**NARRATIVE INFORMATION SHEET** – FY22 GUIDELINES FOR BROWNFIELDS CLEANUP GRANTS, RFP No. EPA-OLEM-OBLR-21-06

**1. Applicant Identification**

Town of Winchester
Selectboard
1 Richmond Road

Winchester, NH 03470-2427

**2. Funding Requested**

2.a. Grant Type

The Grant is being sought for Single Site Clean-up. The Site is Lot 3 owned by the Town of Winchester containing specific assessed hazardous contaminant sources.

2.b. Federal Funds Requested

 i. $650,000

 ii. We are requesting a cost share waiver.

iii. We are requesting a waiver of the $500,000 limit.

**3. Location**

Town of Winchester, Cheshire County, New Hampshire

**4. Property Information**

A.C. Lawrence Tannery Site (Lot 3 on Tax Map 30) consisting of 10.9 acres

15 Bridge Street\*

Winchester, NH 03470-2427

\**Note: 15 Bridge Street is a portion of the larger site listed in NH DES and U.S. EPA data bases at 1 Bridge Street*

**5. Contacts**

5.a. Project Director

Karey Miner

Town Administrator
Town of Winchester, NH

1 Richmond Road
Winchester, NH 03470-2427

Phone: 603-239-4951 x 1

e-mail: kminer@winchester.nh.gov

5.b Chief Executive/ Highest-Ranking Elected Official

Ben Kilanski

Selectboard Chair
Town of Winchester, NH

1 Richmond Road
Winchester, NH 03470-2427

Phone: 603-239-4951 x 1

e-mail: bkilanski@winchester.nh.gov

**6. POPULATION**

Town population – 4,240 (Ref: 2020 U.S. Census)

**7. Other Factors Checklist**

The following Other Factors apply to our community and the proposed project:

|  |  |
| --- | --- |
| Other Factor | Page # |
| Community population is 10,000 or less. | Pg. 4; Section 1.a.i |
| The applicant is, or will assist, a federally recognized Indian tribe or United States territory. | N/A |
| The proposed brownfield site(s) is impacted by mine-scarred land. | N/A |
| Secured firm leveraging commitment ties directly to the project and will facilitate completion of the project/reuse; secured resource is identified in the Narrative and substantiated in the attached documentation. | N/A |
| The proposed site(s) is adjacent to a body of water (i.e., the border of the site(s) is contiguous or partially contiguous to the body of water, or would be contiguous or partially contiguous with a body of water but for a street, road, or other public thoroughfare separating them). | Pg. 4:Section 1a.ii |
| The proposed site(s) is in a federally designated flood plain. | Pg. 4:Section 1a.ii |
| The reuse of the proposed cleanup site(s) will facilitate renewable energy fromwind, solar, or geothermal energy. | Pgs 5 & 6; Section 1.b.ii |
| The reuse of the proposed cleanup site(s) will incorporate energy efficiencymeasures. | Pgs.5 & 6; Sections 1.b.i and b ii |
| The target area(s) is located within a community in which a coal-fired powerplant has recently closed (2011 or later) or is closing. | N/A |

**8. Letter from the State or Tribal Environmental Authority**

Our letter from State officials is provided as the attachment to this letter. (Waiting for Letter)

**9. Releasing copies of applications – COnfidential Information**

No confidential, privileged, or sensitive information is included within our application.

**PROJECT AREA DESCRIPTION AND PLANS FOR REVITALIZATION (30 PTS)**

##### Target Area and Brownfields (15 points)

* + 1. **Background and Description of Target Area (5 points): 11 lines**

The Town of Winchester, NH, population 4,240[[1]](#footnote-1), historically flourished as a small agricultural and manufacturing community tucked into the southwest corner of Cheshire County on the Massachusetts line. The Ashuelot Railroad fostered growth of textile mills and factories circa 1800’s, but changes in the global economy in the late 1900’s diminished these industries resulting in the loss of jobs. While Winchester is mostly rural,[[2]](#footnote-2) the Downtown, the target area of this proposal contains an estimated population of 222 residents[[3]](#footnote-3) and hosts a mix of residential, retail and municipal land uses and the Subject Brownfield Site, the former AC Lawrence Leather property. Winchester continues to remain economically distressed loosing manufacturing jobs today at a rate of 12% since 2010.[[4]](#footnote-4) Vacant buildings and stores front Main Street, and a disproportionate number of low income apartment units (93) are concentrated in the Downtown.[[5]](#footnote-5) Population is declining at a rate of 2.37% since 2010[[6]](#footnote-6) and the Town has one of the highest poverty rates (18.98%) in Cheshire County.[[7]](#footnote-7)

##### Description of the Brownfield Site(s) (5 points): 20 lines

A.C. Lawrence Tannery facility circa 1908 was acquired by the Town of Winchester in 1993 through tax foreclosure after 6 years of dormancy and abandonment. The property comprises two parcels at 15 Bridge Street and Bridget Street (no #) within the Downtown commercial zone. The Subject Site is the larger of the two parcels, the 10.9-acre Lot 3; the location of 78 years of tannery operations, including WWII shearling bomber jackets. Access to the site was via a bridge over the Ashuelot River, but the bridge that linked Downtown with the tannery was closed due to safety concerns along with the industry it supported in the early 1990’s. Today it serves Downtowns’ physical link to the past. After another nearly three decades of State and Federally funded assessment, demolition, and removal actions, the Subject Site is a scene of scorched earth – littered with coal combustion residuals and subject to 100-year flood events (FEMA AE & X zones) - it is a magnet to the homeless and curious. But even now there are signs of positive reuse: the former Ashuelot Railroad along the Site’s west boundary is a public Rails to Trails pedestrian/bicycle facility; the Ashelot River begs for a riverfront hiking trail; and what is now a vacant field of rubble holds much promise as a productive Brightfield (solar farm).

But in its current state, with impacts to surface soils from arsenic and polynuclear aromatic hydrocarbons (PAHs), to soils and groundwater from chromium (including carcinogenic CrVI) and Varsol (a petroleum solvent), to groundwater from chlorinated solvents, lead and per-and polyfluoroalkyl substances (PFAS), legacy contaminants are obstacles to even low-risk reuse initiatives. Only implementation of a cleanup plan that eliminates the greatest threats (via floods transporting PAHs and metals offsite, via direct exposure to humans, and to groundwater) will provide a stable, safe Site for a Brightfield developer, and control hazards to interlopers, the curious or the homeless, or as nearby Rails to Trails and riverside recreation use increases.

##### Revitalization of the Target Area (20 points)

* + 1. **Redevelopment Strategy and Alignment with Revitalization Plans (10 points): 20 lines**

##### Winchester’s redevelopment vision is simple: to focus on revitalizing it’s Downtown and create more business and manufacturing opportunities within the Town to provide higher paying jobs for Town residents. To achieve this vision, numerous federal and state grants have been awarded to improve the Town’s infrastructure, but increasing economic activity and vitality in the Downtown has required more creative approaches. One such approach has been improving the Town’s existing network of Rails to Trails, including enhancing the walkability and bicycle safety of Downtown streets.[[8]](#footnote-8) Recently, a NH State Recreational Trails grant and a 2021 U.S. Department of Agriculture, Rural Business Development Grant[[9]](#footnote-9) was awarded to the Town to restore the Ashuelot Rail Trail adjacent to the Subject Brownfields Site. This grant includes building a parking lot/trail head along Bridge Street adjacent to the Subject Lot 3. The new parking area will add as many as 25-30 spaces improving access to the Rail Trail system as well as increase the potential for adding in the future a hiking trail and greenway along the Ashuelot River adjacent to the entire brownfields site.

Also included in the Reuse Plan is the installation of a “turnkey” solar farm to be located on the entire 18.42 acre property under the EPA Brightfields Program. Upon cleanup of the site, an RFP will be issued by the Town to secure a solar developer that can take advantage of NH’s new net metering law which allows municipalities to net meter solar projects up to 5 MWs in size. To move the solar project forward the Town has already cleared all the vegetation and trees on the Subject Site (except along the Ashuelot River) leaving only the stumps and existing building slabs, debris and earth to be removed as part of the brownfields cleanup.[[10]](#footnote-10) The Rail Trail and Parking Lot and the Solar Farm projects will add a much-needed revitalization boost to the town’s economy, but also remove the blight and eye sore that currently exists at the Subject Site within the heart of Downtown Winchester.

* + 1. **Outcomes and Benefits of Reuse Strategy (10 points): 20 lines**

The Reuse Plan has the following benefits and outcomes: (1) it will improve access and use of the Ashuelot Rail Trail thereby enhancing the visibility and attraction of town services and businesses to both town residents and visitors; (2) it will provide a new Parking Lot/Trailhead for the Ashuelot Rail Trail where infrastructure (roads and water) is already in place; (3) it will promote infill development and stimulate business investment in the Downtown, including jobs for Winchester’s residents; (4) it will provide an environmentally friendly Solar Farm on the site generating local tax revenues and lease payments to the Town as well as offering renewable energy net metering opportunities to town residents, existing and new businesses; (5) it will attract new families and businesses to live and work in the Downtown; and (6) it will increase property values that will generate tax revenues to help pay for the maintenance of the Downtown.

It is estimated that the new Parking/Trailhead to be created at the end of Bridge Street directly adjacent to the Subject Site as well as improvements to the Ashuelot Rail Trail will generate a total of 8 new jobs among three existing businesses including the creation of several potential new business within the Downtown.[[11]](#footnote-11) Indirectly these improvements will also enhance the Town’s Downtown revitalization efforts by a) increasing the number of new commerce visits and visitors to Winchester’s new Farmer’s Market, a new tavern and bed and breakfast establishment as well as the Sweetwater Farm & Distillery located within the Downtown; and b) stimulating renewed interest (such as an ice cream shop) in the reuse of the existing vacant buildings and storefronts located on Main Street.[[12]](#footnote-12) Finally, in addition to the environmental benefits of saving energy and reducing airborne pollution, the Reuse Plan includes as part of the site cleanup the removal of existing foundations, floor slabs and debris of the demolished building as well as the existing tree stumps and overgrown vegetation on the site, thus mitigating the human health risks associated with soils scarred and toxic from past industrial/tannery activity, thereby increasing property values, leading to increased tax revenues and reinvestment in the town.

##### Strategy for Leveraging Resources (15 points)

* + 1. **Resources Needed for Site Reuse (10 points): 20 lines**

A.C. Lawrence Tannery Site remediation requires an estimated $900,000 for implementation of a remedial plan to meet near-term remedial goals: mitigate human health risk, protect the environment, and allow for beneficial site reuse as a Brightfield under a lease arrangement that will generate revenues to further fund monitoring and possible additional remedial action at the end of a 25 year lease period. Initial remediation to meet the near-term remedial goals will be funded by this grant and match ($780,000) and as much as $200,000 of cleanup grant funds from the New Hampshire Department of Environmental Services (NH DES) revolving loan fund will cover cap and security fence costs for a turnkey solar farm. Continuing obligation costs are estimated as $200,000 over 35-years and possible follow-up remediation of the Varsol impacted area ($2,000,000) at the end of the lease and would be funded in part by Brightfield revenues.

The Town was on the verge of completing a lease agreement with a solar developer - in fact the project was featured in the U.S. EPA 2018 Brightfields Conference - but uncertainty of remedial implementation timing vis a vis the solar operations lease period increased the project’s economic risk, and negotiations stalled. For complex Sites it is apparent that a turnkey property, ready for reuse, provides the assurances needed to leverage a liability into a modest but predicable revenue stream for the Town.

Past investments by the U.S. EPA and NH DES, and the Southwest Region Planning Commission Brownfields Program have directly funded actions need to reduce imminent hazards, and to better understand Site conditions, but the model of leveraging this property into an income stream for the Town is critical to advancing the project.

##### Use of Existing Infrastructure (5 points): 10 lines

The Subject Site could be considered a classic landlocked brownfield site that presents limited opportunities for infill development given the site’s access issues as well as its location directly along the shoreline of the Ashuelot River. If the existing Bridge over the Ashuelot River could be replaced, the property could offer an ideal location for a new industry or manufacturing use given the availability of utilities and its location within the Town’s Downtown Commercial zone. However, the additional cost to replace infrastructure often presents a hardship for infill development. This is also compounded by the required building setbacks necessary to protect the Asheulot River from contamination. Therefore from a broader perspective, supporting the Downtown, which in and of itself is existing infrastructure (water, sewer, electric, streets), most redevelopment projects enhance the use of existing and available infrastructure eliminating the need for new structures and/or use of new or upgraded utility services.

#### **COMMUNITY NEED AND COMMUNITY ENGAGEMENT (40 POINTS)**

##### Community Need (25 points)

* + 1. **The Community’s Need for Funding (5 points): 10 lines**

With no sales or income tax, NH is far more reliant on local property taxes than most other states to meet a variety of needs. Unfortunately, Winchester’s property taxpayers are disproportionately for older residents (Median age is 40.3) and a large percent (18.6%) are retired over 65 and no longer working and surviving on extremely low retirement incomes.[12](#_bookmark11) In addition to an overreliance on property taxes, the cost of services and infrastructure are increasingly being downshifted from the State to local municipalities, putting even greater pressure on local property taxes.[[13]](#footnote-13) County taxes have increased 9.5% this past year and education costs continue to go up every year although our school population continues to drop as the Town and the State age. As such, the Cleanup of the AC Lawrence Brownfields Site, which has the immediate cost of $900,000 (and estimated continuing environmental obligation costs of well over $200,000 over 35 years)[[14]](#footnote-14) is a significant cost that the Town of Winchester would not be able to address without financial support.

##### 2.a.ii Threats to Sensitive Populations (20 points):

**(1) Health or Welfare of Sensitive Populations (5 points) 10 lines**

Downtown Winchester is a high risk community. As stated previously it is one of the poorest communities in Cheshire County (18.98%), much higher than the state of NH (7.6%) or the U.S. (11.4).[[15]](#footnote-15) Low income populations are higher risk for COPD, emphysema, and chronic arthritis, osteoporosis, dementia, and kidney disease. While these conditions can be brought on by age, they can also be greatly exacerbated by environmental exposures. The Subject Site is serviced by municipal water, yet critical exposure pathways do exist: (1) inhalation of dust as winds mobilize fine grained soils from the sparsely vegetated former plating building footprint, and (2) incidental ingestion due to the presence of exposed soils. The abandoned Site building footprints, shrouded in lead paint, and impaired earth left in the plating building footprint invite vandalism and inflict blight upon the nearby residential neighborhood and low income apartments within and surrounding Downtown and is a disincentive to investment. U.S. EPA grant funds make redevelopment possible by leveraging contingent funds which collectively pay for remediation.

 **(2) Greater Than Normal Incidence of Disease and Adverse Health Conditions (5 points) 10 lines**

The Subject Site surface soils contain chromium PAHs, arsenic, and PFAS. Exposures can increase the risk of cancer and can cause respiratory irritation, asthma and chronic bronchitis: the very diseases that most effect Walpole’s seniors. The presence of brownfields and other cumulative environmental issues can affect public health by increasing the risk of cancer, birth abnormalities, asthma, and lead poisoning. County level data shows that the target area already has higher incidences of several cancers including leukemia, myeloma, non-Hodgkin Lymphoma, ovary, stomach and uterine cancers than NH and the U.S.[[16]](#footnote-16) In addition, the County has higher rates of death from brain, breast, leukemia and ovary cancers than NH and the U.S.[[17]](#footnote-17) Cheshire County also has a significantly higher rate of adults with asthma at risk from obesity related co-morbidity and asthma exacerbation when compared to NH.[[18]](#footnote-18) A U.S. EPA grant will fund building and impacted soils removal under controlled conditions and include monitoring of air quality. Residents will wonder less about dust outside their apartment and on the front porch furniture, and will be reassured that grandkids can play safely in town.

**(3) Promoting Environmental Justice (10 points): 20 lines**

As noted previously, a disproportionate number of Winchester residents are low income. In fact, the proportion of households Winchester with income and benefits less than the median income of $39,608 is 97% less than NH and 66% less than the U.S.[[19]](#footnote-19) Downtown Winchester and the area in direct proximity to the Subject Site includes a large residential neighborhood to the west and a low income housing project to the north including a great deal of senior housing. These renters tend to be lower-income residents, and seniors living on fixed income. Therefore, senior and lower income residents are apt to be disproportionately affected by Site environmental conditions. Logically, seniors and lower income residents will preferentially benefit from remediation implemented through the award of U.S. EPA cleanup funds. Also, Winchester’s seniors and lower-income residents and renters can benefit most from the planned off- street parking benefits by allowing more on-street disability parking and walkable streets as well as the potential for reduced electricity costs from the solar farm.

**2.b. Community Engagement (15 points)**

**2.b.i Community Involvement (5 points): 10 lines**

**2.b.ii Project Roles (5 points): 10 lines**

In addition to Town support (Selectmen’s Office, Highway Department, Police Department, use of town resources and facilities) the following community partners and stakeholders will provide meaningful support and guidance, as noted in the following table:

|  |  |  |
| --- | --- | --- |
| **Partner Name** | **Point of Contact** | **Specific Role in the Project or Assistance Provided** |
| Southwest Region Planning Commission (Planning Resource) | Joshua (JB) Mackjbmack@swrpc.com | Advise on brownfield assessment program. - Task 4: Area-Wide Reuse Planning |
| Monadnock Economic Development Corporation (MEDC) – 501c3 Non Profit Community Based Volunteers  | Mark Tigan, Chairtganm@gmail.com | Redevelopment Partner – Task 2 & 4: Community Outreach & Engagement/Reuse Planning  |
| Winchester School District SAU | Reuben Duncanr.duncan@sau47.org | Advise on educational/job training programs at tech center - Task 2: Community Outreach & Engagement. Also coordinate youth outreach and input – Task 2 & 4: Community Outreach & Engagement/Reuse Panning |
| Monadnock Sustainability HUB (Volunteer Advocates for Sustainable Development & Renewable Energy) | Annie Henry, Program Manager<https://monadnock>sustainabilityhub.org/programs/ | Advise on renewable energy and sustainable design at energy hub -Task 2 & 4: Community Outreach & Engagement/Reuse Planning |
| Town of Winchester Police Chief | Erik Josephsonejosephson@winchester.nh.gov | Advise on drug & alcohol addiction recovery, prevention and treatment programs -Task 2: Community Outreach & Engagement |
| Town of Winchester Planning Coordinator | Margaret Sharamsharra@winchester.nh.gov | Main Street Program; provides small business support -Task 2 & 4: Community Outreach & Engagement/Reuse Planning |
| Town of Winchester Conservation Commission | Gus Ruth, ChairmanIRuth97@aol.com | Representing conservation and environmental concerns -Task 2 & 4: Community Outreach & Engagement/Reuse Planning |
| Monadnock at Home | Sandra Faberhelp@monadnock@home.org | Coordinate senior population outreach -Task 2: Community Outreach & Engagement |
| Monadnock Economic Development Corporation | Arthur Robert arobert@monadnock-development.org | Redevelopment Partner - Task 2 & 4: Community Outreach & Engagement/Reuse Planning |

##### 2.b.iii Incorporating Community Input (5 points): 10 lines

Winchester is a tight-knit community and frequent engagement of stakeholders is essential for the growth of our Town. Therefore, the Selectboard will provide updates and solicit community input in scheduled meetings, and more focused engagement at dedicated public meetings at key project milestones. During the initial kick off meeting a Clean-up Task Force comprised of the Community Partners and Stakeholders identified above, NH DES, and U.S. EPA representatives will be created as a guiding body. Meeting agendas will be posted on the Town webpage and on public bulletin boards and meetings will be live streamed. Responses to questions or concerns will be made during the public meetings and in writing posted on the web page. Published project documents will be accessible for comment at Town Hall and on the Town’s web page. To date, the community has already participated in one public Town Hall meeting held on November 17, 2021 pertaining to this grant, including discussions on contamination, acquisition and re-use.

#### **TASK DESCRIPTIONS, COST ESTIMATES, AND MEASURING PROGRESS (35 POINTS)**

##### Proposed Cleanup Plan (10 points): 21 lines

The cleanup of the A.C. Lawrence Site requires: (1) the elimination of human contact exposure risks (municipal water available) and potential for surface water quality impacts; (2) reduction of chromium mass to improve groundwater quality; (3) monitoring of chlorinated and petroleum solvents; (4) a stabilized site to promote reuse (solar) to fund future actions that may be required. An analysis of brownfields cleanup alternatives (ABCA) was conducted to evaluate the effectiveness, feasibility and cost of remediation options. Site contaminated media include: 1) Surface soils with PAHs and arsenic (coal combustion residuals), as well as PFAS (tannery products treatment). Shallow soils with CVOCs. Deeper soils with Varsol, and chromium; and 2) Groundwater impacted by chromium (CrIII and CrVI), PFAS, CVOCs, petroleum, lead.

Coal combustion residuals are fairly widespread (up to 4 acres). PFAS has no established SRSs, and monitoring of groundwater is the default remediation strategy. CVOCs soils impacts appear limited and at relatively low concentrations. The spatial extent of chromium (1,325 yds3) and Varsol (30,000 yds3) in soil are well defined. The Varsol impacted area is stable and there is evidence of significant mass attenuation.

After thorough evaluation, “Excavate and Dispose of Chromium-Impacted Soils, Varsol Area Oxidant Injection” was selected as the remediation alternative. However, based on the extensive soil contamination and high cleanup cost; limited access to the Site; and the need to secure a productive Site reuse to fund long-term remediation, the NH DES supported the approach of incremental remedial implementation. Under this approach, grossly chromium-impacted soils (775 yds3) would be removed and disposed of off-site, earthen areas of the former operational area not covered with masonry slab will be capped with 4 inches of crushed stone over a geotextile, subject to an AUR. This would significantly reduce the mass of chromium affecting groundwater, reduce surface soil contaminant mobilization potential and exposure risk, and create a Site which will advance the Town’s prospects for securing a Brightfield lease. A Brightfield lease in the near-term, will generate revenue to fund monitoring and fund possible future Varsol remediation, if warranted.

##### 3.b. Description of Tasks and Activities (25 points)

##### 3.b.i Project Implementation

##### 3.b.ii Anticipated Project Schedule (5 points): 11 lines

##### 3.b.iii Task/Activity Lead (5 points): 11 lines

##### 3.b.iv Outputs (5 points): 11 lines

|  |
| --- |
| **Task/Activity 1: Cooperative Agreement Oversight** |
| 1. Project Implementation: Formally assemble and meet with the BrAC, EPA and DES and establish a meeting schedule (Q1, Q2 and Q4 and twice each year, thereafter); develop a RFP and select a QEP through a competitive process, per 40 CFR 30 (Q2); develop, organize and administer Brownfields programmatic and cleanup activities: coordinating public outreach and education (Q2); provide ongoing grant management and EPA ACRES and MBE/WBE reporting (through Q12). QEP services are EPA grant funded; EPA and DES staff assistance are separately funded; and BrAC volunteers. Town support costs apply towards the cost share.
 |
| 1. Anticipated Project Schedule: Q1 through Q12 as noted above.
 |
| 1. Task/Activity Lead: Town Project Director (TPD) supported by QEP (especially for reporting).
 |
| 1. Outputs – Form BrAC, QEP RFP, ACRES inputs and quarterly reporting.
 |
| **Task/Activity 2: Community Outreach and Engagement** |
| 1. Project Implementation: The TPD will: notify the adjacent land owners and community organizations of cleanup schedules; hold up to four dedicated public outreach meetings (POM) to educate and update the community regarding cleanup and proposed reuse; and prepare public outreach materials. Outreach communication and responses will be provided at monthly Town meetings and prior to undertaking the cleanup efforts, during remediation, and following successful completion of remediation. Meeting minutes, response to enquiries, Site reports will be posted at the Town Office and on the
2. Town website; updates/notifications will be posted on the Town bulletin boards, website and Facebook page. Meetings will be live streamed and recorded. Funding sources identical to Task 1.
 |
| 1. Anticipated Project Schedule: POM–Q3, Q7, Q12; Town meetings–monthly, as needed, Q1 through Q12
 |
| 1. Task/Activity Lead: TPD supported by QEP
 |
| 1. Outputs: Advertisements, press releases, meeting minutes and enquires/response.
 |
| **Task/Activity 3: Site Specific Activities** |
| 1. The QEP will: prepare final ABCA prepare a SSQAPP for confirmatory and waste characterization sampling; prepare Specification and Bid Documents (SBD), prepare an AUR, and subsequent to NH DES and U.S. EPA documents approval, assist the Town with clean-up contractor bid solicitation and Town remediation contractor selection processes. Funding sources identical to Task 1.
 |
| 1. Anticipated Project Schedule: ABCA-Q3; SPD-Q5; SQAPP-Q5; Contractor Selection Process-Q6
 |
| 1. Task/Activity Lead: QEP with oversight by TPD
 |
| 1. Outputs: ABCA, SSQAPP, SBD, AUR with Site Survey
 |
| **Task/Activity 4: Oversee Site Cleanup** |
| 1. The QEP, working at the direction of the TPD, will oversee cleanup activities (excavation/disposal, restoration, capping) and perform project monitoring and reporting to ensure compliance with the specifications. QEP will update, and receive and act upon input from, the Town Health Officer.

Funding sources similar to Task 1; but backfill, police detail, and portion of contractual contribute to cost share.  |
| 1. Anticipated Project Schedule: Q6 through Q12
 |
| 1. Task/Activity Lead: QEP with oversight by TPD, and Town Health Officer
 |
| 1. Outputs: Completion Report, NH DES Certification of Completion
 |

##### 3.c Cost Estimates and Outputs (20 points)

**3.c.i Development of Cost Estimates (10 points): 21 lines**

**3.c.ii Application of Cost Estimates (5 points): 10 lines**

**3.c.iii Eligibility of Cost Share Activities (5 points): 10 lines**

The below cost estimates incorporate Town employee and resource cost data, regional contractor’s rate data, as well as solicited soil disposal costs for Site contaminants.

| **Budget Categories** | **Project Tasks ($)** |  |
| --- | --- | --- |
| **Cooperative Agreement Oversight** | **Community Outreach & Engagement** | **Site-Specific Activities** | **Oversee / Site Cleanup** | **Total** |
| Direct Costsrect Costs | Personnel | $4,224 | $3,020 | $2,220 | $1,560 | $11,024 |
| Fringe Benefits | $936 | $300 | $480 | $340 | $2,436 |
| Travel | - | - | - | - | - |
| Equipment | - | - | - | - | - |
| Supplies | $340 | $300 | $300 | - | $940 |
| Services | - | - | - | $44,680 | $44,680 |
| Contractual | $4,500 | $8,875 | $29,300 | $678,245 | $720,920 |
| Other  | - | - | - | - | - |
| Total Direct Costs | $10,000 | $12,875 | $32,300 | $724,825 | $780,000 |
| Indirect Costs | - | - | - | - | - |
| Total Federal Funding  | $4,500 | $8,875 | $29,300 | $607,325 | $650,000 |
| