its transportation hurdles, weaving together the following elements: smart parking, micro-mobility, innovative street design, flexible transit options, real-time travel information, and new financial models. This technical

assistance project period was scheduled from October 1, 2018 to November 29, 2021.

Reporting – Dubuque has a long history with managing and reporting on grant-funded work. Timely reports have been filed for all previous EPA and other federally-supported projects. Those reports provided clear details on the outputs and outcomes achieved through those cooperative agreements. For EPA’s Brownfields program, reporting was successfully conducted through the Assessment, Cleanup, and Redevelopment Exchange System.

For the SWIFR-supported work, the City will assign a project manager (Jake Jansen). He will serve as a liaison between EPA Region 7 and Dubuque, and will be responsible for assuring compliance with the administrative and reporting requirements of the cooperative agreement. A final technical report will also be filed upon project completion.

Organizational Experience – Dubuque’s Public Works Department has managed the community’s recycling services since 1992. The City has been recognized as a solid waste management and recycling leader. It received the Governor’s Iowa Environmental Excellence Award (2000), the Iowa Department of Natural Resources’ Iowa Recycling Award (2000), and the Iowa Society of Solid Waste Operations’ Outstanding Program Award (2006). However, while the City provides high-quality curbside recycling at no charge to customers, it has fallen behind other jurisdictions in infrastructure investment. Dubuque is one of the last cities in Iowa still using 18-gallon bins.

The key to successful project implementation will be the development of a detailed work plan with clear objectives. This will be developed at an initial meeting, including participation from the City Manager and other key staff. The meeting will identify goals, and responsibilities within the work plan will be well-defined. Performance measures will help to track progress. To ensure that the project is on schedule, status updates will be incorporated into the City’s existing reporting structure. Monthly reports will be provided to the City Manager. In addition, staff will meet regularly with key partners (e.g., Dubuque Metropolitan Solid Waste Agency).

Staff Expertise – Dubuque has the staff capacity to manage the proposed project. Key personnel include:

- Jake Jansen is the City’s Resource Management Supervisor. He will manage the proposed SWIFR project and conduct day-to-day activities. Jake has an extensive background in environmental efforts across the community. He is responsible for the planning and supervision of all solid waste, recyclable, and organic collection programs. Jake also works to identify waste reduction efficiencies to identify a path toward zero-waste. He earned a Bachelor’s degree in Sociology and Political Science at Loras College and earned a Master’s degree in Sustainable Peacebuilding from the University of Wisconsin-Milwaukee.
- John Klostermann is Dubuque’s Public Works Director. He will oversee the SWIFR-funded project. John joined the City of Dubuque in 1975. He is responsible for managing municipal operating and capital improvement budgets, as well as administering refuse collection and recycling, landfill operations, and the municipal garage activities. John is a current member of the American Public Works Association (APWA). In 2019, he was a recipient of APWA’s Top Ten Public Works Leaders of the Year award.
- Arielle Swift is Dubuque’s Assistant Public Works Director. She will oversee the financial progress and reporting of this SWIFR-funded project. Arielle joined the City in 2015 as a Finance Intern and quickly moved to a full-time Accountant position. She is responsible for

managing the five core areas (field operations, fleet maintenance, landfill operations, curbside collection, and administration) of Public Works with a focus on operational process improvements, data capture, tracking, and projections within each. Arielle is the Young Professional Co-Liaison for Iowa's APWA. She has earned a Bachelor of Arts degree in Finance and Accounting and a Master of Science in Business Analytics degree.

V. BUDGET AND EXPENDITURE OF AWARDED GRANT FUNDS

Dubuque has the technical, legal, and financial capacity to deliver the proposed project effectively. The City's experienced staff will manage EPA-funded work. Longstanding local procedures are in place to support the management of federal grant activities. Dubuque has demonstrated its capacity to carry out procurement projects in compliance with federal guidelines through previously funded work (e.g., bus acquisition through the Federal Transit Administration). Dubuque will only seek reimbursement from EPA for agency-approved budget expenses.

The City's financial controls will safeguard EPA investment. An independent audit is performed annually in accordance with standards applicable to financial audits contained in "Government Auditing Standards," OMB Circular A-133. The City has never been cited for an adverse OMB Circular A-133 audit finding and has never been required to comply with "high risk" terms or conditions under OMB Circular A-102. Additionally, the City's legal department is able to assist in any compliance issues.

The City seeks a total investment of \$2,550,000 in EPA SWIFR funding to support the described activities. All federal funding will be expended within a 2-year timeframe. Track 1 resources will help Dubuque serve its disadvantaged Washington (Census Tract 1), Point (Census Tract 3), North End (Census Tract 5), and West End (Census Tract 12.02) neighborhoods, as defined by the Climate and Economic Justice Screening Tool. See attached map and description. Budgeted costs are reasonable and necessary to achieve the identified goals. See the attached Budget Table and Description for full details.

VI. PROJECT SUSTAINABILITY

Fully transitioning to automatic recycling collection with larger containers is difficult for a midsize community like Dubuque to achieve due to budget constraints. While the City has slowly introduced 96-gallon recycling tipper carts since 2016, the pace is not material enough for Dubuque to realize significant participation rate increases or the efficiencies and cost savings associated with a complete shift. A one-time SWIFR investment will enable Dubuque to sustain improved recycling services indefinitely. New tipper carts and 4 new recycling trucks will transform recycling in the area. These changes will outlast federal investment and establish permanent economic, environmental, and social benefits that the City will realize year after year.

Dubuque commits to invest local funding into ongoing recycling operations. Over the life of tipper carts, replacements will be needed. Larger recycling containers will have to be provided for new construction. Recycling trucks will also require ongoing maintenance, repairs, and eventual replacement. The Public Works Department's annual budget, funded by solid waste collection fees, will absorb these recurring costs.

The project will also create long-term cost savings and efficiencies that will help to support local curbside recycling, including:

- Dubuque will save money on operations and maintenance by driving fewer recycling routes

- due to fully-automated trucks and larger containers;
- Fewer workers' injuries incurred repetitively lifting 18-gallon bins will help to lower the City's insurance premiums; and
- Community-wide outreach and educational efforts will speak to all residents, not just those who request recycling infrastructure.

VII. INNOVATIVE APPROACHES AND SOLUTIONS

Dubuque is incorporating innovative approaches in its proposed solution, including:

- The launch of a widescale outreach and education campaign has the opportunity to attract more eyes and ears. Timed with the tiered delivery of new tipper carts, these efforts will share instruction on the carts' use as well as information on what can be recycled. The City will partner with public schools, neighborhood associations, environmental groups, and other stakeholders to share its news. The big recycling push will help to grow participation rates and tonnage of recyclables collected.
- Dubuque will develop an incentive program to urge greater recycling participation. Working with area businesses, the City will offer prizes to residents who begin recycling. The details of the incentive program will be developed upon grant award.
- The City's focus on breaking equity barriers is unique among local recycling efforts. Community engagement activities will target Census Tracts 1, 3, 5, and 12.02, disadvantaged areas where participation rates are low. Stickers with recycling instructions will also be applied to recycling tipper carts in English, Spanish, and Marshallese.

VIII. PROJECT REPLICABILITY

Dubuque's transition to an automatic recycling system with larger containers can serve as a model for other cities across the nation, particularly smaller and midsize communities. The City will fully document the benefits achieved with the proposed changes. Fact sheets and reports highlighting the SWIFR-funded efforts will be prepared to share with local government leaders. Dubuque will also seek opportunities to present its results on webinars and at regional/national conferences, including ICMA (city managers) and APWA (public works directors) events.

IX. LEVERAGING

Federal investment in Dubuque's recycling efforts will leverage additional local, state, federal, and private sector resources, including:

- Transitioning to automatic recycling with larger containers in one fell swoop will help to minimize costs that the Public Works Department would otherwise have paid over time, which can be invested into broader zero-waste goals;
- All project management as well as outreach and education campaign expenses will be borne by the City;
- The City will partner with the Dubuque Metropolitan Solid Waste Agency, which handles glass recycling regionally, to conduct outreach and educational efforts;
- Dubuque will coordinate with public schools, neighborhood associations, environmental groups, and other stakeholders to expand its information reach;
- Increased recycling revenues through greater participation rates and more tonnage of recyclable materials will be reinvested into outreach and educational efforts to grow recycling further; and
- Partnership with Dittmer Recycling to increase recycling educational funding; and Dubuque will create an incentive program that urges greater recycling participation.

Budget

Table

Personnel	Year 1	Year 2	Total
Not applicable	\$0	\$0	\$0
Personnel Subtotal	\$0	\$0	\$0
Fringe Benefits	Year 1	Year 2	Total
Not applicable	\$0	\$0	\$0
Fringe Benefits Subtotal	\$0	\$0	\$0
Travel	Year 1	Year 2	Total
Not applicable	\$0	\$0	\$0
Travel Subtotal	\$0	\$0	\$0
Equipment	Year 1	Year 2	Total
4 automated, side-loader recycling trucks @ \$305,000 per truck	\$1,220,000	\$0	\$1,220,000
18,000 tipper carts @ \$70 per cart	\$1,260,000	\$0	\$1,260,000
Equipment Subtotal	\$2,480,000	\$0	\$2,480,000
Supplies	Year 1	Year 2	Total
Not applicable	\$0	\$0	\$0
Supplies Subtotal	\$0	\$0	\$0
Contractual	Year 1	Year 2	Total
Distribution of tipper carts to Dubuque households	\$50,000	\$20,000	\$70,000
Contractual Subtotal	\$50,000	\$20,000	\$70,000
Eligible Construction Costs	Year 1	Year 2	Total
Not applicable	\$0	\$0	\$0
Eligible Construction Costs Subtotal	\$0	\$0	\$0
Other	Year 1	Year 2	Total
Not applicable	\$0	\$0	\$0
Other Subtotal	\$0	\$0	\$0
Total Direct	\$2,530,000	\$20,000	\$2,550,000
Total Indirect	\$0	\$0	\$0
TOTAL	\$2,530,000	\$20,000	\$2,550,000

Description

Personnel – The budget includes no staff costs.

Total Personnel: \$0

Fringe Benefits – The budget includes no fringe benefit costs.

Total Fringe Benefits: \$0

Travel – The budget includes no budget costs.

Total Travel: \$0

Budget

Equipment – Dubuque plans to procure 4 automated, side-loader recycling trucks with SWIFR funding. The cost of each truck is \$305,000. This equipment is necessary to empty the tipper carts. In addition, 18,000 tipper carts will be purchased for each household in Dubuque. The cost of each tipper cart is \$70. Conversion to and full community distribution of larger-capacity tipper carts will remove barriers to recycling participation and increase participation rates by up to 30 percent.

Item	# of units	Cost per unit	Total
Automated, side-loader recycling truck	4	\$305,000	\$1,220,000
Tipper cart	18,000	\$70	\$1,260,000
Total			\$2,480,000

Dubuque will comply with all Build America, Buy America Act requirements.
Total Equipment: \$2,480,000

Supplies – The budget includes no supply costs.
Total Supplies: \$0

Contractual – Dubuque will contract with a local company to distribute tipper carts to all households in the community. Over the 2-year project period, a total of \$70,000 is included in these contractual costs to provide tipper carts to 18,000 addresses. Approximately 12,000 tipper carts will be distributed in Year 1 and the remaining 6,000 tipper carts will be distributed in Year 2. Distribution of tipper carts will begin in Census Tracts 1, 3, 5, and 12.02, identified as disadvantaged neighborhoods by the Climate and Economic Justice Screening Tool.

Service	Year 1	Year 2	Total
Distribution of 12,000 tipper carts to households	\$50,000	\$0	\$50,000
Distribution of 6,000 tipper carts to households	\$0	\$20,000	\$20,000
Total			\$70,000

Total Contractual: \$70,000

Eligible Construction Costs – The budget includes no construction costs.
Total Eligible Construction Costs: \$0

Other – The budget includes no other costs.
Total Other: \$0

Indirect Costs – The budget includes no indirect costs.
Total Indirect Costs: \$0