1. PROJECT AREA DESCRIPTION AND PLANS FOR REVITALIZATION

a. Target Area and Brownfields

i. Overview of Brownfield Challenges and Description of Target Area: The City of Sherwood, Oregon ("City"; population 20,222, area 4.5 square miles), is in Washington County, approximately 20 miles southwest of Portland. The City's backyard is the 900-acre Tualatin River National Wildlife Refuge (TRNWR), and the City is within the ancestral homelands of the Tualatin Band of the Kalapuyan Tribe, now part of the Confederated Tribes of Grand Ronde. The first settlers arrived in 1843 by wagon train. The City incorporated in 1893, and a brickyard developed around the same time, fueled by rich clay deposited by the Missoula Ice Age floods. Its bricks built historic Portland, and the brickyard closed in 1895 after one of several devastating fires between 1895 and 1911. The City's economy then developed around leather tanning and fruit and vegetable canning. The target area for this grant is the City's industrial corridor in northeast Sherwood (Census tract 321.04). This area is home to the City's lowest income neighborhood, Brickyard Terrace, which sits across Southwest (SW) Oregon Street from the proposed Brownfields site, the former Frontier Leather Tannery (see 2.a.i.). The target area has been impacted by the City's industrial history and prohibitive land use requirements, which create Brownfields challenges by limiting land available to accommodate growth.

The City's population grew 521% from 1990 to 2010. Even after slowing to 12% between 2010 and 2020, the City significantly exceeded the 7% median growth rate for Oregon municipalities over that period. Growth has increased demand for municipal services, such as public works, emergency response, and parks. Oregon's unique statewide land use system requires all cities to restrict growth and preserve farmland and forests with an Urban Growth Boundary (UGB).[1] Brownfield reuse is the City's only option for creating space for any land use, especially public ones. Brownfield reuse will also protect the adjoining and sensitive TRNWR, bolster resilience by improving floodplain conditions, and reduce the risk that future flood events might spread or disturb contamination. It will support economic development goals by making the City's main jobs center more attractive to employers, and will provide access to greenspace for workers and underserved residents.

ii. Description of the Proposed Brownfield Site: The City's proposed Brownfield site ("Site") is the former Frontier Leather Tannery, located at 1210 SW Oregon Street. The Site is vacant with no structures, except for one small former pumphouse. It consists of 25 acres, over half of which (17.36 acres) are wetlands. These include two 3.4-acre former sedimentation (waste) lagoons. A portion of the Site is in the 100-year floodplain. Rock Creek and associated wetlands along the Site's eastern boundary connect the Site to TRNWR. SW Oregon Street – a major thoroughfare – separates the Site from Brickyard Terrace to the south. From 1947, Frontier Leather used chromium oxide to tan cow and deer hides from the local slaughterhouse at the Site and split them into halves. The less valuable halves were buried on Site, and sludge from wastewater treatment processes was discharged into the two lagoons. Frontier Leather also leased an onsite building to a series of lead-acid battery manufacturers from 1956 to 1972, which resulted in the removal of 743 tons of lead-contaminated soil in the mid-1990s. A fire nearly destroyed the facility in 1981. Portions were rebuilt, and the tannery remained in use until 1998, when Frontier Leather went bankrupt, leaving no viable responsible party. The tannery had been vacant for almost 10 years when it burned to the ground in 2006.

The Oregon Department of Environmental Quality (DEQ) added the Site to its Orphan Site List in 2002, and initial assessments identified chromium, lead, and other heavy metals in soil and sediment at concentrations exceeding human health and ecological risks. A FY14 EPA Brownfields Site-Specific Assessment grant funded a Phase II Environmental Site Assessment (ESA) and draft Analysis of Brownfields Cleanup Alternatives (ABCA; see 4.b.i.). Washington County acquired the Site through tax foreclosure between 2012 and 2014, and the City purchased the Site in 2023.

Metal concentrations are highest in the hide-split landfill and downstream of breaches in the former waste lagoons. The Site threatens the surrounding natural environment: previous assessments have identified metals in soil and sediment samples in Rock Creek, which discharges to TRNWR. Chromium-contaminated

[1] This statewide land use system dates from 1974 and contains 19 goals. Goal 14 addresses Comprehensive Land Use Planning.

hides, stacked in layers and exposed by erosion, are easily accessible by wildlife and people, including those camping due to homelessness. Police activity has been documented related to criminal mischief, arson, and odor complaints. The Site is an attractive nuisance due to its unsecured location, frequent illegal dumping, presence of wetlands, and surrounding residential, commercial, and light industrial uses. The Site also threatens the surrounding natural environment: previous assessments have identified metals in soil and sediment samples in Rock Creek, which discharges to TRNWR.

b. Revitalization of the Target Area

i. Reuse Strategy and Alignment with Revitalization Plans: Reuse strategies on the Site's wetlands include a new green infrastructure regional water quality installation to collect and treat currently untreated stormwater from across east Sherwood (a 50-acre basin) before discharging it into Rock Creek. This will protect the floodplain, wetlands and TRNWR.[2] A 50-foot environmental buffer will separate the Site from the floodplain, providing a wildlife corridor and habitat, plus public education and recreational opportunities (1.b.ii and 1.c). This reuse strategy could also support establishment of a City-run wetland mitigation bank, which are in high demand in the Tualatin Valley Watershed. Finally, by supporting increased water storage capacity in the 100-year floodplain, the buffer enhances Site resilience: regional climate change models estimate a 32% increase in 100-year extreme precipitation events by 2050. Added on-Site flood storage reduces flood risks.[3] Further reuse planning will be subject to robust public visioning and engagement, and could include greenspace and/or an expanded public works and emergency operations center, to include community space and the capacity to serve as a resilience hub, like a heating or cooling center.

