ANALYSIS OF BROWNFIELDS CLEANUP ALTERNATIVES (ABCA)

200 BLUE STAR HIGHWAY REDEVELOPMENT LOCATED AT 200 BLUE STAR HIGHWAY DOUGLAS, ALLEGAN COUNTY, MICHIGAN 49406

FY22 EPA BROWNFIELD CLEANUP GRANTS

DRAFT: December 1, 2021

Prepared for

The City of the Village of Douglas
86 West Center Street
Douglas, Michigan 49406

Prepared By:

PM Environmental, Inc.
3340 Ranger Road
Lansing, Michigan 48906
Contact Person: J. Adam Patton, CHMM
Telephone: (517) 325-9867

PM ENVIRONMENTAL
Risk Well Managed

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1.0 INTRODUCTION AND BACKGROUND

This Analysis of Brownfields Cleanup Alternatives (ABCA) Report is a preliminary evaluation to document brownfield cleanup planning related to prospective site redevelopment of the 200 Blue Star Redevelopment project located at 200 Blue Star Highway, Douglas, Michigan, referred to herein as "subject property" or the "site", see Figure 1. This ABCA has been prepared for the City of the Village of Douglas ("the City") pursuant to the requirement specified in the U.S. Environmental Protection Agency (EPA) FY22 Guidelines for Brownfield Cleanup Grants (RFA No.: EPA-OLEM-OBLR-21-06).

For the purpose of this evaluation, the subject property is eligible for a Cleanup Grant. This project will assist the City ("the applicant") to conduct cleanup activities on the subject property that will allow the City to position the property for redevelopment. Cleanup activities will contribute to reducing threats posed by the hazardous substances present onsite and are a necessary first step that will allow the City to leverage additional brownfield redevelopment incentives at the state and local levels.

1.1: Subject property Location and Description

The subject property is located at 200 Blue Star Highway, Douglas, Michigan and consists of a single parcel containing a total of approximately 7.18 acres and is located approximately 500 feet north of the Blue Star Highway and Ferry Street intersection in Douglas, Michigan. The subject property is developed with a 150,300 square foot, one-story industrial building and two utility buildings that have been occupied by various manufacturing companies since the 1940s. The building is currently vacant.

Subject Property Location/Address	200 Blue Star Highway, Douglas, Michigan
Number of Parcels and Acreage	One parcel containing 7.18 acres
Number of Building(s)	150,300 square foot, one-story building with two utility buildings
Current Property Use	Industrial
Current Zoning	C-2: General Commercial

The subject property location is depicted on Figure 1, Site Location Map. A diagram of the subject property and adjoining properties is included as Figure 2, Generalized Diagram of the Subject Property and Surrounding Area.

1.2: Subject property History and Previous Use(s)

The target property is located at 200 Blue Star Highway and consists of a single parcel of approximately 7.18 acres. By 1938, it was initially developed as a fallow orchard with two small structures. By the 1940s, the property was redeveloped into its current configuration, which consists of two utility buildings and a 150,300 square foot, single-story industrial building with approximately 15 truck bays facing Blue Star Highway. From the 1940's through the mid-1970's the property's extensive history included plating, buffing, zinc die casting, metal forming, stamping, phosphatizing, and painting metal parts. Between the years of 1976 and 2014, the

property was owned and occupied by Haworth Inc. (formerly Haworth Manufacturing) who used the facility to manufacture furniture.

1.3: Previous Assessment Findings

The following is a list of previous environmental investigations performed on the property;

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A Phase II Environmental Site Assessment (ESA) was completed for the subject property by ERM dated October 9, 2015. The Phase II ESA was conducted to assess the following Recognized Environmental Conditions (RECs) that were identified in a prior Phase I ESA completed by ERM in August 2015:

- Volatile Organic Compounds (VOCs) contamination documented beneath the subject building and subsequent Michigan Department of Environment Great Lakes and Energy (EGLE) sub-slab and indoor air sampling, which identified concentrations of volatile organic compounds (VOCs) above the [then] current EGLE Nonresidential Recommended Interim Action Screening Levels (RIASLs) for vapor intrusion:

- Three 6,000-gallon underground storage tanks (USTs) located southwest of the building, two 500-gallon USTs located east and west of the building, three concrete waste treatment tanks beneath the concrete slab in the eastern portion of the building, and a 17,500-gallon fuel oil UST that was once located on leased land across Ferry Street, to the west of the subject property, which were all reported to have been removed, but no soil sampling documentation was available;

- The structural integrity of floor drains and trench drains in the subject property building;

- Former die casting operations conducted between the 1950s and 1971.

Subsurface investigation activities were conducted in the former die cast pit area (east room) of the subject property building, which is not currently used for warehousing. No other former operational areas of the subject property building, or exterior locations were included in the Phase II ESA other than a former vent pipe area located east of the subject property building's east exterior wall. Investigation activities included the advancement of 10 soil borings and the

collection of soil samples for analysis of polychlorinated biphenyls (PCBs). Groundwater was not encountered in any of the soil borings advanced during ERM's August 2015 site investigation.

Soil analytical results identified concentrations of PCBs above 1.0 part per million (ppm) at three of the boring locations, however, the horizontal and vertical extent of PCB impacts were not defined within the Toxic Substances Control Act (TSCA) subpart D cleanup standards for unrestricted land use.

In addition, ERM collected six 24-hour indoor air samples at representative locations in the building for laboratory analysis of VOCs. No concentrations of VOCs were identified in any of the indoor air samples collected from the subject property building above laboratory method detection limits (MDLs).

ERM also traced a vent pipe along the eastern wall of the subject property building, which was suspected of being associated with a former fuel oil UST. No USTs were identified, and no sampling was completed. The other UST basins identified as RECs were not assessed.

Remedial Alternative Evaluation – 5/11/18 (GHD)
A Remedial Alternatives Evaluation (RAE) for the subject property was completed by GHD dated May 11, 2018. GHD reviewed previous reports that documented the nature and extent of trichloroethene (TCE) and PCB impacts at the subject property to evaluate remedial alternatives for the risks associated with the VOC groundwater plume and PCBs in soil for the vapor intrusion and direct contact pathways, respectively.

The RAE documented that ERM completed additional site investigations in December 2015, August, November, and December 2016, and January 2017 to attempt to delineate the horizontal and vertical extent of PCB impacts at the subject property. The soil analytical results identified concentrations of PCBs above 100.0 ppm at several locations ranging from 1 to 15.5 ft bgs. The horizontal extent of impacts was delineated within the TSCA subpart D cleanup standard for Low-Occupancy areas of 100 ppm.

ERM also collected concrete samples from the surface and lower layers of the concrete slab in the east room (warehouse). Concentrations of PCBs greater than 1.0 ppm were identified in all of the deeper intervals at concentrations ranging from 3.4 ppm to 5,600 ppm. The locations of the highest concentrations of PCBs were identified around the north and east pits, where concentrations exceeded 100 ppm. In addition, 10 surface concrete samples from the west room in the northwestern portion of the building were collected, none of which contained PCB concentrations exceeding 10 ppm, which is appropriate for high-occupancy use.

PCB Cleanup and Application for Risk-Based Cleanup and Disposal Approval – 8/3/18 (GHD)
In June 2018, GHD conducted an additional site investigation to vertically delineate the extent of PCB impacts greater than 1 ppm and 100 ppm, respectively, and/or confirm soil boring refusal depths encountered by ERM during previous site investigations in the central portion of the east room between 12.0 and 15.0 feet bgs to evaluate 27 identified data gaps. GHD concluded that the drilling work confirmed refusal at 21 of the 27 data gaps between 12.0 and 15.0 feet bgs. At the remaining six soil boring locations, soil samples were collected at depths to 19.0 to 20.0 feet bgs, none of which identified concentrations of PCBs above laboratory MDLs. Based on these results, GHD assumed vertical delineation in the east room at approximately 18.0 to 20.0 feet bgs. Additional vertical delineation would be required to fully define the vertical extent of PCB impacts to within the TSCA subpart D cleanup standards below refusal depths.

The results of GHD's investigation are included in a PCB Cleanup Plan (Cleanup Plan), dated August 3, 2018. GHD's Cleanup Plan contains a Draft PCB Cleanup Plan that was completed by ERM in 2017. Included within the plan is documentation of additional sampling that was conducted by ERM to evaluate PCBs impacts to groundwater and soil gas. Sampling included the installation of four temporary monitoring wells to a depth of approximately 40 feet bgs downgradient to the north of the east room for collection of groundwater samples. No concentrations of PCBs were identified above laboratory MDLs. Three soil gas samples collected in the east room identified no concentrations of PCBs above laboratory MDLs.

Concrete floor sampling was also conducted in the east and west rooms. PCB concentrations in concrete above 100 ppm were not identified in the west room. In the north central portion of the east room, PCB concentrations exceeding 100 ppm were detected and fully delineated. Along the east and north walls, PCB concentrations were greater than 1 ppm but less than 5 ppm. All other delineation samples collected from the east room were below 1 ppm or below laboratory detection limits.

Based on these results, GHD presented the following recommended approach in the Cleanup Plan, which envisioned Low-Occupancy uses of the subject property, as defined under TSCA:

- PCBs ≤ 100 ppm – leave in place and cap with an epoxy seal;
- PCBs > 100 ppm from 0.0 to 5.0 feet bgs – excavate to 5.0 feet bgs and dispose of offsite;
- PCBs > 100 ppm greater than 5.0 feet bgs – leave in place and cap with an epoxy seal; and
- PCBs > 1 ppm – cap with an epoxy seal all areas that exceed 1 ppm.

Additional recommended activities included:

- Collection of confirmation soil samples in the planned PCB excavation area following TSCA verification of soil remediation guidance.
- No PCB removal activities of soil or concrete to be completed in the west room; and
- Recording deed restrictions for the subject property consistent TSCA requirements.

Groundwater Sampling Results and Summary - 3/13/2019 (GHD)
Groundwater monitoring results dated 2019 document similar concentrations as previously identified. Sampling results indicate that the chlorinated VOCs present in groundwater have not mobilized the PCBs present in the impacted soils to groundwater.

1.4: Project Goals

The existing building has been subject to several years of decline and deterioration, prompting the City to acquire the property. The City's intent is to better position the property for redevelopment by addressing the PCB contamination known to exist at the site. The City will retain ownership of the property and oversee the cleanup activities until the property can be sold to a developer and redeveloped.

The City intends to engage in PCB cleanup activities to achieve Risk-Based High-Occupancy TSCA cleanup standards. The magnitude of these costs along with additional costs necessary to implement due care response activities exceeds the capabilities of available brownfield tax increment financing, as well as other state cleanup programs that are experiencing significant funding reductions due to the COVID-19 pandemic. Cleanup of PCB contamination to the Risk-

Based High-Occupancy TSCA standard will eliminate a significant cleanup cost, which would make state brownfield tax increment financing feasible to implement the necessary due care response activities available for redeveloping property.

The initial conceptual site development plan that was prepared by the City includes the redevelopment of the property into a commercial mixed-use development that includes, restaurants, entertainment, and live-work space.

The project goals for this ABCA are to identify, evaluate, and select an appropriate cleanup plan to address the soil, groundwater, and soil gas impacts identified at the subject property. Based on the preliminary redevelopment concept, the goal of the ABCA also relate to activities likely required to achieve compliance with the Risk-Based High-Occupancy TSCA cleanup standards with the implementation of cleanup activities, as it pertains to documented soil, groundwater, and soil gas impacts at the subject property.

2.0 APPLICABLE REGULATIONS AND CLEANUP STANDARDS

2.1: Law and Regulations Applicable to the Cleanup

Laws and regulations that are applicable to this cleanup include the Federal Toxic Substances Control Act (15 U.S.C. chapter 53, subchapter 1, sections 2601-2629) and Brownfields Revitalization Act (Pub. L. 107-118, 115 stat. 2356), the Federal Davis-Bacon Act (Ch. 411, 46 Stat. 1494) and Michigan Parts 111, 115, and 201. Federal, state, and local laws regarding procurement of contractors to conduct the cleanup will be followed. As described herein, all cleanup will be in accordance with the State of Michigan regulations and Federal TSCA regulations. All applicable permits and documentation (i.e. One-Call, Project Notification Forms, Asbestos Removal, Building Demolition Permit, etc.) will be obtained prior to the work commencing, and all work will be conducted in accordance with the conditions for approval. Pertinent laws and regulations applicable to the contaminant of concern for this ABCA are detailed in the following subsections.

2.1.1: Cleanup Standards for Major Contaminants

Documented soil, groundwater, and soil gas impacts were identified at the subject property and compared to TSCA subpart D cleanup standards. These standards are described as follows:

Standard	No Action	Appropriate Cap w/Deed Restriction	Removal Required
High-Occupancy Area (≥335 hours/year)	≤1 ppm	>1 to ≤10 ppm	>10 ppm
Low-Occupancy Area (<335 hours/year)	≤25 ppm w/ deed restriction	>25 to ≤100 ppm	>100 ppm

ppm = parts per million

Cleanup activities will be undertaken in a manner compliant with TSCA subpart D cleanup standards, federal Occupational Safety and Health Administration (OSHA), and/or Michigan Occupational Safety and Health Administration (MIOSHA), as applicable.

The regulations also require work practice standards designed to eliminate or minimize the release of contaminated soil during the cleanup process. The objective of the contamination cleanup or mitigation is to reduce or eliminate the potential risk of exposure to site occupants and

to workers and the public during remediation at the subject property. In order to be considered effective, the remedial alternative selected for the subject property needs to minimize the potential for human exposure to contaminated soil.

2.2: Cleanup Oversight Responsibility

An environmental professional will oversee cleanup remediation activities and will include reporting to EPA upon completion.

3.0 POTENTIAL CLEANUP ALTERNATIVES

The sections below provide an outline of the conceptual alternatives to achieve TSCA subpart D compliance in relation to identified contamination on the subject property. It is assumed that demolition of the building will be necessary to access the target cleanup areas. The City has selected a qualified contractor to abate the asbestos containing materials (ACM) that have been identified within the building as well as demolish the structure. The cost to abate ACM and demolish of the building is not part of this grant request. It is anticipated that ACM abatement and demolition activities will commence in December 2021 and be completed before remediation activities are scheduled to occur.

Multiple potential alternatives have been selected for further evaluation and comparison:

- Alternative #1: No Action
  - No action
- Alternative #2:
  - Comprehensive Cleanup to Achieve Compliance with Michigan's Part 201 Cleanup Criteria, and federal Self-Implementing High-Occupancy TSCA (no surface cap). Specifically, the Michigan Part 201 Residential Generic Cleanup Criteria and federal TSCA Self-Implementing High-Occupancy Standards will be utilized.
- Alternative #3:
  - Cleanup of Contaminated Areas to Achieve Compliance with TSCA Risk-Based High-Occupancy Standards.

Each alternative was evaluated for applicability to the subject property and its feasibility and are further discussed in the following sections.

3.1: Alternative #1: "No Action"

The "no action" cleanup alternative is included in the evaluation as a standard to compare other remedial action in order to compare and contrast any significant reduction in subject property risk, as necessary. For the "no action" alternative, no action to remediate the issues identified at the subject property would take place and the contaminants would remain in place. This alternative does not include a means to mitigate or eliminate potential exposure both during and following redevelopment and does not meet the objectives of the project.

3.1.1: Effectiveness

This alternative is not effective in controlling the release of contaminants or achieving project goals. Contamination will remain in the ground and potentially cause issues related to the development activities including soil management.

3.1.2: Implementability

The 'No Action' alternative is simple to implement since no activities will be conducted.

3.1.3: Cost

No direct costs associated with this alternative; however, potential environmental and financial liabilities would not be addressed and may result in additional management costs during development.

3.2: Alternatives to "No Action"

The following Tables have lined up Alternatives 2 and 3 for an easier comparison of Effectiveness, Implementability and Cost.

Alternatives to "No Action" CONCEPTUAL CLEANUP OPTIONS

Alternative 2: Comprehensive Cleanup to Achieve Compliance with Michigan's Part 201 of Michigan's Natural Resources and Environmental Protection Act (NREPA) (P.A. 451 of 1994), as amended.					
	Advantages	**Conceptual Budgetary Costs**	**Effectiveness Feasibility**	**Anticipated Cleanup Standard**	**Timeframe**
Comprehensive Cleanup of PCB/VOCs, and Metals above Part 201 Residential and Nonresidential Cleanup Criteria and, Volatilization to Indoor Air Pathway (VIAP) Screening Levels, and TSCA High-Occupancy Criteria. Removal of Contaminated Materials	**Advantages** • Removal of all contamination from the site that represents a potential unacceptable exposure risk to occupants. • Facilitates unrestricted use of the property. • Potential exposure risks via the groundwater ingestion pathway controlled using a Restrictive Covenant **Disadvantages** • A groundwater contaminant plume originating from the site already extends greater than 1,600 feet offsite to the north/northwest such that cleanup of all contamination on the site will not address the offsite plume area. • Not cost feasible when compared to other alternatives. • Additional evaluation and delineation studies needed to completely delineate the vertical and horizontal extent of contamination relative to current EGLE VIAP Screening Levels or Volatilization to Indoor Air Criteria (VIAC) issued by EGLE • Additional feasibility and pilot testing required to implement cleanup. • The contaminant types onsite require different cleanup technologies such that a combination of extensive excavation coupled with remediation system operation, possible in-situ groundwater treatment, and long-term groundwater monitoring would be required • Cleanup activities would require years to achieve.	Greater than $1,000,000	Effectively removes occupant contaminant exposure conditions	Part 201: Drinking Water, Ground-Water Surface Water Interface, Direct Contact, and Volatilization to Indoor Air Inhalation Cleanup Criteria	Five to ten years (or greater)

Alternative 3: Comprehensive Cleanup to Achieve Compliance with Michigan's Part 201 of Michigan's Natural Resources and Environmental Protection Act (NREPA) (P.A. 451 of 1994), as amended.					
	Advantages	**Conceptual Budgetary Costs**	**Effectiveness Feasibility**	**Anticipated Cleanup Standard**	**Timeframe**
Cleanup of PCBs to Achieve Risk-Based TSCA high-Occupancy Subpart D Cleanup Standards Utilization of Traditional Brownfield TIF to address Due Care Compliance (i.e. vapor mitigation, institutional controls, etc.)	**Advantages** • Cost feasible • Risk Based Approach allows source removal while implementing targeted engineering and institutional controls to facilitate reuse and redevelopment consistent with a high-occupancy land use as defined under TSCA. • Allows EPA input to Risk-Based TSCA Cleanup Workplan/Approach that is submitted to EPA prior to implementation; • Allows leveraging of state brownfield TIF programs for non-PCB impacts; • Reduces waste generation compared to Alternative 2 or a more conservative Self-Implementing standard under TSCA. • Moderate property disruption relative to other options. • Timeframe for cleanup activities significantly reduced compared to Alternative 2. • Maximizes redevelopment/reuse potential relative to PCB impacts including those consistent with both High and Low-Occupancy uses and mixed Residential/Commercial land uses; • Redevelopment features, like building pads, parking lots and driveways can be adopted or implemented to meet risk-based cleanup requirements and/or controls. **Disadvantages** • Only addresses TSCA subpart D cleanup standards. Additional institutional controls likely needed. • Surface barriers, vapor intrusion controls, or institutional controls may still be needed, which will require operation and maintenance. • Annual inspections and documentation may be required to demonstrate compliance with Due Care obligations and the institutional and engineering controls required for Risk-Based TSCA Closure;	±$500,000 to $600,000 PCBs are Removed to Meet Risk-Based High-Occupancy Standards, and Engineering/ Institutional Controls Implemented	Effective, achieves compliance with Risk-Based TSCA subpart D High-Occupancy cleanup standards.	TSCA Subpart D Cleanup Standards (Risk-Based High-Occupancy)	6-12 months

4.0 RECOMMENDED CLEANUP ALTERNATIVE

Given the cost feasibility involving cleanup of the PCB contamination on the property, the recommended cleanup option is Alternative 3: Cleanup of PCB Contaminated Areas to Achieve Compliance with Risk-Based High-Occupancy TSCA Subpart D Cleanup Standards.

While still a viable option for remediation, the costs associated with Alternative 2 is not economical as the total remediation costs are estimated to be greater than the property's value. In addition, a comprehensive cleanup of the property would not address the existing offsite groundwater contaminant plume which has migrated greater than 1,600-feet to the north/northwest. Cleanup of the PCB contaminations to TSCA Risk-Based High-Occupancy Standards would effectively split the cost of EPA Brownfield Cleanup funding, which would allow the leveraging of state brownfield TIF incentives to redevelop the site. Neither program would provide enough funding to fully address the cleanup of the PCB contamination and address due care response activities on their own.

Following the implementation of cleanup activities, The City intends to submit a Risk-Based TSCA Closure Report to EPA documenting compliance with TSCA subpart D. It is understood that the Closure Report will need to include requirements for post-closure actions including inspections and operation and maintenance activities, as applicable.

5.0 REFERENCES

The following previous site investigations, some of which are available from public sources.

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In addition, the following published sources were utilized during completion of this ABCA:

- TSCA Part 761 "Polychlorinated Biphenyls Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions", Subpart D "Storage and Disposal";
- "Part 201 Cleanup Criteria and Part 213 Risk-based Screening Levels," Revised December 2013 and in accordance with Section 20120a(1);
- EGLE Operational Memorandum No. 4 "Site Characterization and Remediation Verification – Attachment 10, Peer Review Draft Groundwater Not in an Aquifer," February 2007;
- EGLE Operational Memorandum No. 2 "Sampling and Analysis," October 22, 2004, Revised July 5, 2007;
- EGLE Guidance Document for the Vapor Intrusion Pathway, May 2013;

- Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, ASTM, ASTM Designation E 1527-13, Published November 2013.

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ERM also collected concrete samples from the surface and lower layers of the concrete slab in the east room (warehouse). Concentrations of PCBs greater than 1.0 ppm were identified in all of the deeper intervals at concentrations ranging from 3.4 ppm to 5,600 ppm. The locations of the highest concentrations of PCBs were identified around the north and east pits, where concentrations exceeded 100 ppm. In addition, 10 surface concrete samples from the west room in the northwestern portion of the building were collected, none of which contained PCB concentrations exceeding 10 ppm, which is appropriate for high-occupancy use.

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Based on these results, GHD presented the following recommended approach in the Cleanup Plan, which envisioned Low-Occupancy uses of the subject property, as defined under TSCA:

- PCBs ≤ 100 ppm – leave in place and cap with an epoxy seal;
- PCBs > 100 ppm from 0.0 to 5.0 feet bgs – excavate to 5.0 feet bgs and dispose of offsite;
- PCBs > 100 ppm greater than 5.0 feet bgs – leave in place and cap with an epoxy seal; and
- PCBs > 1 ppm – cap with an epoxy seal all areas that exceed 1 ppm.

Additional recommended activities included:

- Collection of confirmation soil samples in the planned PCB excavation area following TSCA verification of soil remediation guidance.
- No PCB removal activities of soil or concrete to be completed in the west room; and
- Recording deed restrictions for the subject property consistent TSCA requirements.

Groundwater Sampling Results and Summary - 3/13/2019 (GHD)
Groundwater monitoring results dated 2019 document similar concentrations as previously identified. Sampling results indicate that the chlorinated VOCs present in groundwater have not mobilized the PCBs present in the impacted soils to groundwater.

1.4: Project Goals

The existing building has been subject to several years of decline and deterioration, prompting the City to acquire the property. The City's intent is to better position the property for redevelopment by addressing the PCB contamination known to exist at the site. The City will retain ownership of the property and oversee the cleanup activities until the property can be sold to a developer and redeveloped.

The City intends to engage in PCB cleanup activities to achieve Risk-Based High-Occupancy TSCA cleanup standards. The magnitude of these costs along with additional costs necessary to implement due care response activities exceeds the capabilities of available brownfield tax increment financing, as well as other state cleanup programs that are experiencing significant funding reductions due to the COVID-19 pandemic. Cleanup of PCB contamination to the Risk-

Based High-Occupancy TSCA standard will eliminate a significant cleanup cost, which would make state brownfield tax increment financing feasible to implement the necessary due care response activities available for redeveloping property.

The initial conceptual site development plan that was prepared by the City includes the redevelopment of the property into a commercial mixed-use development that includes, restaurants, entertainment, and live-work space.

The project goals for this ABCA are to identify, evaluate, and select an appropriate cleanup plan to address the soil, groundwater, and soil gas impacts identified at the subject property. Based on the preliminary redevelopment concept, the goal of the ABCA also relate to activities likely required to achieve compliance with the Risk-Based High-Occupancy TSCA cleanup standards with the implementation of cleanup activities, as it pertains to documented soil, groundwater, and soil gas impacts at the subject property.

2.0 APPLICABLE REGULATIONS AND CLEANUP STANDARDS

2.1: Law and Regulations Applicable to the Cleanup

Laws and regulations that are applicable to this cleanup include the Federal Toxic Substances Control Act (15 U.S.C. chapter 53, subchapter 1, sections 2601-2629) and Brownfields Revitalization Act (Pub. L. 107-118, 115 stat. 2356), the Federal Davis-Bacon Act (Ch. 411, 46 Stat. 1494) and Michigan Parts 111, 115, and 201. Federal, state, and local laws regarding procurement of contractors to conduct the cleanup will be followed. As described herein, all cleanup will be in accordance with the State of Michigan regulations and Federal TSCA regulations. All applicable permits and documentation (i.e. One-Call, Project Notification Forms, Asbestos Removal, Building Demolition Permit, etc.) will be obtained prior to the work commencing, and all work will be conducted in accordance with the conditions for approval. Pertinent laws and regulations applicable to the contaminant of concern for this ABCA are detailed in the following subsections.

2.1.1: Cleanup Standards for Major Contaminants

Documented soil, groundwater, and soil gas impacts were identified at the subject property and compared to TSCA subpart D cleanup standards. These standards are described as follows:

Standard	No Action	Appropriate Cap w/Deed Restriction	Removal Required
High-Occupancy Area (≥335 hours/year)	≤1 ppm	>1 to ≤10 ppm	>10 ppm
Low-Occupancy Area (<335 hours/year)	≤25 ppm w/ deed restriction	>25 to ≤100 ppm	>100 ppm

ppm = parts per million

Cleanup activities will be undertaken in a manner compliant with TSCA subpart D cleanup standards, federal Occupational Safety and Health Administration (OSHA), and/or Michigan Occupational Safety and Health Administration (MIOSHA), as applicable.

The regulations also require work practice standards designed to eliminate or minimize the release of contaminated soil during the cleanup process. The objective of the contamination cleanup or mitigation is to reduce or eliminate the potential risk of exposure to site occupants and

to workers and the public during remediation at the subject property. In order to be considered effective, the remedial alternative selected for the subject property needs to minimize the potential for human exposure to contaminated soil.

2.2: Cleanup Oversight Responsibility

An environmental professional will oversee cleanup remediation activities and will include reporting to EPA upon completion.

3.0 POTENTIAL CLEANUP ALTERNATIVES

The sections below provide an outline of the conceptual alternatives to achieve TSCA subpart D compliance in relation to identified contamination on the subject property. It is assumed that demolition of the building will be necessary to access the target cleanup areas. The City has selected a qualified contractor to abate the asbestos containing materials (ACM) that have been identified within the building as well as demolish the structure. The cost to abate ACM and demolish of the building is not part of this grant request. It is anticipated that ACM abatement and demolition activities will commence in December 2021 and be completed before remediation activities are scheduled to occur.

Multiple potential alternatives have been selected for further evaluation and comparison:

- Alternative #1: No Action
  - No action
- Alternative #2:
  - Comprehensive Cleanup to Achieve Compliance with Michigan's Part 201 Cleanup Criteria, and federal Self-Implementing High-Occupancy TSCA (no surface cap). Specifically, the Michigan Part 201 Residential Generic Cleanup Criteria and federal TSCA Self-Implementing High-Occupancy Standards will be utilized.
- Alternative #3:
  - Cleanup of Contaminated Areas to Achieve Compliance with TSCA Risk-Based High-Occupancy Standards.

Each alternative was evaluated for applicability to the subject property and its feasibility and are further discussed in the following sections.

3.1: Alternative #1: "No Action"

The "no action" cleanup alternative is included in the evaluation as a standard to compare other remedial action in order to compare and contrast any significant reduction in subject property risk, as necessary. For the "no action" alternative, no action to remediate the issues identified at the subject property would take place and the contaminants would remain in place. This alternative does not include a means to mitigate or eliminate potential exposure both during and following redevelopment and does not meet the objectives of the project.

3.1.1: Effectiveness

This alternative is not effective in controlling the release of contaminants or achieving project goals. Contamination will remain in the ground and potentially cause issues related to the development activities including soil management.

3.1.2: Implementability

The 'No Action' alternative is simple to implement since no activities will be conducted.

3.1.3: Cost

No direct costs associated with this alternative; however, potential environmental and financial liabilities would not be addressed and may result in additional management costs during development.

3.2: Alternatives to "No Action"

The following Tables have lined up Alternatives 2 and 3 for an easier comparison of Effectiveness, Implementability and Cost.

Alternatives to "No Action" CONCEPTUAL CLEANUP OPTIONS

Alternative 2: Comprehensive Cleanup to Achieve Compliance with Michigan's Part 201 of Michigan's Natural Resources and Environmental Protection Act (NREPA) (P.A. 451 of 1994), as amended.					
	Advantages	**Conceptual Budgetary Costs**	**Effectiveness Feasibility**	**Anticipated Cleanup Standard**	**Timeframe**
Comprehensive Cleanup of PCB/VOCs, and Metals above Part 201 Residential and Nonresidential Cleanup Criteria and, Volatilization to Indoor Air Pathway (VIAP) Screening Levels, and TSCA High-Occupancy Criteria. Removal of Contaminated Materials	**Advantages** • Removal of all contamination from the site that represents a potential unacceptable exposure risk to occupants. • Facilitates unrestricted use of the property. • Potential exposure risks via the groundwater ingestion pathway controlled using a Restrictive Covenant **Disadvantages** • A groundwater contaminant plume originating from the site already extends greater than 1,600 feet offsite to the north/northwest such that cleanup of all contamination on the site will not address the offsite plume area. • Not cost feasible when compared to other alternatives. • Additional evaluation and delineation studies needed to completely delineate the vertical and horizontal extent of contamination relative to current EGLE VIAP Screening Levels or Volatilization to Indoor Air Criteria (VIAC) issued by EGLE • Additional feasibility and pilot testing required to implement cleanup. • The contaminant types onsite require different cleanup technologies such that a combination of extensive excavation coupled with remediation system operation, possible in-situ groundwater treatment, and long-term groundwater monitoring would be required • Cleanup activities would require years to achieve.	Greater than $1,000,000	Effectively removes occupant contaminant exposure conditions	Part 201: Drinking Water, Ground-Water Surface Water Interface, Direct Contact, and Volatilization to Indoor Air Inhalation Cleanup Criteria	Five to ten years (or greater)

Alternative 3: Comprehensive Cleanup to Achieve Compliance with Michigan's Part 201 of Michigan's Natural Resources and Environmental Protection Act (NREPA) (P.A. 451 of 1994), as amended.					
	Advantages	**Conceptual Budgetary Costs**	**Effectiveness Feasibility**	**Anticipated Cleanup Standard**	**Timeframe**
Cleanup of PCBs to Achieve Risk-Based TSCA high-Occupancy Subpart D Cleanup Standards Utilization of Traditional Brownfield TIF to address Due Care Compliance (i.e. vapor mitigation, institutional controls, etc.)	**Advantages** • Cost feasible • Risk Based Approach allows source removal while implementing targeted engineering and institutional controls to facilitate reuse and redevelopment consistent with a high-occupancy land use as defined under TSCA. • Allows EPA input to Risk-Based TSCA Cleanup Workplan/Approach that is submitted to EPA prior to implementation; • Allows leveraging of state brownfield TIF programs for non-PCB impacts; • Reduces waste generation compared to Alternative 2 or a more conservative Self-Implementing standard under TSCA. • Moderate property disruption relative to other options. • Timeframe for cleanup activities significantly reduced compared to Alternative 2. • Maximizes redevelopment/reuse potential relative to PCB impacts including those consistent with both High and Low-Occupancy uses and mixed Residential/Commercial land uses; • Redevelopment features, like building pads, parking lots and driveways can be adopted or implemented to meet risk-based cleanup requirements and/or controls. **Disadvantages** • Only addresses TSCA subpart D cleanup standards. Additional institutional controls likely needed. • Surface barriers, vapor intrusion controls, or institutional controls may still be needed, which will require operation and maintenance. • Annual inspections and documentation may be required to demonstrate compliance with Due Care obligations and the institutional and engineering controls required for Risk-Based TSCA Closure;	±$500,000 to $600,000 PCBs are Removed to Meet Risk-Based High-Occupancy Standards, and Engineering/ Institutional Controls Implemented	Effective, achieves compliance with Risk-Based TSCA subpart D High-Occupancy cleanup standards.	TSCA Subpart D Cleanup Standards (Risk-Based High-Occupancy)	6-12 months

4.0 RECOMMENDED CLEANUP ALTERNATIVE

Given the cost feasibility involving cleanup of the PCB contamination on the property, the recommended cleanup option is Alternative 3: Cleanup of PCB Contaminated Areas to Achieve Compliance with Risk-Based High-Occupancy TSCA Subpart D Cleanup Standards.

While still a viable option for remediation, the costs associated with Alternative 2 is not economical as the total remediation costs are estimated to be greater than the property's value. In addition, a comprehensive cleanup of the property would not address the existing offsite groundwater contaminant plume which has migrated greater than 1,600-feet to the north/northwest. Cleanup of the PCB contaminations to TSCA Risk-Based High-Occupancy Standards would effectively split the cost of EPA Brownfield Cleanup funding, which would allow the leveraging of state brownfield TIF incentives to redevelop the site. Neither program would provide enough funding to fully address the cleanup of the PCB contamination and address due care response activities on their own.

Following the implementation of cleanup activities, The City intends to submit a Risk-Based TSCA Closure Report to EPA documenting compliance with TSCA subpart D. It is understood that the Closure Report will need to include requirements for post-closure actions including inspections and operation and maintenance activities, as applicable.

5.0 REFERENCES

The following previous site investigations, some of which are available from public sources.

Name of Report	Date of Report	Prepared by
Phase II ESA	10/9/2015	Environmental Resources Management Michigan, Inc. (ERM)
Remedial Alternatives Evaluation (RAE)	5/11/2018	GHD Services Inc. (GHD)
PCB Cleanup Plan and Application for Risk-Based Cleanup and Disposal Approval (Cleanup Plan)	8/3/2018	GHD
Groundwater Sampling Results and Summary	3/13/2019	GHD

In addition, the following published sources were utilized during completion of this ABCA:

- TSCA Part 761 "Polychlorinated Biphenyls Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions", Subpart D "Storage and Disposal";
- "Part 201 Cleanup Criteria and Part 213 Risk-based Screening Levels," Revised December 2013 and in accordance with Section 20120a(1);
- EGLE Operational Memorandum No. 4 "Site Characterization and Remediation Verification – Attachment 10, Peer Review Draft Groundwater Not in an Aquifer," February 2007;
- EGLE Operational Memorandum No. 2 "Sampling and Analysis," October 22, 2004, Revised July 5, 2007;
- EGLE Guidance Document for the Vapor Intrusion Pathway, May 2013;

- Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, ASTM, ASTM Designation E 1527-13, Published November 2013.

CHANGE ORDER

For Industrial Property Located at 200 Blue Star Highway in Douglas, Michigan

PM Environmental, Inc. Project No. 01-10275-1-0006

Change Order No.: 1	Date: 11/3/2021	
Property Address: Industrial Property Located at 200 Blue Star Highway in Douglas, Michigan		
Original Proposal Date: July 7, 2021	Original Proposal No.: 01019717	
Scope of Work and Cost		
Additional project management, correspondence, meetings associated with city council and brownfield authority, and communication for community public comment (*10 to 20 hours*)		$2,000 -$4,000
Abatement Oversight, Universal Waste removal verification, exposure monitoring and clearance testing (*assumed two to three weeks -eight to twelve days @ $950 per day*)		$7,600-$11,400
Construction Fugitive Dust Monitoring during demolition activities- *estimated two to four weeks*		
• Onsite technician monitoring, health and safety supplies, sampling equipment, associated project coordination/management		$7,600- $15,200
• TSI Dust Trak 8533 dust collect of two sampling points, periodically positioned based on prevailing winds, for dust and particulate monitoring weekly rate $650 per week		$1,300 - $2,600
Projected Estimated Amount for Project		**$18,500-$33,200**
All terms and conditions of the contract between the parties remain unchanged and in full force and effect. It is understood and agreed by the parties hereto that the foregoing change(s) in the Contract Amount and change(s) in services are accepted and agreed to by the parties.		
PM Authorized Signature: Wayne Ruppe	**Client Authorized Signature:**	
Signature date: November 3, 2021	**Signature date:**	
NOTE: SIGN AND RETURN ORIGINAL; COPIES MAY BE RETAINED FOR YOUR FILE.		

1. PROJECT AREA DESCRIPTION AND PLANS FOR REVITALIZATION

a. Target Area and Brownfields

i. Background and Description of Target Area

The City of the Village of Douglas (population: 936) is in Allegan County in the southwest portion of Michigan's lower peninsula on the shores of Lake Michigan. First settled in 1851, the City's initial economy revolved around the lumber industry. Lumber production peaked after the Great Chicago Fire of 1871, as Douglas area sawmills became the primary source of the lumber that was used to rebuild the City of Chicago. By the late 1800's the area's abundance of scenic natural resources began to attract people from large urban centers, like Chicago, who were in search of a quiet and peaceful vacation locale. Today, Douglas is an established tourist community offering an eclectic art, food, and cultural scene with miles of trails and attractions that include the panoramic views of Lake Michigan. Douglas and its residents have strived to be a community where people from all walks of life are welcomed with open arms, earning its reputation as one of Michigan's most LGBTQ-friendly small towns.

Over the past five years, changes in demographics, housing markets, and the economy has prompted the City to devise new strategies to address critical needs for housing and commercial retail. Although the City has established neighborhoods and a downtown area (approximately 0.07 square miles on the western shore of Kalamazoo Lake), the City's reputation as a seasonal community has led to an average of 49.9% of households that are occupied by non-family units (Allegan County: 27.5%, Michigan 35.7%) and 29.9% of households that are renter occupied (Allegan County: 17.4%). Since 2015, Douglas has experienced a 12.8% increase in renter-occupied households. In addition, there is an increasing trend of older residents who are relocating to the City. Census statistics show that 25.7% of the population is comprised of residents over the age of 65 compared to 17.2% of Allegan County and 17.7% at the state level. Furthermore, the percentage of households with children under the age of 18 years is more almost two times less than Allegan County (16.3% and 29.4%), which suggests that Douglas has become a preferred destination for retired individuals.

To support the health and vitality of the local economy, the community has determined that maintaining a balance of permanent and seasonal residents, as well as diversifying the City's population with young families, is necessary to sustain and grow local business, and increase property tax revenues to support all populations. To accomplish this goal, the disparity in housing options between those who work versus those who live in the City must be addressed. According to Zillow.com, the average cost of a single-family home is over 95% more than the average cost per home in Allegan County. With an average cost of nearly $316,600 for a single-family home, there is a lack of diverse housing stock that can be accessed by the working families who support the local economy. As a result, these families have sought other housing options in nearby cities, which has partially contributed to a population decrease in Douglas of approximately 17.5% since 2015. With only 1.78 square miles of land area within the City's limits, there are few opportunities to create new residential and mixed-use developments that are necessary to attract younger, working families.

By engaging the public through several strategic planning initiatives, the City has identified the Blue Star Highway Corridor as a targeted area of focus to attract new development. Approximately 1.25 miles, the corridor is the main north-south thoroughfare that bisects the City and is an established commercial corridor which includes several established businesses, including restaurants, lodging, banks, and small retail shops.

Across from these developments, is the former Haworth Manufacturing property (the target property), a former industrial manufacturing facility of approximately 7 acres. In 2014, the manufacturer closed operations and relocated to a larger, more modern facility. Its resulting vacancy eliminated approximately 80 jobs, which contributed to an already decreasing trend in the manufacturing sector. Between the years of 2010 and 2019, the percentage of City residents employed by the manufacturing sector has decreased by approximately 6.3%, while the State average has increased by 1.2%. The steady decline of the manufacturing sector, combined with the lack of diverse housing stock within the City has likely contributed to an overall decrease in population of younger, working class age groups. Between the years of 2015 and 2019, the population of individuals ranging between 20 and 34 years old has decreased by nearly 50% (US Census).

Efforts by the City to attract a developer to undertake the redevelopment of the property have stalled due to the known contamination that exists at the site. With respect to the target property's location and size, its cleanup

and redevelopment has the potential to attract additional "spin-off" developments to the Blue Star Corridor and achieve the City's objectives to attract new developments that provide diverse housing options, new commercial mixed-use retail developments, create jobs, and generate new tax revenues.

ii. Description of the Brownfield Site(s)

The target property is located at 200 Blue Star Highway and consists of a single parcel of approximately 7.18 acres. By 1938, it was initially developed as a fallow orchard with two small structures. By the 1940s, the property was redeveloped into its current configuration, which consists of two utility buildings and a 150,300 square foot, single-story industrial building with approximately 15 truck bays facing Blue Star Highway. From the 1940's through the mid-1970's the property's extensive history included plating, buffing, zinc die casting, metal forming, stamping, phosphatizing, and painting metal parts. Between the years of 1976 and 2014, the property was owned and occupied by Haworth Inc. (formerly Haworth Manufacturing) who used the facility to manufacture furniture. Since 2014, the vacancy of the massive metal warehouse-like structure is one of the first sights that greet those traveling into the City from the south. After seven years of vacancy, the property is an eyesore as it remains unutilized, is not contributing to tax revenues, and is an environmental risk. In addition to the overall cost associated with redeveloping the target property, the added expense of addressing the contamination has made redevelopment of the property financially prohibitive. To assist in leveraging funding opportunities for cleanup and redevelopment, the City acquired the target property in 2019.

In 2015, Phase I and II Environmental Site Assessments (ESAs) were conducted to review previous assessments and investigate contamination from polychlorinated biphenyls (PCBs) and volatile organic compounds (VOCs) beneath the building, as well as evaluate pathways related to vapor intrusion. Sampling conducted in the former die cast pit area (eastern portion of the building) identified concentrations of PCBs above one part per million (ppm). Analytical data also suggests that the TCE contamination exceeding Michigan's Residential and Nonresidential Drinking Water, Groundwater Surface Water Interface, and Groundwater Volatilization to Indoor Air cleanup criteria, has migrated approximately 1,600 feet north-northwest of the target property, offsite. In May 2018, a Remedial Alternatives Evaluation (RAE) was conducted to evaluate the extent of trichloroethene (TCE), and PCB impacts to determine options to address the risks associated with VOC contaminated groundwater and PCB contaminated soil. The RAE also summarized the results of previous site investigations that were conducted between 2015 and 2017 to define the horizontal and vertical extent of PCB contaminated soil impacts. These investigations identified soils impacted by PCBs at concentrations ranging from 3.4 parts per million (ppm) to 5,600 ppm, which are above the Toxic Substances Control Act (TSCA) Subpart D Cleanup Standard for high occupancy areas. The horizontal and vertical extent of the PCB impact were determined to be in the north central and eastern portions of the east room of the building, at depths ranging from 1' to 15.5' below ground surface (bgs). A cleanup strategy was prepared that involves addressing the contamination from the source areas on the target property by first addressing the PCB contamination. This approach will assist in eliminating one of the concerns identified and as a result, in conjunction with other leveraged sources, to better position the property to be marketed for redevelopment.

Before cleanup of the PCB cleanup activities takes place, it is necessary to demolish the building to access the PCB contaminated areas and implement cleanup activities. Coupled with the community's desire to remove an eyesore, City officials have begun the process of demolishing the building, which will involve the removal of the structure while leaving the floor and paved areas in place to serve as a cap to the contamination below. To date, the City has completed an inventory of the asbestos containing materials within the building, prepared plans and specifications for asbestos abatement and demolition activities, solicited for competitive pricing and selected a qualified contractor. It is anticipated that abatement and demolition activities will commence in December 2021.

b. Revitalization of the Target Area

i. Reuse Strategy and Alignment with Revitalization Plans

The City has been involved in several local and area planning initiatives that include the City's Master Plan, the Tri-Community Master Plan, and the Blue Star Highway Corridor Study. One of the common overarching goals of these planning initiatives is to bolster the local economy by diversifying industries and services that cater to both tourism and full-time citizens. In support of this goal, several objectives have been identified for which the redevelopment of the target property could align. These objectives include: 1) create inclusive and inviting

residential areas that include a multitude of affordable housing types that include mixed housing types of condos, stacked flats, live/work space, townhouses and single-family detached units that attract both seasonal and permanent homeowners; 2) ensure housing stock is inclusive of all age groups to encourage long-term, permanent residency within the City, and 3) support the creation of service-based, mixed uses that include health services, banking, shopping and other industries. These objectives are echoed within the Tri-Community Master Plan, a regionally based planning initiative that includes Douglas and the neighboring City of Saugatuck and Saugatuck Township. Specifically, the proposed reuse of the target property achieves the following: 1) provide a balanced range of diverse housing types at varying densities where public utilities are present or could be quickly provided, and 2) encourage high quality commercial development adjacent to existing commercial development and are compatible with adjoining uses.

Additionally, the City conducted the Blue Star Highway Corridor Study to obtain public input for formulating a community vision for the corridor. Reuse of the target property was identified in the study as a priority to build upon the corridor as a regional business hub for large-scale retail, eating and drinking establishments, personal service establishments, professional and support offices, and medical facilities that are capable of meeting the needs of year-round residents of the Tri-Community area.

Subsequently, reuse scenarios have been explored for the target site that are consistent with these planning initiatives and incorporate community feedback from council and brownfield redevelopment authority meetings. Preliminary conceptual plans include an estimated 80,000 square feet of commercial retail and restaurant space over 7 two-story buildings, and 52,000 square feet of live-work space over 2 buildings. Several elements of the initial site design concept address the City's placemaking goals, including the preservation of the City's reputation as a quaint destination community. These features involve incorporating larger building setback distances, the relocation of parking areas behind the proposed buildings, and implementing streetscape improvements that are in accordance with the City's greenspace and tree ordinances. The preliminary conceptual plan also incorporates placemaking features that includes approximately 800 feet of bike lane along the Blue Star Highway, 700 feet of sidewalk improvements along Ferry Street.

The City has already allocated resources to retain an environmental consultant to perform environmental assessments as part of the City's acquisition of the target property, perform an asbestos containing materials survey, prepare plans and specifications for demolition, and identify state and local brownfield redevelopment incentives that can be leveraged to assist with addressing contamination. Understanding that the approval of a risk based Toxic Substances Control Act (TSCA) PCB Cleanup work plan is a lengthy process, the City and its consultant have already engaged EPA TSCA staff on a preliminary basis to devise an approach for preparing this plan. Additionally, a Memorandum of Understanding (MOU) in place with a local developer to redevelop the property based on the conceptual site plan. However, once grant funded cleanup activities are complete, the City will continue to provide opportunities for community input into the redevelopment and planning process and evaluate other redevelopment options for the site. The target property is not located within a federally designated floodplain.

ii. Outcomes and Benefits of Redevelopment Strategy

Although the preliminary concepts include approximately 52,000 square feet of live-work space, these spaces can be adapted to address specific housing needs within the city which include senior assisted living, stacked-flats, or apartments. Once redeveloped the proposed project will generate new property tax revenue, and no longer be a burden to the City's budget. Based on the initial conceptual site design, it is anticipated that the taxable value of the target property would significantly increase, generating approximately $87,500 annually in property tax revenues for the City. Converting the target property into commercial mixed-use and live-work space is estimated to create 140 jobs related to retail and restaurants usages, and an additional 85 office related jobs. According to the U.S. Energy Information Administration (EIA), food service and retail related uses average one job per every 567 square feet, and office uses average one job for every 600 square feet.

Additional "spin off" developments are anticipated as a result of the redevelopment of the target property. For example, the vacant parcels located to the west of the target property (approximately 52 acres) have generated interest for residential development that includes townhomes and condos. Initial property tax calculations

estimate that approximately $158,000 in additional property tax revenue will be generated for the City for every 100 residential units that are developed. Once the known contamination has been adequately addressed for the target property's reuse, the City anticipates that plans to redevelop these adjoining parcels will also be accelerated.

c. Strategy for Leveraging Resources

i. Resources Needed for Site Reuse

The award of an EPA Brownfield Cleanup Grant is intended to provide financial assistance to address the PCB contamination at the target property. Once PCB cleanup activities have been completed, several response activities will still be required to address remaining contamination to ensure the property is safe for those occupying it. Although the grant will not be used to address these activities, its award will make additional funding opportunities at the local and state level viable. These funding opportunities include several programs that provide incentives to private investors and developers to assist with the cost of redeveloping the property once grant funded cleanup activities are complete. These programs include:

Source	Role
Michigan Brownfield Redevelopment Financing Act – Tax Increment Financing	Michigan enables local governments to issue Tax Increment Financing (TIF) plans for cleanup and response activities to address brownfields. New tax revenue generated from redevelopment creates the tax increment, which is used to reimburse the developer over time for up to 30 years. Once cleanup activities under this grant request have been completed, tax increment financing can be used to assist with reimbursing the cost of the remaining cleanup and response activities. The value of this program is dependent on the final site plan and the future taxes generated. This program is utilized regularly in partnership with the Michigan Department of Environment Great Lakes and Energy (EGLE). The City is setup to implement a TIF Plan through the Brownfield Redevelopment Authority.
Michigan Environment Great Lakes and Energy (EGLE) Grant and Loan	Provides funding of up to $1 million in grant and up to $1 million in loan funds ($2 million total) for environmental cleanup activities at properties with known contamination. Funding can be applied to address remaining contamination that is not addressed under the EPA Cleanup grant. The City is eligible to apply for funding directly, upon finalization of the development plan, which will be catalyzed by the EPA Cleanup grant. TIF revenues from the Brownfield Redevelopment Financing Act can also be utilized to repay a loan under this program. The City was already awarded a grant under this fund in the amount of $179,287 to complete additional assessment activities to delineate the contamination on the former Haworth Property and devise a cleanup strategy.
Commercial Rehabilitation Act	A state tax abatement program that encourages the rehabilitation of commercial and properties by freezing property tax values at predevelopment values for a period up to 10 years. The value of this program is dependent on the final site plan; however, it is estimated to be $200,000 annually. While it may reduce the available TIF for a project, it can assist in reducing tax obligations while a project is working to stabilize itself and assist in developer attraction.
Community Revitalization Program	Funding of up to 20% of the total project investment (not to exceed $10,000,000) is available for redevelopment projects that foster economic growth and job creation within a downtown or commercial corridor. These funds can be applied for by the future developer of the property, contingent upon proof of financing and financial need.
EPA Targeted Brownfield Assessment (TBA) Program	Although there is sufficient data available to delineate the PCB contamination, additional data is needed to evaluate the overlaying concrete for disposal purposes. The City through the EPA TBA program is currently in the process of collecting additional sampling data to further characterize the overlaying concrete, as well as collect data to refine the vertical delineation PCB contamination. Data collected by EPA TBA will be used to finalize a risk based TSCA PCB Cleanup work plan, that will be submitted to the EPA TSCA team for approval.
City of Douglas	To date, allocated via funds set aside within the general budget, the City has expended $100,000 to acquire the target property and has allocated another $37,500 to perform environmental site assessments. The City also awarded a contract in the amount of $77,800 for asbestos abatement and demolition of the building on November 2, 2021. An environmental consultant to provide oversight and air monitoring support during asbestos abatement activities in the amount of $20,000. Abatement and demolition of the building is tentatively scheduled to begin in December 2021.

ii. Use of Existing Infrastructure

The target property is located along the Blue Star Highway, which provides for easy access to existing infrastructure (roads, water, electricity, natural gas, sewers, etc.) that are sufficient to support the proposed redevelopment and reuse without significant additional investments into upgrading the existing infrastructure. Depending on the final site design, the existing utilities (i.e. water and sewer) are capable of accommodating the redevelopment, with the exception of minor sewer leads and taps that may need to be constructed to access the existing infrastructure. As the City's main thoroughfare, Blue Star Highway provides quick access (via Interstate I-196) to the City of Grand Rapids, Michigan's second largest city. Less than 40 miles away, Grand Rapids provides advantages that are typical to metropolitan areas that include amenities such as an established transportation network of roads and access to an international commercial airport, both of which provide connections to other economic markets.

2. COMMUNITY NEED AND COMMUNITY ENGAGEMENT

a. Community Need

i. The Community's Need for Funding

The City's rising operational costs, stagnated tax base, and reduced state revenue share, are the primary reasons why the City does not have the ability to completely fund the cleanup activities that are needed to redevelop the target property. Since 2015, the City's population has decreased by approximately 17.5% (pop. 936), and while the median household income ($59,152) has increased since 2015, its approximately $16,000 less than the State's average ($75,703), the county average ($62,965), as well as three of the four surrounding counties. In addition to a shrinking tax base, the City is met with constant challenges to maintain its fiscal responsibility. Over the past three years, the City has experienced an estimated 16.2% increase in public works expenses related to capital projects needed to maintain the City's infrastructure, as well as increases in governmental operations expenses of approximately 14.8% which are correlated with rising health care costs, retirement obligations, and staff turnover.

With respect to the City's size (approximately 1.78 square miles), large tracts of developable land are not available, which has reduced opportunities to increase property tax revenues from new development within the City. Adding to the City's fiscal challenges is the reduction of state revenue share of approximately 18.6% over the past three years. As a result, the growth of City's general fund revenues have stagnated. Since 2010, revenues beyond budgeted expenditures are nonexistent (Michigan Department of Treasury), which has necessitated the need for financial assistance to implement cleanup initiatives at the target site. Overall, the City's projected expenditures are predicted to exceed the City's revenue by approximately 8.3%, for fiscal year 2020-2021.

In accordance with the goals and objectives of the City's Master Plan to diversify commercial mixed-use and residential sectors, parcels located on, or in proximity to the Blue Star Highway Corridor target area provides the highest potential to generate a significant amount of new property tax revenues. Recognizing this opportunity, the City acquired the target property and has proactively allocated a funding from its general budget to complete asbestos abatement and demolition activities. However, the City is unable to generate enough funding to fully fund cleanup activities at the target property without help from an EPA Brownfield Cleanup Grant.

ii. Threats to Sensitive Populations

(1) Health or Welfare of Sensitive Populations

According to the Asset Limited, Income Constrained, Employed Project (ALICE), 17% of the population within the City live in poverty, or above the poverty line, yet still struggle to make ends meet. Within a one-third mile radius of the target property, 20% are considered to have low incomes (less than or equal to twice the federal poverty level) (EJSCREEN) (2019-ACS). In addition, 24% of the population within this radius are over the age of 65, which is approximately 17.8% higher than the overall City average. Cleanup of the target property would reduce the negative health impacts associated with exposure to the contamination at the target property to this segment of the population. Furthermore, there is only one senior living facility located within the City that has a capacity of 50 people. The next closest facilities are located at least 10 miles away in other communities. Although most of the senior population within the City are presently living independently, it is anticipated that the demand for senior housing, as well as supporting commercial uses (i.e. health services, banking, shopping, and retail, etc.), will increase as the City's population continues to age.

(2) Greater Than Normal Incidence of Disease and Adverse Health Conditions

According to the International Agency for Research on Cancer (IARC), PCBs and chlorinated solvents (which includes TCE) are known carcinogens that impacts the liver, skin, and reproductive system, suggesting that segments of the population that are exposed (via inhalation or by direct contact) to these contaminants are more vulnerable to experience the more severe health effects. According to data published by the Michigan Department of Health and Human Services (MDHHS), cancer related mortality rate (per 100,000 persons) in Allegan County has increased by 8.2% compared to the State (1.0%) since 2010. Specifically, the age group that has experience the highest increase are individuals between the age of 50 and 74 years old. Since 2010, cancer mortality for individuals within this age group have risen by 29.3% compared to a decrease of 3.8% at the state level. Regarding chronic liver disease, which has also been linked to PCB and TCE exposure, Allegan County has experienced 34% increase in deaths related to chronic liver disease compared to the state's average of 9.1%. Specifically, individuals within the age of 50 to 74 years old have experienced an increase of 19.1% compared to the state average of 9%, and the mortality rate of individuals over the age of 75 has nearly doubled (98.9%) in Allegan County compared to the state (19.9%).

In addition, Alzheimer's disease is the 6th leading cause of death in Michigan according to the Alzheimer's Association. MDHHS data suggests that the mortality rate of Alzheimer's Disease for populations on a county-wide basis has increased by approximately 79.9% since 2010, while Michigan increased at slightly slower rate (approximately 73.7%). According to articles published by the National Institute of Health, it is plausible that exposures to PCBs can increase the risk of neurodegenerative diseases that include Alzheimer's Disease, Parkinson's Disease, amyotrophic lateral sclerosis (ALS), and various cognitive attention disorders.

(3) Promoting Environmental Justice

24% of the population within a one-third mile radius of the target property is over the age of 64 years old, and while only 3.2% of the City's population are people of color, approximately 9% of the population within this radius are comprised of people of color. (EJSCREEN). Cleanup of the PCB contamination is the first step toward mitigating the pathways that pose threats to human health and welfare of the sensitive aging populations and people of color living nearby. The cleanup and redevelopment of the target property will provide additional residential housing stock, which could include senior assisted living, more attainable housing for the City's workforce and lower income residents, as well as commercial retail and services that are needed to support residential development. The establishment of these commercial uses are expected to catalyze additional residential redevelopment of nearby properties. The average cost for a single-family home of nearly $316,600(nearly double the average for Allegan County) for working families, who have been forced to seek housing options outside of the City. The availability of more diverse housing stock as a result of the target property redevelopment, as well as any spin off projects that occur, will provide an access more affordable and attainable housing for seniors and lower income families.

b. Community Engagement

i. and ii. Project Involvement and Roles

The City has an ongoing, cooperative relationship with surrounding local units of government and local community organizations that was initiated during our participation in the planning process for the Tri-Community Comprehensive Plan and the Blue Star Corridor Planning Study as well as development of this application. These partners will provide critical input into the redevelopment process to ensure that the highest and best use of the target property is determined.

Organization	Contact	Role & Commitments
Community Resident Group	Tracey Shafroth shafroth.tracey@gmail.com	This community resident group is made of up locals invested in assisting the community in improving the environment. The group regularly attends Council Meetings and community input sessions to assist in educating their neighbors and ensuring residents have a voice. The group will be involved in providing resident input regularly throughout the grant cycle and distributing information to others within the City.
Saugatuck-Douglas Area	David Langley david@saugatuckdouglas.com	Provides economic development support; will provide communication to local businesses to advertise public input/involvement opportunities. Will provide input in decisions for cleanup/redevelopment based on knowledge of the area's

Business Association		economic needs. Can bring local business owners/residents to community meetings through their extensive contacts.
City of Douglas Brownfield Redevelopment Authority	Matt Balmer, Chair (269) 857-1438	The Douglas BRA will provide a public forum for input during cleanup and provide input into the cleanup planning process. The BRA will also serve as a technical resource for pursuing state brownfield incentives once cleanup activities have been completed. The public will be given an opportunity to offer feedback on the project at their monthly meetings.
Allegan County Economic Development Commission	Cheri Schultz (269) 673-0205	The Allegan County BRA will serve as a technical resource and provide local and county expertise during the cleanup process and economic planning expertise in support of refining the reuses for the target property.

iii. Incorporating Community Input

All communication will be conducted in a variety of ways to ensure all stakeholders are involved in the planning and implementation of the project. The community will receive notifications through postings at the City Offices, the City's website and Facebook pages, and updates at City Council and Brownfield Redevelopment Authority (BRA) meetings. Once awarded, a "kickoff" announcement meeting will be held, which will be followed by routine public meetings at regularly scheduled BRA meetings to update on the cleanup and redevelopment status of the project. These meetings will provide a platform for residents to provide input regarding health, safety, and community disruption posed by the project. These concerns will be recorded by the City to make decisions on improving the process and performance under the grant. Community input will be appropriately responded to by the grant manager and/or the consultant in a timely fashion in the residents preferred form of communication. Since the onset of the COVID-19 pandemic, the City has devised policies that have allowed City operations to continue, which include the holding of City Council meetings, and other community and operational meetings. The policies have been effective and will continue to be implemented over the course of this grant as needed. If complications with the COVID-19 pandemic makes meeting in person difficult and/or potentially dangerous, remote meetings will be held using the Zoom platform. Commentary will be collected in a variety of methods, including digital submissions through Zoom and recorded. Input will be used to facilitate discussion among the stakeholders and public, which will then be incorporated into the decision-making process to further refine best reuses for the target property. Public meetings will also be utilized to present potential redevelopment opportunities to interested developers, as well as provide technical assistance regarding additional financial incentives that can be potentially leveraged for the planned redevelopment. To reach residents that may not have the ability to attend public and/or virtual meetings, communication regarding grant updates will be posted on the City's website, social media platforms, community wide emails, and mailers.

3. TASK DESCRIPTIONS, COST ESTIMATES, AND MEASURING PROGRESS

a. Proposed Cleanup Plan

The selected cleanup alternative involves utilizing a risk-based cleanup approach for the PCB contamination on the intended reuse of the property using the TSCA Subpart D Cleanup Standards for high occupancy uses. Prior to the commencement of cleanup activities, a risk based TSCA PCB Cleanup work plan will be prepared for EPA review and approval. Since the state of Michigan does not have its own TSCA program, the City has already engaged EPA TSCA staff and has started the process of outlining a preliminary approach to preparing the risk based TSCA PCB Cleanup work plan for high occupancy uses based on the available existing data. Cleanup activities are expected to include the disposal of approximately 1,520 tons of contaminated soil and concrete, the import and placement of approximately 1,000 cubic yards of clean fill material, and the installation and maintenance of 6,800 square feet of appropriate surface cover. Contaminated materials will be transported to a licensed facility capable of meeting applicable disposal requirements. In addition, cleanup activities include environmental sampling and oversight by an environmental consultant to ensure that all applicable regulations are followed. Additional data from the EPA TBA Program (December 2021) will be used to further characterize the vertical extent of the PCB soil contamination, as well as the extent of PCB contamination of the overlying concrete floor and refine preliminary contaminated soil volume and concrete estimates.

b. Description of Tasks/Activities and Outputs

Task 1 – Community Involvement and Outreach

- *Project Implementation (i):* Includes the development of a Community Involvement Plan which outlines community participation activities that includes resident notification of cleanup schedules and progress and a minimum of three public meetings (pre, interim, and post) to solicit input, educate, and update the community of cleanup progress. This task also includes the attendance of one staff member at the EPA National Brownfield Conference being held in Oklahoma City, Oklahoma in 2022.
- *Schedule (ii):* Quarters 1-12
- *Task/activity Lead (iii):* City of Douglas, supported by a qualified environmental consultant
- *Outputs (iv):* Community Involvement Plan, Community outreach/involvement/meetings, Meeting minutes documenting the outcomes of each meeting.
- *Additional Notes:* The development of the Community Development Plan also includes preparation of handout materials and flyers, as well as support from the environmental consultant throughout the task.

Task 2 – Cleanup Planning

- *Project Implementation (i):* Includes the finalization of the Analysis of Brownfield Cleanup Alternatives (ABCA), development and approval of a risk based TSCA PCB Cleanup work plan/model, preparation of bids and specifications, and solicitation of competitive pricing.
- *Schedule (ii):* ABCA: Quarter 2, TSCA Plan: Quarters 2-6
- *Task/activity Lead (iii):* City of Douglas, supported by a qualified environmental consultant
- *Outputs (iv):* Final ABCA, Risk Based TSCA PCB Cleanup Work Plan, Bid Package/Solicitation, Pre-Bid Meeting/Site Walkover Attendance List, and Bid Tabulation and recommendation to award.
- *Additional Notes:* The TSCA PCB Cleanup work plan/model will include updated cleanup volume calculations that incorporates the additional site assessment data from the EPA TBA investigation that is currently in progress. It is anticipated that the approval process of the risk based TSCA PCB Cleanup work plan (already in progress) will take approximately one year and require the submittal of several drafts and ongoing correspondence with EPA TSCA staff before final approval is issued. Attendance of a pre-bid meeting and site walkover will be mandatory for qualified contractors to submit competitive pricing. The retaining of a qualified contractor will abide by EPA Guidelines and the City's established procurement process.

Task 3 – Cleanup Activities

- *Project Implementation (i):* 1) Activities include the implementation the risk based TSCA PCB Cleanup work plan that involves the removal and disposal of contaminated soil and concrete surface material at an approved disposal facility, the import and placement of clean fill material, environmental sampling and oversight, and the installation and maintenance of appropriate surface cover.
- *Schedule (ii):* Quarters 7-9
- *Task/activity Lead (iii):* City of Douglas, supported by a qualified environmental consultant
  Outputs (iv): 1) Removal and disposal of approximately 1,520 tons of PCB contaminated concrete and soil, environmental sampling and oversight, 2) placement of approximately 1,000 cubic yards of clean fill (quantity imported), and 3) and the installation and maintenance of appropriate surface cover which includes the repaving of approximately 6,800 square feet of excavated area.
- *Outputs (iv):* Daily observation reports, project photos, volume of contaminated materials removed.
- *Additional Notes:* Cleanup of the PCB contaminated areas will be compliant with the cleanup standards outlined in TSCA Subpart D.

Task 4 – Grant Management

- *Project Implementation (i):* Includes the preparation and submittal of required progress reports, input of project data into ACRES, and preparation and submittal of a final project report.
- *Schedule (ii):* Quarters 1-12
- *Task/activity Lead (iii):* City of Douglas, supported by a qualified environmental consultant
- *Outputs (iv):* Quarterly reports (11), entry into ACRES, final project report
- *Additional Notes:* Includes ongoing correspondence with EPA and EGLE as appropriate.

c. Cost Estimates

Budget Categories		Project Tasks ($600,000)				Total
		Task 1 Community Involvement	Task 2 Cleanup Planning	Task 3 Cleanup Activities	Task 4 Grant Management	
Direct Costs	Personnel	$0	$0	$0	$0	$0
	Fringe Benefits	$0	$0	$0	$0	$0
	Travel	$4,000	$0	$0	$0	$4,000
	Equipment	$0	$0	$0	$0	$0
	Supplies	$0	$0	$0	$0	$0
	Contractual	$0	$25,000	$471,000	$0	$496,000
	Other	$0	$0	$0	$0	$0
Total Direct Costs		$4,000	$25,000	$471,000	$0	$500,000
Indirect Costs		$0	$0	$0	$0	$0
Total Federal Funding		$4,000	$25,000	$471,000	$0	$500,000
Cost Share		$7,500	$0	$82,500	$10,000	$100,000
Total Budget		$11,500	$25,000	$553,500	$10,000	$600,000

Task 1 – Community Involvement and Outreach:
Contractual Costs: The cost of preparing presentations and attending three meetings, which includes the preparation of handout materials and flyers and consultant time to assist in the community outreach portion will be covered by the City's 20% match. $2,500/meeting, 20 hrs./meeting at an average rate of $125/hr. = $7,500. A total of $4,000 is budgeted for attendance the EPA Brownfield Training Conference being held in Oklahoma City, Oklahoma in 2022. This includes registration fees ($350), a day per-diem ($2,600 over four days), lodging ($350 over 3 nights) and air travel ($700).
Task 2 – Cleanup Planning:
Contractual Costs: The total estimated cost to complete cleanup planning activities, which includes finalizing the ABCA, preparing the Risk Based TSCA PCB Cleanup Work Plan, and scoping and bidding the project is $25,000. The cost of preparing and submitting a TSCA PCB Cleanup Work Plan for EPA TSCA approval is estimated to require 150 hours, at an average rate of $125/hr. for an estimated cost of $18,750. The cost of finalizing the ABCA is estimated to require 10 hours, at an average rate of $125/hr. for an estimated cost of $1,250. The cost of scoping, bidding, and selecting a qualified contractor to complete the cleanup activities is estimated to require 40 hours, at an average rate of $125/hr. for an estimated cost of $5,000.
Task 3 – Cleanup Activities:
Contractual Costs: The total estimated cost of cleanup activities (to be overseen by the environmental consultant) is $553,500, which will be paid for with a combination of grant funds, the City's 20% match. The cost of excavation, transportation and disposal of PCB contaminated concrete and soil is estimated to be $475,000 based on a unit cost of $250/ton and a preliminary estimate of 1,520 tons of soil, and 380 tons of concrete. The placement of clean fill is estimated to be $17,500 based on a cost of $18/cubic yard and a preliminary estimate of 1,000 cubic yards. The installation and maintenance of appropriate surface cover involves the bituminous repaving over the excavation area at an estimated cost of $3.50/square foot, over an estimated area of 6,800 square feet.
Task 4 – Grant Management:
This task will be paid as part of the City's 20% match and is estimated to be $10,000 (80 hours at $125/hr.).

d. Measuring Environmental Results

The City will measure progress holding monthly progress meetings over the course of the grant. During cleanup activities, progress will be tracked by preparing daily observation reports and site photos. The City and environmental consultant will plan on daily measured progress and will also include short term outputs such as the number of community involvement meetings and attendance at each. Long term outputs will include the excavated and disposed quantities of contaminated materials, and the preparation of a closeout report that will document cleanup activities. Outcomes will include improved environmental and health conditions and the positioning of the target property for redevelopment.

4. PROGRAMMATIC CAPABILITY AND PAST PERFORMANCE

a. Programmatic Capability

i. and ii. Organizational Structure and Description of Key Staff

Project management and grant administration responsibilities will be handled by the City Manager of the City of Douglas, Mr. Rich LaBombard. As the City Manager, Mr. LaBombard oversees the day-to-day operations of the City which includes, public works, asset management and overseeing special projects such as road reconstruction, utility improvements, facility improvements and construction of new assets. Prior to his employment with the City, he has successfully procured and managed over $5 million in grants over the past five years, and has demonstrated experience with project management, grant writing, technical writing, energy efficiency, energy conservation and renewable energy. Mr. Matt Smith, the City's Treasurer will assist Mr. Labombard with the financial management of the grant.

iii. Acquiring Additional Resources

Once EPA has approved a project work plan and has entered into a cooperative agreement with the City, the City will immediately begin the procurement process to retain a qualified environmental consultant. The desired consultant will be experienced in conducting various types of brownfield cleanup activities specific to those outlined within our cleanup plan, community outreach, and have familiarity with state and federal regulations. Additionally, the consultant will be expected to prepare the Generic Quality Assurance Project Plan (GQAPP) within the first 60 days of the grant so that the proposed cleanup assessments and activities are not delayed. Procurement of the qualified environmental consultant will be conducted accordance with the EPA's selection protocol as well as the established City's purchasing and procurement policies. This includes the publishing of a Request for Proposal that will be issued to qualified firms with allotted guidelines and deadlines. The City will review each response, select the most qualified candidate, and enter into a master services agreement with the selected consultant.

b. Past Performance and Accomplishments

ii. Has Not Received an EPA Brownfields Grant but has Received Other Federal or Non-Federal Assistance Agreements

(1) Purpose and Accomplishments

The City received a grant of $1,789,549 from the Michigan Strategic Water Quality Initiatives Fund (SWQIF) to operate an existing treatment system, construct a new treatment system, that will eliminate soil and groundwater contamination from migrating into Wicks Creek. Operation of these systems will maximize risk reduction to groundwater and surface water and facilitate the redevelopment the affected property.

In 2018, the City received a grant in the amount of $179,287 from the Michigan EGLE under their Brownfield Grant and Loan program to conduct additional investigation activities and devise a cleanup plan for low occupancy uses at the former Haworth property. The purpose of the additional site investigation was to delineate the extent of PCB impacts and address data gaps that were identified in previous assessments. Samples were collected at 27 borings location at several depth intervals. The results of the delineation of the contaminated areas were used to devise a cleanup plan that included the recommended use of several institutional and engineering controls.

(2) Compliance with Grant Requirements

Grant funds awarded to the City have been successfully managed and completed. The City was able to ensure compliance with approve work plans, schedules, reporting requirement and the terms and conditions placed on the use of all grant funds awarded.

1. PROJECT AREA DESCRIPTION AND PLANS FOR REVITALIZATION

a. Target Area and Brownfields

i. Background and Description of Target Area

The City of the Village of Douglas (population: 936) is in Allegan County in the southwest portion of Michigan's lower peninsula on the shores of Lake Michigan. First settled in 1851, the City's initial economy revolved around the lumber industry. Lumber production peaked after the Great Chicago Fire of 1871, as Douglas area sawmills became the primary source of the lumber that was used to rebuild the City of Chicago. By the late 1800's the area's abundance of scenic natural resources began to attract people from large urban centers, like Chicago, who were in search of a quiet and peaceful vacation locale. Today, Douglas is an established tourist community offering an eclectic art, food, and cultural scene with miles of trails and attractions that include the panoramic views of Lake Michigan. Douglas and its residents have strived to be a community where people from all walks of life are welcomed with open arms, earning its reputation as one of Michigan's most LGBTQ-friendly small towns.

Over the past five years, changes in demographics, housing markets, and the economy has prompted the City to devise new strategies to address critical needs for housing and commercial retail. Although the City has established neighborhoods and a downtown area (approximately 0.07 square miles on the western shore of Kalamazoo Lake), the City's reputation as a seasonal community has led to an average of 49.9% of households that are occupied by non-family units (Allegan County: 27.5%, Michigan 35.7%) and 29.9% of households that are renter occupied (Allegan County: 17.4%). Since 2015, Douglas has experienced a 12.8% increase in renter-occupied households. In addition, there is an increasing trend of older residents who are relocating to the City. Census statistics show that 25.7% of the population is comprised of residents over the age of 65 compared to 17.2% of Allegan County and 17.7% at the state level. Furthermore, the percentage of households with children under the age of 18 years is more almost two times less than Allegan County (16.3% and 29.4%), which suggests that Douglas has become a preferred destination for retired individuals.

To support the health and vitality of the local economy, the community has determined that maintaining a balance of permanent and seasonal residents, as well as diversifying the City's population with young families, is necessary to sustain and grow local business, and increase property tax revenues to support all populations. To accomplish this goal, the disparity in housing options between those who work versus those who live in the City must be addressed. According to Zillow.com, the average cost of a single-family home is over 95% more than the average cost per home in Allegan County. With an average cost of nearly $316,600 for a single-family home, there is a lack of diverse housing stock that can be accessed by the working families who support the local economy. As a result, these families have sought other housing options in nearby cities, which has partially contributed to a population decrease in Douglas of approximately 17.5% since 2015. With only 1.78 square miles of land area within the City's limits, there are few opportunities to create new residential and mixed-use developments that are necessary to attract younger, working families.

By engaging the public through several strategic planning initiatives, the City has identified the Blue Star Highway Corridor as a targeted area of focus to attract new development. Approximately 1.25 miles, the corridor is the main north-south thoroughfare that bisects the City and is an established commercial corridor which includes several established businesses, including restaurants, lodging, banks, and small retail shops.

Across from these developments, is the former Haworth Manufacturing property (the target property), a former industrial manufacturing facility of approximately 7 acres. In 2014, the manufacturer closed operations and relocated to a larger, more modern facility. Its resulting vacancy eliminated approximately 80 jobs, which contributed to an already decreasing trend in the manufacturing sector. Between the years of 2010 and 2019, the percentage of City residents employed by the manufacturing sector has decreased by approximately 6.3%, while the State average has increased by 1.2%. The steady decline of the manufacturing sector, combined with the lack of diverse housing stock within the City has likely contributed to an overall decrease in population of younger, working class age groups. Between the years of 2015 and 2019, the population of individuals ranging between 20 and 34 years old has decreased by nearly 50% (US Census).

Efforts by the City to attract a developer to undertake the redevelopment of the property have stalled due to the known contamination that exists at the site. With respect to the target property's location and size, its cleanup

and redevelopment has the potential to attract additional "spin-off" developments to the Blue Star Corridor and achieve the City's objectives to attract new developments that provide diverse housing options, new commercial mixed-use retail developments, create jobs, and generate new tax revenues.

ii. Description of the Brownfield Site(s)

The target property is located at 200 Blue Star Highway and consists of a single parcel of approximately 7.18 acres. By 1938, it was initially developed as a fallow orchard with two small structures. By the 1940s, the property was redeveloped into its current configuration, which consists of two utility buildings and a 150,300 square foot, single-story industrial building with approximately 15 truck bays facing Blue Star Highway. From the 1940's through the mid-1970's the property's extensive history included plating, buffing, zinc die casting, metal forming, stamping, phosphatizing, and painting metal parts. Between the years of 1976 and 2014, the property was owned and occupied by Haworth Inc. (formerly Haworth Manufacturing) who used the facility to manufacture furniture. Since 2014, the vacancy of the massive metal warehouse-like structure is one of the first sights that greet those traveling into the City from the south. After seven years of vacancy, the property is an eyesore as it remains unutilized, is not contributing to tax revenues, and is an environmental risk. In addition to the overall cost associated with redeveloping the target property, the added expense of addressing the contamination has made redevelopment of the property financially prohibitive. To assist in leveraging funding opportunities for cleanup and redevelopment, the City acquired the target property in 2019.

In 2015, Phase I and II Environmental Site Assessments (ESAs) were conducted to review previous assessments and investigate contamination from polychlorinated biphenyls (PCBs) and volatile organic compounds (VOCs) beneath the building, as well as evaluate pathways related to vapor intrusion. Sampling conducted in the former die cast pit area (eastern portion of the building) identified concentrations of PCBs above one part per million (ppm). Analytical data also suggests that the TCE contamination exceeding Michigan's Residential and Nonresidential Drinking Water, Groundwater Surface Water Interface, and Groundwater Volatilization to Indoor Air cleanup criteria, has migrated approximately 1,600 feet north-northwest of the target property, offsite. In May 2018, a Remedial Alternatives Evaluation (RAE) was conducted to evaluate the extent of trichloroethene (TCE), and PCB impacts to determine options to address the risks associated with VOC contaminated groundwater and PCB contaminated soil. The RAE also summarized the results of previous site investigations that were conducted between 2015 and 2017 to define the horizontal and vertical extent of PCB contaminated soil impacts. These investigations identified soils impacted by PCBs at concentrations ranging from 3.4 parts per million (ppm) to 5,600 ppm, which are above the Toxic Substances Control Act (TSCA) Subpart D Cleanup Standard for high occupancy areas. The horizontal and vertical extent of the PCB impact were determined to be in the north central and eastern portions of the east room of the building, at depths ranging from 1' to 15.5' below ground surface (bgs). A cleanup strategy was prepared that involves addressing the contamination from the source areas on the target property by first addressing the PCB contamination. This approach will assist in eliminating one of the concerns identified and as a result, in conjunction with other leveraged sources, to better position the property to be marketed for redevelopment.

Before cleanup of the PCB cleanup activities takes place, it is necessary to demolish the building to access the PCB contaminated areas and implement cleanup activities. Coupled with the community's desire to remove an eyesore, City officials have begun the process of demolishing the building, which will involve the removal of the structure while leaving the floor and paved areas in place to serve as a cap to the contamination below. To date, the City has completed an inventory of the asbestos containing materials within the building, prepared plans and specifications for asbestos abatement and demolition activities, solicited for competitive pricing and selected a qualified contractor. It is anticipated that abatement and demolition activities will commence in December 2021.

b. Revitalization of the Target Area

i. Reuse Strategy and Alignment with Revitalization Plans

The City has been involved in several local and area planning initiatives that include the City's Master Plan, the Tri-Community Master Plan, and the Blue Star Highway Corridor Study. One of the common overarching goals of these planning initiatives is to bolster the local economy by diversifying industries and services that cater to both tourism and full-time citizens. In support of this goal, several objectives have been identified for which the redevelopment of the target property could align. These objectives include: 1) create inclusive and inviting

residential areas that include a multitude of affordable housing types that include mixed housing types of condos, stacked flats, live/work space, townhouses and single-family detached units that attract both seasonal and permanent homeowners; 2) ensure housing stock is inclusive of all age groups to encourage long-term, permanent residency within the City, and 3) support the creation of service-based, mixed uses that include health services, banking, shopping and other industries. These objectives are echoed within the Tri-Community Master Plan, a regionally based planning initiative that includes Douglas and the neighboring City of Saugatuck and Saugatuck Township. Specifically, the proposed reuse of the target property achieves the following: 1) provide a balanced range of diverse housing types at varying densities where public utilities are present or could be quickly provided, and 2) encourage high quality commercial development adjacent to existing commercial development and are compatible with adjoining uses.

Additionally, the City conducted the Blue Star Highway Corridor Study to obtain public input for formulating a community vision for the corridor. Reuse of the target property was identified in the study as a priority to build upon the corridor as a regional business hub for large-scale retail, eating and drinking establishments, personal service establishments, professional and support offices, and medical facilities that are capable of meeting the needs of year-round residents of the Tri-Community area.

Subsequently, reuse scenarios have been explored for the target site that are consistent with these planning initiatives and incorporate community feedback from council and brownfield redevelopment authority meetings. Preliminary conceptual plans include an estimated 80,000 square feet of commercial retail and restaurant space over 7 two-story buildings, and 52,000 square feet of live-work space over 2 buildings. Several elements of the initial site design concept address the City's placemaking goals, including the preservation of the City's reputation as a quaint destination community. These features involve incorporating larger building setback distances, the relocation of parking areas behind the proposed buildings, and implementing streetscape improvements that are in accordance with the City's greenspace and tree ordinances. The preliminary conceptual plan also incorporates placemaking features that includes approximately 800 feet of bike lane along the Blue Star Highway, 700 feet of sidewalk improvements along Ferry Street.

The City has already allocated resources to retain an environmental consultant to perform environmental assessments as part of the City's acquisition of the target property, perform an asbestos containing materials survey, prepare plans and specifications for demolition, and identify state and local brownfield redevelopment incentives that can be leveraged to assist with addressing contamination. Understanding that the approval of a risk based Toxic Substances Control Act (TSCA) PCB Cleanup work plan is a lengthy process, the City and its consultant have already engaged EPA TSCA staff on a preliminary basis to devise an approach for preparing this plan. Additionally, a Memorandum of Understanding (MOU) in place with a local developer to redevelop the property based on the conceptual site plan. However, once grant funded cleanup activities are complete, the City will continue to provide opportunities for community input into the redevelopment and planning process and evaluate other redevelopment options for the site. The target property is not located within a federally designated floodplain.

ii. Outcomes and Benefits of Redevelopment Strategy

Although the preliminary concepts include approximately 52,000 square feet of live-work space, these spaces can be adapted to address specific housing needs within the city which include senior assisted living, stacked-flats, or apartments. Once redeveloped the proposed project will generate new property tax revenue, and no longer be a burden to the City's budget. Based on the initial conceptual site design, it is anticipated that the taxable value of the target property would significantly increase, generating approximately $87,500 annually in property tax revenues for the City. Converting the target property into commercial mixed-use and live-work space is estimated to create 140 jobs related to retail and restaurants usages, and an additional 85 office related jobs. According to the U.S. Energy Information Administration (EIA), food service and retail related uses average one job per every 567 square feet, and office uses average one job for every 600 square feet.

Additional "spin off" developments are anticipated as a result of the redevelopment of the target property. For example, the vacant parcels located to the west of the target property (approximately 52 acres) have generated interest for residential development that includes townhomes and condos. Initial property tax calculations

estimate that approximately $158,000 in additional property tax revenue will be generated for the City for every 100 residential units that are developed. Once the known contamination has been adequately addressed for the target property's reuse, the City anticipates that plans to redevelop these adjoining parcels will also be accelerated.

c. Strategy for Leveraging Resources

i. Resources Needed for Site Reuse

The award of an EPA Brownfield Cleanup Grant is intended to provide financial assistance to address the PCB contamination at the target property. Once PCB cleanup activities have been completed, several response activities will still be required to address remaining contamination to ensure the property is safe for those occupying it. Although the grant will not be used to address these activities, its award will make additional funding opportunities at the local and state level viable. These funding opportunities include several programs that provide incentives to private investors and developers to assist with the cost of redeveloping the property once grant funded cleanup activities are complete. These programs include:

Source	Role
Michigan Brownfield Redevelopment Financing Act – Tax Increment Financing	Michigan enables local governments to issue Tax Increment Financing (TIF) plans for cleanup and response activities to address brownfields. New tax revenue generated from redevelopment creates the tax increment, which is used to reimburse the developer over time for up to 30 years. Once cleanup activities under this grant request have been completed, tax increment financing can be used to assist with reimbursing the cost of the remaining cleanup and response activities. The value of this program is dependent on the final site plan and the future taxes generated. This program is utilized regularly in partnership with the Michigan Department of Environment Great Lakes and Energy (EGLE). The City is setup to implement a TIF Plan through the Brownfield Redevelopment Authority.
Michigan Environment Great Lakes and Energy (EGLE) Grant and Loan	Provides funding of up to $1 million in grant and up to $1 million in loan funds ($2 million total) for environmental cleanup activities at properties with known contamination. Funding can be applied to address remaining contamination that is not addressed under the EPA Cleanup grant. The City is eligible to apply for funding directly, upon finalization of the development plan, which will be catalyzed by the EPA Cleanup grant. TIF revenues from the Brownfield Redevelopment Financing Act can also be utilized to repay a loan under this program. The City was already awarded a grant under this fund in the amount of $179,287 to complete additional assessment activities to delineate the contamination on the former Haworth Property and devise a cleanup strategy.
Commercial Rehabilitation Act	A state tax abatement program that encourages the rehabilitation of commercial and properties by freezing property tax values at predevelopment values for a period up to 10 years. The value of this program is dependent on the final site plan; however, it is estimated to be $200,000 annually. While it may reduce the available TIF for a project, it can assist in reducing tax obligations while a project is working to stabilize itself and assist in developer attraction.
Community Revitalization Program	Funding of up to 20% of the total project investment (not to exceed $10,000,000) is available for redevelopment projects that foster economic growth and job creation within a downtown or commercial corridor. These funds can be applied for by the future developer of the property, contingent upon proof of financing and financial need.
EPA Targeted Brownfield Assessment (TBA) Program	Although there is sufficient data available to delineate the PCB contamination, additional data is needed to evaluate the overlaying concrete for disposal purposes. The City through the EPA TBA program is currently in the process of collecting additional sampling data to further characterize the overlaying concrete, as well as collect data to refine the vertical delineation PCB contamination. Data collected by EPA TBA will be used to finalize a risk based TSCA PCB Cleanup work plan, that will be submitted to the EPA TSCA team for approval.
City of Douglas	To date, allocated via funds set aside within the general budget, the City has expended $100,000 to acquire the target property and has allocated another $37,500 to perform environmental site assessments. The City also awarded a contract in the amount of $77,800 for asbestos abatement and demolition of the building on November 2, 2021. An environmental consultant to provide oversight and air monitoring support during asbestos abatement activities in the amount of $20,000. Abatement and demolition of the building is tentatively scheduled to begin in December 2021.

ii. Use of Existing Infrastructure

The target property is located along the Blue Star Highway, which provides for easy access to existing infrastructure (roads, water, electricity, natural gas, sewers, etc.) that are sufficient to support the proposed redevelopment and reuse without significant additional investments into upgrading the existing infrastructure. Depending on the final site design, the existing utilities (i.e. water and sewer) are capable of accommodating the redevelopment, with the exception of minor sewer leads and taps that may need to be constructed to access the existing infrastructure. As the City's main thoroughfare, Blue Star Highway provides quick access (via Interstate I-196) to the City of Grand Rapids, Michigan's second largest city. Less than 40 miles away, Grand Rapids provides advantages that are typical to metropolitan areas that include amenities such as an established transportation network of roads and access to an international commercial airport, both of which provide connections to other economic markets.

2. COMMUNITY NEED AND COMMUNITY ENGAGEMENT

a. Community Need

i. The Community's Need for Funding

The City's rising operational costs, stagnated tax base, and reduced state revenue share, are the primary reasons why the City does not have the ability to completely fund the cleanup activities that are needed to redevelop the target property. Since 2015, the City's population has decreased by approximately 17.5% (pop. 936), and while the median household income ($59,152) has increased since 2015, its approximately $16,000 less than the State's average ($75,703), the county average ($62,965), as well as three of the four surrounding counties. In addition to a shrinking tax base, the City is met with constant challenges to maintain its fiscal responsibility. Over the past three years, the City has experienced an estimated 16.2% increase in public works expenses related to capital projects needed to maintain the City's infrastructure, as well as increases in governmental operations expenses of approximately 14.8% which are correlated with rising health care costs, retirement obligations, and staff turnover.

With respect to the City's size (approximately 1.78 square miles), large tracts of developable land are not available, which has reduced opportunities to increase property tax revenues from new development within the City. Adding to the City's fiscal challenges is the reduction of state revenue share of approximately 18.6% over the past three years. As a result, the growth of City's general fund revenues have stagnated. Since 2010, revenues beyond budgeted expenditures are nonexistent (Michigan Department of Treasury), which has necessitated the need for financial assistance to implement cleanup initiatives at the target site. Overall, the City's projected expenditures are predicted to exceed the City's revenue by approximately 8.3%, for fiscal year 2020-2021.

In accordance with the goals and objectives of the City's Master Plan to diversify commercial mixed-use and residential sectors, parcels located on, or in proximity to the Blue Star Highway Corridor target area provides the highest potential to generate a significant amount of new property tax revenues. Recognizing this opportunity, the City acquired the target property and has proactively allocated a funding from its general budget to complete asbestos abatement and demolition activities. However, the City is unable to generate enough funding to fully fund cleanup activities at the target property without help from an EPA Brownfield Cleanup Grant.

ii. Threats to Sensitive Populations

(1) Health or Welfare of Sensitive Populations

According to the Asset Limited, Income Constrained, Employed Project (ALICE), 17% of the population within the City live in poverty, or above the poverty line, yet still struggle to make ends meet. Within a one-third mile radius of the target property, 20% are considered to have low incomes (less than or equal to twice the federal poverty level) (EJSCREEN) (2019-ACS). In addition, 24% of the population within this radius are over the age of 65, which is approximately 17.8% higher than the overall City average. Cleanup of the target property would reduce the negative health impacts associated with exposure to the contamination at the target property to this segment of the population. Furthermore, there is only one senior living facility located within the City that has a capacity of 50 people. The next closest facilities are located at least 10 miles away in other communities. Although most of the senior population within the City are presently living independently, it is anticipated that the demand for senior housing, as well as supporting commercial uses (i.e. health services, banking, shopping, and retail, etc.), will increase as the City's population continues to age.

(2) Greater Than Normal Incidence of Disease and Adverse Health Conditions

According to the International Agency for Research on Cancer (IARC), PCBs and chlorinated solvents (which includes TCE) are known carcinogens that impacts the liver, skin, and reproductive system, suggesting that segments of the population that are exposed (via inhalation or by direct contact) to these contaminants are more vulnerable to experience the more severe health effects. According to data published by the Michigan Department of Health and Human Services (MDHHS), cancer related mortality rate (per 100,000 persons) in Allegan County has increased by 8.2% compared to the State (1.0%) since 2010. Specifically, the age group that has experience the highest increase are individuals between the age of 50 and 74 years old. Since 2010, cancer mortality for individuals within this age group have risen by 29.3% compared to a decrease of 3.8% at the state level. Regarding chronic liver disease, which has also been linked to PCB and TCE exposure, Allegan County has experienced 34% increase in deaths related to chronic liver disease compared to the state's average of 9.1%. Specifically, individuals within the age of 50 to 74 years old have experienced an increase of 19.1% compared to the state average of 9%, and the mortality rate of individuals over the age of 75 has nearly doubled (98.9%) in Allegan County compared to the state (19.9%).

In addition, Alzheimer's disease is the 6th leading cause of death in Michigan according to the Alzheimer's Association. MDHHS data suggests that the mortality rate of Alzheimer's Disease for populations on a county-wide basis has increased by approximately 79.9% since 2010, while Michigan increased at slightly slower rate (approximately 73.7%). According to articles published by the National Institute of Health, it is plausible that exposures to PCBs can increase the risk of neurodegenerative diseases that include Alzheimer's Disease, Parkinson's Disease, amyotrophic lateral sclerosis (ALS), and various cognitive attention disorders.

(3) Promoting Environmental Justice

24% of the population within a one-third mile radius of the target property is over the age of 64 years old, and while only 3.2% of the City's population are people of color, approximately 9% of the population within this radius are comprised of people of color. (EJSCREEN). Cleanup of the PCB contamination is the first step toward mitigating the pathways that pose threats to human health and welfare of the sensitive aging populations and people of color living nearby. The cleanup and redevelopment of the target property will provide additional residential housing stock, which could include senior assisted living, more attainable housing for the City's workforce and lower income residents, as well as commercial retail and services that are needed to support residential development. The establishment of these commercial uses are expected to catalyze additional residential redevelopment of nearby properties. The average cost for a single-family home of nearly $316,600(nearly double the average for Allegan County) for working families, who have been forced to seek housing options outside of the City. The availability of more diverse housing stock as a result of the target property redevelopment, as well as any spin off projects that occur, will provide an access more affordable and attainable housing for seniors and lower income families.

b. Community Engagement

i. and ii. Project Involvement and Roles

The City has an ongoing, cooperative relationship with surrounding local units of government and local community organizations that was initiated during our participation in the planning process for the Tri-Community Comprehensive Plan and the Blue Star Corridor Planning Study as well as development of this application. These partners will provide critical input into the redevelopment process to ensure that the highest and best use of the target property is determined.

Organization	Contact	Role & Commitments
Community Resident Group	Tracey Shafroth shafroth.tracey@gmail.com	This community resident group is made of up locals invested in assisting the community in improving the environment. The group regularly attends Council Meetings and community input sessions to assist in educating their neighbors and ensuring residents have a voice. The group will be involved in providing resident input regularly throughout the grant cycle and distributing information to others within the City.
Saugatuck-Douglas Area	David Langley david@saugatuckdouglas.com	Provides economic development support; will provide communication to local businesses to advertise public input/involvement opportunities. Will provide input in decisions for cleanup/redevelopment based on knowledge of the area's

Business Association		economic needs. Can bring local business owners/residents to community meetings through their extensive contacts.
City of Douglas Brownfield Redevelopment Authority	Matt Balmer, Chair (269) 857-1438	The Douglas BRA will provide a public forum for input during cleanup and provide input into the cleanup planning process. The BRA will also serve as a technical resource for pursuing state brownfield incentives once cleanup activities have been completed. The public will be given an opportunity to offer feedback on the project at their monthly meetings.
Allegan County Economic Development Commission	Cheri Schultz (269) 673-0205	The Allegan County BRA will serve as a technical resource and provide local and county expertise during the cleanup process and economic planning expertise in support of refining the reuses for the target property.

iii. Incorporating Community Input

All communication will be conducted in a variety of ways to ensure all stakeholders are involved in the planning and implementation of the project. The community will receive notifications through postings at the City Offices, the City's website and Facebook pages, and updates at City Council and Brownfield Redevelopment Authority (BRA) meetings. Once awarded, a "kickoff" announcement meeting will be held, which will be followed by routine public meetings at regularly scheduled BRA meetings to update on the cleanup and redevelopment status of the project. These meetings will provide a platform for residents to provide input regarding health, safety, and community disruption posed by the project. These concerns will be recorded by the City to make decisions on improving the process and performance under the grant. Community input will be appropriately responded to by the grant manager and/or the consultant in a timely fashion in the residents preferred form of communication. Since the onset of the COVID-19 pandemic, the City has devised policies that have allowed City operations to continue, which include the holding of City Council meetings, and other community and operational meetings. The policies have been effective and will continue to be implemented over the course of this grant as needed. If complications with the COVID-19 pandemic makes meeting in person difficult and/or potentially dangerous, remote meetings will be held using the Zoom platform. Commentary will be collected in a variety of methods, including digital submissions through Zoom and recorded. Input will be used to facilitate discussion among the stakeholders and public, which will then be incorporated into the decision-making process to further refine best reuses for the target property. Public meetings will also be utilized to present potential redevelopment opportunities to interested developers, as well as provide technical assistance regarding additional financial incentives that can be potentially leveraged for the planned redevelopment. To reach residents that may not have the ability to attend public and/or virtual meetings, communication regarding grant updates will be posted on the City's website, social media platforms, community wide emails, and mailers.

3. TASK DESCRIPTIONS, COST ESTIMATES, AND MEASURING PROGRESS

a. Proposed Cleanup Plan

The selected cleanup alternative involves utilizing a risk-based cleanup approach for the PCB contamination on the intended reuse of the property using the TSCA Subpart D Cleanup Standards for high occupancy uses. Prior to the commencement of cleanup activities, a risk based TSCA PCB Cleanup work plan will be prepared for EPA review and approval. Since the state of Michigan does not have its own TSCA program, the City has already engaged EPA TSCA staff and has started the process of outlining a preliminary approach to preparing the risk based TSCA PCB Cleanup work plan for high occupancy uses based on the available existing data. Cleanup activities are expected to include the disposal of approximately 1,520 tons of contaminated soil and concrete, the import and placement of approximately 1,000 cubic yards of clean fill material, and the installation and maintenance of 6,800 square feet of appropriate surface cover. Contaminated materials will be transported to a licensed facility capable of meeting applicable disposal requirements. In addition, cleanup activities include environmental sampling and oversight by an environmental consultant to ensure that all applicable regulations are followed. Additional data from the EPA TBA Program (December 2021) will be used to further characterize the vertical extent of the PCB soil contamination, as well as the extent of PCB contamination of the overlying concrete floor and refine preliminary contaminated soil volume and concrete estimates.

b. Description of Tasks/Activities and Outputs

Task 1 – Community Involvement and Outreach

- *Project Implementation (i):* Includes the development of a Community Involvement Plan which outlines community participation activities that includes resident notification of cleanup schedules and progress and a minimum of three public meetings (pre, interim, and post) to solicit input, educate, and update the community of cleanup progress. This task also includes the attendance of one staff member at the EPA National Brownfield Conference being held in Oklahoma City, Oklahoma in 2022.
- *Schedule (ii):* Quarters 1-12
- *Task/activity Lead (iii):* City of Douglas, supported by a qualified environmental consultant
- *Outputs (iv):* Community Involvement Plan, Community outreach/involvement/meetings, Meeting minutes documenting the outcomes of each meeting.
- *Additional Notes:* The development of the Community Development Plan also includes preparation of handout materials and flyers, as well as support from the environmental consultant throughout the task.

Task 2 – Cleanup Planning

- *Project Implementation (i):* Includes the finalization of the Analysis of Brownfield Cleanup Alternatives (ABCA), development and approval of a risk based TSCA PCB Cleanup work plan/model, preparation of bids and specifications, and solicitation of competitive pricing.
- *Schedule (ii):* ABCA: Quarter 2, TSCA Plan: Quarters 2-6
- *Task/activity Lead (iii):* City of Douglas, supported by a qualified environmental consultant
- *Outputs (iv):* Final ABCA, Risk Based TSCA PCB Cleanup Work Plan, Bid Package/Solicitation, Pre-Bid Meeting/Site Walkover Attendance List, and Bid Tabulation and recommendation to award.
- *Additional Notes:* The TSCA PCB Cleanup work plan/model will include updated cleanup volume calculations that incorporates the additional site assessment data from the EPA TBA investigation that is currently in progress. It is anticipated that the approval process of the risk based TSCA PCB Cleanup work plan (already in progress) will take approximately one year and require the submittal of several drafts and ongoing correspondence with EPA TSCA staff before final approval is issued. Attendance of a pre-bid meeting and site walkover will be mandatory for qualified contractors to submit competitive pricing. The retaining of a qualified contractor will abide by EPA Guidelines and the City's established procurement process.

Task 3 – Cleanup Activities

- *Project Implementation (i):* 1) Activities include the implementation the risk based TSCA PCB Cleanup work plan that involves the removal and disposal of contaminated soil and concrete surface material at an approved disposal facility, the import and placement of clean fill material, environmental sampling and oversight, and the installation and maintenance of appropriate surface cover.
- *Schedule (ii):* Quarters 7-9
- *Task/activity Lead (iii):* City of Douglas, supported by a qualified environmental consultant
  Outputs (iv): 1) Removal and disposal of approximately 1,520 tons of PCB contaminated concrete and soil, environmental sampling and oversight, 2) placement of approximately 1,000 cubic yards of clean fill (quantity imported), and 3) and the installation and maintenance of appropriate surface cover which includes the repaving of approximately 6,800 square feet of excavated area.
- *Outputs (iv):* Daily observation reports, project photos, volume of contaminated materials removed.
- *Additional Notes:* Cleanup of the PCB contaminated areas will be compliant with the cleanup standards outlined in TSCA Subpart D.

Task 4 – Grant Management

- *Project Implementation (i):* Includes the preparation and submittal of required progress reports, input of project data into ACRES, and preparation and submittal of a final project report.
- *Schedule (ii):* Quarters 1-12
- *Task/activity Lead (iii):* City of Douglas, supported by a qualified environmental consultant
- *Outputs (iv):* Quarterly reports (11), entry into ACRES, final project report
- *Additional Notes:* Includes ongoing correspondence with EPA and EGLE as appropriate.

c. Cost Estimates

Budget Categories		Project Tasks ($600,000)				
		Task 1 Community Involvement	Task 2 Cleanup Planning	Task 3 Cleanup Activities	Task 4 Grant Management	**Total**
Direct Costs	Personnel	$0	$0	$0	$0	$0
	Fringe Benefits	$0	$0	$0	$0	$0
	Travel	$4,000	$0	$0	$0	$4,000
	Equipment	$0	$0	$0	$0	$0
	Supplies	$0	$0	$0	$0	$0
	Contractual	$0	$25,000	$471,000	$0	$496,000
	Other	$0	$0	$0	$0	$0
Total Direct Costs		$4,000	$25,000	$471,000	$0	$500,000
Indirect Costs		$0	$0	$0	$0	$0
Total Federal Funding		$4,000	$25,000	$471,000	$0	$500,000
Cost Share		$7,500	$0	$82,500	$10,000	$100,000
Total Budget		$11,500	$25,000	$553,500	$10,000	$600,000

Task 1 – Community Involvement and Outreach:
Contractual Costs: The cost of preparing presentations and attending three meetings, which includes the preparation of handout materials and flyers and consultant time to assist in the community outreach portion will be covered by the City's 20% match. $2,500/meeting, 20 hrs./meeting at an average rate of $125/hr. = $7,500. A total of $4,000 is budgeted for attendance the EPA Brownfield Training Conference being held in Oklahoma City, Oklahoma in 2022. This includes registration fees ($350), a day per-diem ($2,600 over four days), lodging ($350 over 3 nights) and air travel ($700).
Task 2 – Cleanup Planning:
Contractual Costs: The total estimated cost to complete cleanup planning activities, which includes finalizing the ABCA, preparing the Risk Based TSCA PCB Cleanup Work Plan, and scoping and bidding the project is $25,000. The cost of preparing and submitting a TSCA PCB Cleanup Work Plan for EPA TSCA approval is estimated to require 150 hours, at an average rate of $125/hr. for an estimated cost of $18,750. The cost of finalizing the ABCA is estimated to require 10 hours, at an average rate of $125/hr. for an estimated cost of $1,250. The cost of scoping, bidding, and selecting a qualified contractor to complete the cleanup activities is estimated to require 40 hours, at an average rate of $125/hr. for an estimated cost of $5,000.
Task 3 – Cleanup Activities:
Contractual Costs: The total estimated cost of cleanup activities (to be overseen by the environmental consultant) is $553,500, which will be paid for with a combination of grant funds, the City's 20% match. The cost of excavation, transportation and disposal of PCB contaminated concrete and soil is estimated to be $475,000 based on a unit cost of $250/ton and a preliminary estimate of 1,520 tons of soil, and 380 tons of concrete. The placement of clean fill is estimated to be $17,500 based on a cost of $18/cubic yard and a preliminary estimate of 1,000 cubic yards. The installation and maintenance of appropriate surface cover involves the bituminous repaving over the excavation area at an estimated cost of $3.50/square foot, over an estimated area of 6,800 square feet.
Task 4 – Grant Management:
This task will be paid as part of the City's 20% match and is estimated to be $10,000 (80 hours at $125/hr.).

d. Measuring Environmental Results

The City will measure progress holding monthly progress meetings over the course of the grant. During cleanup activities, progress will be tracked by preparing daily observation reports and site photos. The City and environmental consultant will plan on daily measured progress and will also include short term outputs such as the number of community involvement meetings and attendance at each. Long term outputs will include the excavated and disposed quantities of contaminated materials, and the preparation of a closeout report that will document cleanup activities. Outcomes will include improved environmental and health conditions and the positioning of the target property for redevelopment.

4. PROGRAMMATIC CAPABILITY AND PAST PERFORMANCE

a. Programmatic Capability

i. and ii. Organizational Structure and Description of Key Staff

Project management and grant administration responsibilities will be handled by the City Manager of the City of Douglas, Mr. Rich LaBombard. As the City Manager, Mr. LaBombard oversees the day-to-day operations of the City which includes, public works, asset management and overseeing special projects such as road reconstruction, utility improvements, facility improvements and construction of new assets. Prior to his employment with the City, he has successfully procured and managed over $5 million in grants over the past five years, and has demonstrated experience with project management, grant writing, technical writing, energy efficiency, energy conservation and renewable energy. Mr. Matt Smith, the City's Treasurer will assist Mr. Labombard with the financial management of the grant.

iii. Acquiring Additional Resources

Once EPA has approved a project work plan and has entered into a cooperative agreement with the City, the City will immediately begin the procurement process to retain a qualified environmental consultant. The desired consultant will be experienced in conducting various types of brownfield cleanup activities specific to those outlined within our cleanup plan, community outreach, and have familiarity with state and federal regulations. Additionally, the consultant will be expected to prepare the Generic Quality Assurance Project Plan (GQAPP) within the first 60 days of the grant so that the proposed cleanup assessments and activities are not delayed. Procurement of the qualified environmental consultant will be conducted accordance with the EPA's selection protocol as well as the established City's purchasing and procurement policies. This includes the publishing of a Request for Proposal that will be issued to qualified firms with allotted guidelines and deadlines. The City will review each response, select the most qualified candidate, and enter into a master services agreement with the selected consultant.

b. Past Performance and Accomplishments

ii. Has Not Received an EPA Brownfields Grant but has Received Other Federal or Non-Federal Assistance Agreements

(1) Purpose and Accomplishments

The City received a grant of $1,789,549 from the Michigan Strategic Water Quality Initiatives Fund (SWQIF) to operate an existing treatment system, construct a new treatment system, that will eliminate soil and groundwater contamination from migrating into Wicks Creek. Operation of these systems will maximize risk reduction to groundwater and surface water and facilitate the redevelopment the affected property.

In 2018, the City received a grant in the amount of $179,287 from the Michigan EGLE under their Brownfield Grant and Loan program to conduct additional investigation activities and devise a cleanup plan for low occupancy uses at the former Haworth property. The purpose of the additional site investigation was to delineate the extent of PCB impacts and address data gaps that were identified in previous assessments. Samples were collected at 27 borings location at several depth intervals. The results of the delineation of the contaminated areas were used to devise a cleanup plan that included the recommended use of several institutional and engineering controls.

(2) Compliance with Grant Requirements

Grant funds awarded to the City have been successfully managed and completed. The City was able to ensure compliance with approve work plans, schedules, reporting requirement and the terms and conditions placed on the use of all grant funds awarded.