Different community groups have expressed a desire for Site redevelopment for over 20 years. Since 2015, the City has maintained a project website and held numerous public meetings regarding the Site (see 4.b.i(1)), which has targeted hard-to-reach groups, including people with low-income and people with disabilities. Table 1 shows how reuse strategies align with local and regional land use and revitalization plans.

Table 1. Local and Regional Plans Related to Site Reuse

Entity	Plan	How Project Relates
City	2040 Comprehensive Plan	**Economic policies** include supporting and encouraging infill and redevelopment in existing commercial areas. **Community and cultural heritage policies** support collaborative and inclusive community engagement to reach the entire community. **Governance and growth management policies** encourage land use patterns that reduce or shorten vehicle trips and encourage energy conservation. **Ecosystem policies** support pursuing funding for the acquisition, protection, or enhancement of natural areas; and supporting Brownfield cleanup for reuse and redevelopment of property.
City	Sherwood Seismic Resilience Plan	Identifies current public works facility as vulnerable in a major earthquake. Notes the need for a new structure built to seismic standards.
City	Parks Master Plan	Supports preservation and enhanced accessibility of natural areas to the community.
Sherwood City Council	2023-2024 City Council Goals	Pillar 2 (Infrastructure), Deliverable 2.9 prioritizes Site cleanup and reuse for public purposes.
Oregon Metro	Tonquin Ice Age Trail Master Plan	Supports development of a 22-mile multi-use trail adjacent to the south side of the site that connects the cities of Sherwood, Wilsonville and Tualatin.
Oregon Metro	Six Desired Regional Outcomes	All six regional pillars are relevant, including creating vibrant communities where everyday needs are easily accessible; economic competitiveness and prosperity; safe, reliable, and sustainable transportation choices; leading on climate change, and healthy ecosystems and equity for current and future generations.

ii. Outcomes and Benefits of Reuse Strategy: Reuse will protect City residents and TRNWR's sensitive environment, including endangered and threatened species, from contamination

[2] Tannery Site Assessment Fact Sheet. 2018. https://www.sherwoodoregon.gov/sites/default/files/fileattachments/Planning/page/4239/brownfields_fact_sheet_january_2018.pdf

[3] Morgan, H., Mauger, G., Won, J., Gould, D. 2021. *Projected Changes in Extreme Precipitation Web Tool.* University of Washington Climate Impacts Group: https:/doi.org/10.6069/79CV-4233.

(2.a). The City will consider donating part of the Site's wetlands to TRNWR to enhance these protections (3.d).

Reuse could also benefit City operations and therefore all residents by providing additional space for public functions. This is particularly important given the City's rapid growth (1.a.i.) and resulting expanded service needs. Public works personnel are critical emergency first responders, but the current public works building is projected to be unusable following a major earthquake. An improved emergency operations center would improve resilience to earthquakes and other disasters and support emergency response and long-term social and economic recovery. This would benefit vulnerable and sensitive populations who are more likely to be disproportionately impacted (2.a.ii). Any public buildings at the Site would be constructed to energy-efficient standards (e.g. LEED or similar), and reuse plans would consider development of solar generation and a disaster-resilient microgrid.

Site reuse will facilitate development of a critical segment of the regional, multiuse Tonquin Ice Age Trail ("Trail") along SW Oregon Street, which will include signage explaining the impact of the Missoula Ice Age floods on the City's geology. Site reuse will therefore improve access to trails for Brickyard Terrace residents, who are farther from existing trails and are also more likely to be low-income or people of color (2.a.i.).

The Trail will make the 250-acre Tonquin Employment Area (TEA), located 500 feet east of the Site, more attractive to employers; reuse therefore supports job creation and local economic development goals. The TEA is the City's primary employment cluster, and by 2028, it will host over 3,500 light manufacturing and technology jobs. 90% of the local workforce commutes outside the City, and 53% of these commute 10-25 miles or more.[4] The Climate and Economic Justice Screening Tool (CEJST) ranks the City in the 80th percentile nationally for transportation barriers (average of relative cost and time spent on transportation), which likely relates to commuting burdens. More local, family-wage jobs benefit residents at all income levels by reducing out-commuting and related emissions, and diversifying the economy and taxbase.

Finally, reuse can benefit City operations and all City residents by providing additional space for public buildings and related operations (1.a.i). If reuse includes an emergency operations center, this will improve resilience to earthquakes and other disasters, supporting the City's emergency response and long-term social and economic recovery, which would disproportionately benefit vulnerable populations (2.a.ii.3)(b)).

c. Strategy for Leveraging Resources; i-iii. Resources Needed for Site Characterization/Remediation/Reuse: Site characterization is complete and requires no additional funding. Cleanup is ready to proceed upon grant award. Due to the rising costs of other critical infrastructure projects, the City has insufficient funding to support remediation. This grant will provide the required resources. Remediation costs exceed the grant budget by $659,991. The City will seek the state resources shown in Table 2 to support completion of cleanup and reuse. Importantly, cleanup will allow several existing and planned Capital Improvement Projects to proceed, leveraging an estimated $32.8 million in Metro and City funding for Trail development and stormwater green infrastructure.[5]

Table 2. Resources to Support Site Reuse (All Unsecured)

Name of Resource	Is the Resource for (1.c.i) Assessment, (1.c.ii) Remediation, or (1.c.iii) Reuse Activities?	Additional Details or Information
Business Oregon Brownfields Redevelopment Fund	1.c.ii – Remediation	Could support remediation through loans or grants.
Business Oregon Brownfields Cleanup Fund	1.c.ii – Remediation	Could support remediation through loans or grants.
Oregon DEQ Clean Water State Revolving Fund (CWSRF)	1.c.iii – Reuse	Could support infrastructure, specifically regional water quality system and buffer via low-interest, partially forgivable loans.

[4] U.S. Census Bureau. 2020. OnTheMap: https://onthemap.ces.census.gov/.

[5] Sherwood Capital Improvement Plan (FY2023/24-FY2028/29): https://www.sherwoodoregon.gov/sites/default/files/fileattachments/Engineering/page/4142/cip_6-14-23.pdf

Oregon Watershed Enhancement Board (OWEB)	1.c.iii – Reuse	Could support infrastructure, such as a regional water quality system and buffer, which supports restoration of Rock Creek and improves water quality, flow, and fish habitat. May support public education for watershed protection.
Oregon Department of Energy (ODOE) Community Renewable Energy Grant Program	1.c.iii – Reuse	Could support planning/construction of community energy resilience infrastructure, such as a microgrid associated with expanded public facilities/emergency operations center at the Site.
Oregon Parks & Recreation Dept. Local Government Grants	1.c.iii – Reuse	Could support interpretive signage/facilities along new Trail to enhance access, connectivity and mobility.
Oregon Parks & Recreation Dept. Recreational Trails Grant	1.c.iii – Reuse	Could support Trail construction, interpretive signage, and related safety and education projects.

iv. Use of Existing Infrastructure: There is no existing infrastructure on the Site, and water, sewer, stormwater, electrical, broadband, road connections, and internal road networks are necessary for reuse. City infrastructure is available adjacent to the Site. To support infrastructure development, the City will pursue infrastructure-focused grants and loans listed in Table 2.

2. COMMUNITY NEED AND COMMUNITY ENGAGEMENT

a. Community Need; i. The Community's Need for Funding: The City is one of the smallest by population in the Portland Metro region and lacks the resources necessary to clean up this regionally significant Brownfield. Cleanup would preserve the health of TRNWR, which is home to hundreds of species including the threatened Upper Willamette River Steelhead, Chinook Salmon and Monarch butterfly. Tissue samples show fish may be accumulating chromium and other metals from the Site, and the U.S. Fish and Wildlife Service has expressed concern about the Site being an attractive ecological risk to waterfowl, as TRNWR is a key stopover for migratory birds on the Pacific Flyway.

The Site is in the northeastern corner of census tract 321.04. Because census tracts cover large areas, higher income neighborhoods in other areas of tract 321.04 skew the demographic data, which fail to show income-related community need. More granular census block group data show that income in the southern portions of tract 321.04 is higher than in Brickyard Terrace, closer to the site.[6] At 3.5% unemployment, the 2021 unemployment rate in tract 321.04 is also 35% higher than in the City as a whole (2.6%).[7] Brickyard Terrace has significantly lower home values, denser housing, and more manufactured and multi-family units compared to the City. The median home value in the City is $680,000,[8] but a home in Brickyard Terrace recently sold for 20% of the median, and another sold for 41% of the median price.

School district demographic data for both the City and Hawk's View Elementary school, located less than 1 mile from the Site in Brickyard Terrace, provide further support: 11% of City students receive free and reduced lunch, versus over 95% of students at Hawk's View Elementary School.[9] These data support the assertion that that average incomes in Brickyard Terrace are lower compared to the rest of census tract 321.04.

Over 25% of City residents rent. Of these, 40% are cost-burdened, and 20% are severely cost-burdened. The concentration of multifamily rental units in Brickyard Terrace indicate it is likely home to more cost-burdened renters, who regionally are more likely to be minorities and households with children.[10] Housing cost-burdens perpetuate inequities by limiting resources for food or education to support child development.[11] The

[6] US Census Bureau. 2021. American Community Survey 5-Year Estimates (2017-2021) – Median Household Income in the Past 12 Months: https://data.census.gov/table/ACSDT5Y2021.B19013?q=income&g=1500000US410670321041,410670321042,410670321043

[7] US Census Bureau. 2021. American Community Survey 5-Year Estimates (2017-2021):

[8] Redfin Sherwood, OR Housing Market: https://www.redfin.com/city/17173/OR/Sherwood/housing-market

[9] Oregon Department of Education At-A-Glance Profiles and Accountability Details: https://www.ode.state.or.us/data/reportcard/reports.aspx

[10] HUD defines cost-burdened renter households as those paying more than 30% of their income for rent and utilities. Severely cost-burdened renters pay more than 50%. For details, see Sherwood Housing Needs Analysis (2019-2039): https://www.hbapdx.org/uploads/1/1/6/8/116808533/sherwood_hna_adopted2020compressed1.pdf.

[11] Enterprise (2014). "Impact of Affordable Housing on Families and Communities": https://homeforallsmc.org/wp-content/uploads/2017/05/Impact-of-Affordable-Housing-on-Families-and-Communities.pdf

prevalence of multi-family units in Brickyard Terrace indicates this area likely experiences disproportionate renter cost burdens compared to other parts of the City, and demographic trends indicate Sherwood's rent-burdened households are more likely to be those with children (2.a.ii).

ii. Threats to Sensitive Populations; 1) Health or Welfare of Sensitive Populations: Per Table 3, the City and census tract 321.04 are home to more children under 18 and females of childbearing age than the county and state. The City is in the 78th percentile statewide and the 70th nationally for children under 18.[12] The City is also aging: its fastest growing population from 2000-2010 were people over 45, the youngest of whom will be 65 in 7 years. By 2035, 24% of Washington County's population will be over 60.[13] Just outside tract 321.04, Brickyard Terrace includes The Springs, a 173-resident senior living facility ¼-mile from the Site.

Table 3. Sensitive Populations in the Target Area.

Population	Target Area Census Tract 321.04	Sherwood	Washington County	Oregon	United States
Age Above 65	11%	10%	13%	18%	17%
Age Under 18	25%	29%	23%	21%	22%
Age Under 18 Below Poverty	0%	1%	2%	3%	13%
Female ages 15-44	22%	20%	21%	20%	20%

Source: 2021 American Community Survey 5-Year Estimates

Site remediation and reuse will remove contaminated soils and stabilize contaminated sediment that could threaten the health of sensitive populations, while Site cleanup will spur development of the Trail, delivering benefits and connecting these groups with TRNWR (2.a.iii.2)b).

2) Greater Than Normal Incidence of Disease and Adverse Health Conditions: Table 4 shows City residents are 6.6% more likely to experience cancer than Washington County residents, and 8.3% more likely than U.S. adults. They are also 5% more likely to experience asthma compared to U.S. adults. Site reuse will reduce access to potentially carcinogenic contaminants and enhanced greenspace supports improved air quality. Reuse will also improve community health by connecting Brickyard Terrace with the Trail.

Table 4. Inequitable Health Burdens.

Cancer (excluding skin cancer) among adults aged >=18 years (age-adjusted prevalence, %)			Current asthma among adults aged >=18 years (age-adjusted prevalence, %)		
Sherwood	WA County	U.S.	Sherwood	WA County	U.S.
6.5	6.1	6	10.2	10	9.7

Notes: 2021 CDC PLACES Data. WA County = Washington County, Oregon.

3) Environmental Justice; (a) Identification of Environmental Justice (EJ) Issues

Per CEJST, census tract 321.04 is not disadvantaged. Notably, adjacent census tract 320.03 is disadvantaged based on housing costs, lack of indoor plumbing, proximity to Risk Management Plan (RMP) facilities, and low income, showing how higher income areas in tract 321.04 skew its statistics (2.a.i) – the challenges in tract 320.03 are unlikely to stop at the tract boundary. EJScreen 2.2 results for tract 321.04 in Table 5 show supplemental indexes (which combine social vulnerability data with a single environmental indicator) equal to or exceeding the 60th percentile in the state or U.S. for three variables. Four EJ Screen 2.2 pollution and sources indicators exceed the 60th percentile in the state or US. These results do not show known equity concerns like housing and access to food via school free/reduced lunch programs (2.a.i). US Department of Transportation Equitable Transportation Communities (ETC) data shows the City is in the 60th state or US percentile for six out of 15 indicators. Significantly impaired surface water quality is a significant concern given the City's proximity and ecological connectedness to TRNWR.[14]

[12] USDOT Equitable Transportation Community Explorer: https://experience.arcgis.com/experience/0920984aa80a4362b8778d779b090723/page/ETC-Explorer---State-Results/

[13] This is a rapid increase from 18% in 2015: https://www.hbapdx.org/uploads/1/1/6/8/116808533/sherwood_hna_adopted2020compressed1.pdf.

[14] USDOT Equitable Transportation Community Explorer: https://experience.arcgis.com/experience/0920984aa80a4362b8778d779b090723/page/ETC-Explorer---State-Results/

Table 5. EJ Data for Census Tract 321.04.

Tool	Category	Selected Variables	%ile in State	%ile in U.S.
EJ Screen 2.2	Supp. Index	Particulate Matter (PM)	64	51
	Supp. Index	Air Toxics Respiratory Hazard Index	36	60
	Supp. Index	RMP Facility Proximity	60	56
	Pollution & Sources	PM	96	81
	Pollution & Sources	Diesel PM	55	78
	Pollution & Sources	Air Toxics Respiratory Hazard Index	37	70
	Pollution & Sources	RMP Facility Proximity (facility county/distance)	89	90
DOT ETC		PM 2.5	81	70
		Diesel PM	56	69
		Air Toxics Cancer Risk	54	71
		RMP Facility Proximity	65	65
		Railway Proximity	71	69
		Impaired Surface Water	67	71

Notes: Shading indicates that tract ranks above the 60th percentile in the state or US among impacted areas.
Supp. = supplemental; RMP Facility = facility that has submitted a risk management plan to EPA

(b) Advancing Environmental Justice: Site cleanup and reuse will reduce risks to human and environmental health in and around Brickyard Terrace and Rock Creek by removing legacy pollution and improving water quality, and preserving the health of TRNWR. The new green infrastructure stormwater management installation will directly address impaired surface water (2.a.iii.2)a). Site reuse will also enhance access to the Trail and TRNWR, providing safe outdoor recreational opportunities. The Trail will also leverage TEA to reduce transportation barriers by improving access to active transportation options to local jobs (2.a.iii.2)a), and decreasing commuting-associated air quality burdens.

Site reuse plans that could expand public services also benefit underserved communities, which experience disproportionate impacts from emergencies.[15] Site reuse will improve floodplain conditions, enhance water retention, remove contamination that could spread to nearby communities via flooding (see 1.b.i.), and potentially develop a more resilient emergency response center to serve all City residents.

b. Community Engagement; i. Project Involvement and ii. Project Roles

Table 6. Selected Project Partners and Their Roles.

Name of Organization/Entity/Group	Point of Contact	Specific Project Role or Assistance Provided
Sherwood City Council	Mayor Tim Rosener rosenert@sherwoodoregon.gov 503.625.4246	Advertise community meetings via websites, newsletters, and social media. Facilitate public meetings and engage the community around Site reuse. Collect and share community feedback and questions with City staff and advise on community engagement and messaging.
Clean Water Services (regional water resources management utility)	Elle Wörrlein, PE, Development Services Program Manager; 503.681.3650 worrleine@cleanwaterservices.org	Provide subject matter expertise and engage community on Site redevelopment, infrastructure development, and watershed impacts. Advertise community meetings via website, billing notices, newsletters, and social media.
Sherwood School District	Dr. Jeremy Lyon, Superintendent JMYLON@Sherwood.k12.or.us 503.825.5003	Engage youth in educational opportunities related to environmental careers and provide project details/community meeting information in multiple languages to students and families. Support coordination with nonprofits serving underserved communities.
Tualatin River National Wildlife Refuge (US Fish and Wildlife Service)	Richard Mykut, Wildlife Biologist Richard_Mykut@fws.gov 503.625.5944	Subject matter expert articulating regional benefits of protecting TRNWR; projects' EJ impacts; wetland preservation; and bike/ped connectivity with TRNWR. Help with outreach via events like TRNWR Migratory Bird Festival.

[15] UN Disaster Risk Reduction Prevention Web, "Poverty and Inequality": https://www.preventionweb.net/understanding-disaster-risk/risk-drivers/poverty-inequality#:~:text=Vulnerability%20is%20not%20simply%20about,invest%20in%20risk-reducing%20measures.

Name of Organization/Entity/Group	Point of Contact	Specific Project Role or Assistance Provided
Sherwood Chamber	Renee Brouse, Exec. Director Chamber@sherwoodchamber.org 503.625.7800	Engaging/informing business leaders, hosting speakers and outreach events, advertising and hosting public meetings.
Tualatin Valley Fire & Rescue	Deric Weiss, Fire Chief dweiss@tvfr.org 503.649.8577	Hosting public meeting events at Station 33's community meeting room, near Site.

iii. Incorporating Community Input: The City's priority is to meaningfully engage and solicit from stakeholders directly impacted by the project, especially underserved communities in Brickyard Terrace. The City will develop a Public involvement Plan (PIP) to build on past community engagement efforts and meaningfully engage as many diverse stakeholders as possible (4.b.i). The PIP will outline planned engagement activities according to project timelines, target audiences, and engagement best practices. The City anticipates holding eight in-person community meetings, with virtual options to facilitate maximum participation. Reuse visioning will occur at several meetings (Table 7), and meetings will coincide with major project milestones like project initiation (meeting 1), ABCA finalization (meeting 2), development of cleanup plans and selection of remediation contractor (meetings 3, 4), cleanup (meetings 5, 6), post-cleanup (meeting 7) and grant closeout (meeting 8). The City will work with project partners to advertise meetings via partner newsletters, social media, websites, and the newspaper. The City will collect meeting attendance, record all public comments, and consider them in cleanup implementation. The City will transparently post online and share in subsequent public meetings which feedback it incorporated and how, and which it did not or could not, and why.

The City will publish monthly blogs, articles, social media posts, website updates or press releases to keep the community informed throughout the project, including quarterly updates at City Council meetings. It will work with project partners to provide at least two field trips to support community and career education for diverse stakeholders like youth, Brickyard Terrace residents, and underserved communities (4.a.iii).

3. TASK DESCRIPTIONS, COST ESTIMATES, AND MEASURING PROGRESS

a. Proposed Cleanup Plan

The preferred remedial action (draft ABCA Alternative 2) includes excavation and off-site transportation of contaminated soils and sediments with metals concentrations above cleanup levels. This includes approximately 17,000 cubic yards of contaminated sediments from the north and south sedimentation lagoons and 2,725 cubic yards of sediments outside the lagoons in the Rock Creek floodplain. Contaminated sediments will be excavated during dry weather conditions when the water table is lower and sediments are not saturated. If necessary, sediments will be temporarily stockpiled on plastic sheeting and allowed to dry before transporting off site to an appropriate landfill 18 miles away. Approximately 25,300 cubic yards will be excavated from the hide-split landfill, including commingled soil, and will be transported 23 miles to landfill. Excavated areas will be backfilled with suitable fill from the berms of the existing sedimentation lagoons or imported from a local source. All fill will be compacted to the existing grade. An area of 3.9 acres of designated wetlands in the excavated area will be restored and enhanced, including sedimentation lagoon berm areas, which will be converted into a constructed wetland. The City could potentially sell 3.9 acres of wetland credits into a wetland mitigation bank following the remedial action. This alternative will allow for the greatest amount of wetland reconstruction and would contribute to enhanced flood control along Rock Creek and TRNWR. The City will follow EPA's Green Remediation Best Practices wherever possible, such as use of biodiesel where practical.

b. Description of Tasks/Activities and Outputs; i-iv. Project Implementation, Anticipated Project Schedule, Task/Activity Lead, Outputs

Table 7. Tasks and Activities.

Task 1 – Project Management
i. The City will be responsible for overall project execution and management, and will monitor schedule and budget, report on project activities and accomplishments to stakeholders, and procure and oversee QEP, which will support project documentation

and reporting. City and QEP will meet monthly. Three City staff will attend 1 National Brownfields Training Conference and 3 state or regional conferences.
ii. Schedule: QEP procured in compliance with 2 CFR 200.317-326 and all applicable EPA guidelines and best practices in October 2023 (see threshold criteria). Work will begin upon completion of EPA-approved workplan, assumed to be October 1, 2024 to September 30, 2028.
iii. Lead: City, Assist: Qualified Environmental Professional (QEP)
iv. Outputs: 48 project team meetings, 15 quarterly reports, 4 MBE/WBE reports, 4 Federal Financial Reports, attendance at 1 National Brownfields Training Conference, attendance at 3 state/regional Brownfields conferences, 16 quarterly ACRES updates.
Task 2 – Community Engagement
i. City will develop a PIP and conduct 8 community meetings at key project milestones (2.b.iii). City will work closely with project partners to conduct direct outreach to impacted neighbors, especially Brickyard Terrace, Hawk's View Elementary School, and The Springs senior living facility. City has budgeted participant support costs, including stipends to cover time, loss of wages to attend meetings, and other incentives/costs associated with meeting attendance, including transportation and childcare.
ii. Schedule: Oct. 1, 2024 to Sept. 30, 2028. Community meetings in Nov. 2024 (kickoff, ABCA review, reuse visioning), Mar. 2025 (ABCA review/finalization, reuse visioning), Jul. 2025 (reuse visioning), Dec. 2025 (pre-construction, cleanup plan development), May and December 2026 (cleanup), May 2027 (post-cleanup) and Mar. 2028 (grant completion). Other meetings as needed.
iii. Lead: City, Assist: QEP
iv. Outputs: 1 PIP, 16 City Council updates, 7 community meetings and notes/attendance/recordings, website and online information repository, 16 press releases or newspaper/web articles and social media posts, and direct community outreach as needed.
Task 3 – Cleanup Planning
i. Activities will include a 30-day ABCA public review and comment period; finalizing ABCA to incorporate comments from public notice and regulatory review; obtaining approval from R10 EPA Project Manager; securing all permits/regulatory approvals; developing Site cleanup plans including HASP, QAPP and SAP; completing 100% design documents; preparing bid documents for soliciting cleanup contractors; and completing bidding process.
ii. Schedule: January 1, 2025 to June 30, 2026
iii. Lead: QEP, Assist: City
iv. Outputs: 1 final ABCA; 1 HASP, QAPP, SAP; 100% design documents; 1 set of bid documents; 1 cleanup plan
Task 4 – Site Cleanup
i. The majority of grant funds support Site cleanup. The City will competitively procure a remediation contractor in compliance with state regulations and 2CFR 200.317-326, which Project Manager will oversee with QEP assistance. Contractor cleanup activities will include excavation and removal of contaminated soil and hides, as well as wetland restoration. QEP will work with City to ensure cleanup meets state, City, and federal regulations.
ii. Schedule: May 1, 2026 to April 30, 2028
iii: Lead: Contractor, Assist: City, QEP
iv. Outputs: 1 grant close-out report detailing cleanup progress and any remaining needs

Notes:	PIP = Project Involvement Plan
ABCA = Analysis of Brownfields Cleanup Alternatives	QAPP = Quality Assurance Project Plan
ACRES = Assessment, Cleanup and Redevelopment Exchange	QEP = Qualified Environmental Professional
HASP = Health and Safety Plan	R10 EPA = EPA Region 10

Any City staff time in excess of that identified in the following Tables 8 and 9 will be contributed in-kind at a rate of $98/hour ($70 personnel and $28 fringe benefits).

c. Cost Estimates

Table 8. Project Budget Table.

Budget Categories		Project Tasks ($)				Total
		Task 1: Project Management	Task 2: Community Outreach	Task 3: Cleanup Planning	Task 4: Site Cleanup	
Direct Costs	Personnel	$15,680	$12,460	$9,100	$16,800	**$54,040**
	Fringe Benefits	$6,272	$4,984	$3,640	$6,720	**$21,616**
	Travel	$12,000	$0	$0	$0	**$12,000**
	Equipment	$0	$0	$0	$0	**$0**
	Supplies	$0	$2,500	$0	$0	**$2,500**
	Contractual	$21,200	$25,800	$94,400		**$155,680**
	Construction	$0	$0	$0	$4,753,444	**$4,739,164**
	Participant Support Costs	$0	$15,000	$0	$0	**$15,000**

Budget Categories	Project Tasks ($)				Total
	Task 1: Project Management	Task 2: Community Outreach	Task 3: Cleanup Planning	Task 4: Site Cleanup	
Total Direct Costs	**$55,152**	**$60,744**	**$107,140**	**$4,776,964**	**$5,000,000**
Indirect Costs					
Total Budget (Direct + Indirect Costs)	**$55,152**	**$60,744**	**$107,140**	**$4,776,964**	**$5,000,000**

Table 9. Development of Cost Estimates

Task 1 – Project Management: $55,152
Personnel and Fringe total: $21,952 ($15,680 personnel + $6,272 fringe benefits) 48 monthly team meetings with prep/follow-up ($98/hr [$70/hr personnel + $28/hr fringe] x 48 hrs = $4,704); provide project oversight, such as reviewing QEP-prepared reports ($98/hr x 80 hrs = $7,840); program management, including financial management ($98/hr x 96 hrs = $9,408)
Travel Costs for Three City staff: $12,000 National Brownfields Training Conference (1 conference x 3 people x $1,600/person = $4,800) State or regional Brownfields conferences (3 conferences x 3 people x $800/person = $7,200)
Contractual costs: $21,200 48 project team meetings (48 x $200/hr x 1 hr = $9,600); 15 quarterly reports (15 x $200/hr x 2 hrs = $6,000); 1 final summary report (12 hours x $200/hr = $2,400); ACRES updates (16 x $200 x 1 hr = $3,200)
Task 2 – Community Engagement: $60,744
Personnel and Fringe total: $17,444 ($12,460 personnel + $4,984 fringe benefits) Review/finalize PIP ($98/hr [$70 personnel + $28 fringe] x 8 hrs = $784); plan/facilitate 8 community outreach meetings ($98/hr x 48 hrs = $4,704); conduct direct outreach to key constituencies ($98/hr x 50 hrs = $4,900); monthly updates for social media, website, press ($98/hr x 72 hrs = $7,056)
Supplies: $2,500 Production of print and online materials for direct community outreach, such as fliers and posters ($2,500)
Contractual costs: $25,800 Public Involvement Plan (12 x $200/hr = $2,400); Community outreach meetings (8 x $200/hr = $1,600); Articles/media and website updates (39 hrs x $200/hr = $7,800); Direct engagement with impacted stakeholders (50 hrs x $200/hr = $10,000); Interpretation and translation (20 hrs x $200/hr = $4,000)
Participant Support Costs (PSCs): $15,000 $13,000 in stipends to cover time, lost wages due to meeting attendance, and other incentives and/or costs due to meeting attendance, like transportation. Includes $2,000 ($100/hr x 20) for childcare provider for after-hours community meetings. City will obtain approval from EPA before paying out PSCs and will track disbursements.
Task 3 – Cleanup Planning: $107,140
Personnel and Fringe total: $12,740 ($9,100 personnel + $3,640 fringe benefits) Project oversight, including ABCA review/finalization, review remedial design documents, support permitting efforts, review site workplans, prepare bid documents, attend pre-bid site meetings, evaluate bids and check references, select contractor and coordinate with/oversee QEP ($98/hr [$70 personnel + $28 fringe] x 130 hrs = $12,740)
Contractual costs: $94,400 Update and finalize ABCA incorporating comments from public notice and regulatory review (average rate of $150/hr x 50 hours = $7,500); Remedial design ($170/hr x 105 hrs = $17,850; Permitting ($170/hr x 175 hours = $29,750 + $15,000 permit fees = $44,750); Develop Site Workplans including HASP, QAPP, and SAP ($150/hr x 60 hour = $9,000); Prepare 100% design documents; prepare bid documents; attend pre-bid site meetings; assist as requested with bid evaluation and reference checking to support contractor selection ($170/hr x 90 hours = $15,300).
Task 4 – Site Cleanup: $4,776,964
Personnel and Fringe total: $23,520 ($16,800 personnel + $6,720 fringe) Oversight of QEP, regulatory communication and correspondence, closeout report ($98/hr [$70/hr personnel + $28/hr fringe] x 240 hrs = $23,520)
Construction costs: $4,753,444 Cost estimates from 2018 draft ABCA. Contractor site preparation/mobilization/demobilization (588 hrs x $170/hr = $100,000); Shrub, brush and tree removal ($3,500/acre x 17 acres = $59,500); Install gravel surfacing to minimize erosion and prevent spread of contamination ($50/CY x 3,500 CY = $175,000); Excavation and grading ($20/CY x 50,000 CY = $1,000,000); Transport and disposal of contaminated soil and hides to appropriate landfills ($67/ton x 40,949 tons = $2,743,559); Wetland restoration ($43,500/ac x 12.5 ac = $543,750); Excavation oversight/monitoring and closure sampling ($111/hr x 885 hrs = $98,235); Laboratory analysis for chromium ($20/sample x 410 samples = $8,200); Prepare construction and close-out reports, regulatory correspondence and communications throughout project ($175/hr x 450 hrs = $78,750)

d. Plan to Measure and Evaluate Environmental Progress and Results

The City will track and evaluate progress monthly, coordinating with the QEP and project contractor. It will measure/report outputs and other deliverables with quarterly progress reports and in ACRES. Measurement will compare quarterly achievements to output/outcome goals, so that deviations can be identified and corrected as they occur. Measurable cleanup results within the four-year grant period are: Removal of approximately 45,025 cubic yards of contaminated soil and hides from the Site; decrease in chromium, lead, and other metals in soil and Rock Creek sediments; preservation easements for 50-foot wetland buffer;

consolidated lot lines, with potential donation of sensitive wetlands at Site's east to TRNWR; increase in wetland buffer and wetland area; and increased flood plain capacity due to environmental restoration.

4. PROGRAMMATIC CAPABILITY AND PAST PERFORMANCE

a. Programmatic Capability; i. Organizational Structure and ii. Description of Key Staff: The City has the knowledge and experience required to manage this grant. City staff engaged in this project are experienced grant administrators capable of successfully and timely expenditure of EPA funds, meeting all technical, administrative, financial, and reporting requirements. Key staff are **Project Director Jason Waters, P.E., City Engineer**. Jason has over 20 years' experience managing and delivering large public improvement projects, and will manage the project day-to-day. He will work with QEP to develop, review and approve all reports, ACRES submissions, and deliverables. He will also lead City efforts to select a remediation contractor, and will serve as the City's primary budget manager. Jason will coordinate closely with David Bodway, **Financial Manager,** who will manage and approve EPA funds tracking and submission of reimbursement requests. David has 18 years' experience in government finance and accounting, and holds a Masters in Public Administration from Portland State University. **Jo Guediri, Engineering Program Associate, will serve as Administrative Support Staff.** Jo has over 20 years' experience administering complex public construction contracts, including project setup and payments. She will support development of payment requests, review of payment processing, and preparing and submitting grant reimbursement requests. **Tammy Stevens, Volunteer Coordinator, will serve as the City's Community Outreach Lead,** coordinating with Jason**.** Tammy has worked with the City for 10 years and enjoys strong connections with local nonprofits and other partners. **Craig Sheldon, Public Works Director, will serve as the Project Supervisor**, and will be accountable for the project and City team's success. He will support Jason with regular reports to City Council. Craig has over 34 years' experience completing construction and public works projects.

iii. Acquiring Additional Resources: The City has staff and systems in place to assist with and support efficient staff transitions should unforeseen events take place. This will eliminate project delays and ensure staff have appropriate qualifications and experience. The City procures $2.2 million of contractor services annually and has the staff and procedures in place to acquire these through a competitive, qualifications-based process compliant with 2 CFR 200.317 - 200.326. Through its partnership with Sherwood School District, as well as Portland Community College and Oregon Tradeswomen,[16] the City will leverage this grant to connect diverse community members with Brownfields redevelopment careers. This could include facilitating field trips, holding Q&A sessions with professionals working at the Site, and sharing project updates (2.b.iii).

b. Past Performance and Accomplishments

i. Currently Has or Previously Received an EPA Brownfields Grant; 1) Accomplishments: The City successfully managed a $200,000 2014 EPA Brownfields Site-Specific Assessment Grant (assistance ID number BF 00J93201), which closed September 30, 2019. It developed a strong relationship with DEQ in the process. The award supported a Phase II ESA at the Site, and a wetlands report that was approved on May 18, 2017 by the Oregon Department of State Lands. The award also supported a draft ABCA and public meetings in July 2015, July 2016, and August 2017. At the final meeting, the Sherwood City Planning Commission and public discussed the draft ABCA. In developing the ABCA, the City and its QEP also held two publicly noticed work sessions with the City Council. The QEP revised the ABCA to address comments from the community and DEQ received in April 2018, and submitted a revised document to DEQ and EPA on July 23, 2018, after which no comments affecting the conclusions or recommendations in the ABCA were received. Associated outputs and outcomes are accurately reflected in ACRES. The ABCA has been available on the project website since 2018.

2) Compliance with Grant Requirements: The City successfully managed, drew down, and complied with the terms, conditions, workplan, and schedules associated with the FY14 grant, including all required reporting. The City submitted all quarterly, annual, and other required reports in a timely manner and completed this grant on schedule, following all EPA rules and regulations. EPA grant manager received copies of all deliverables, and no funds remained upon grant closure.

[16] Oregon Tradeswomen is a Portland non-profit that received EPA Brownfields Environmental Workforce and Job Training Grants from 2004-2017.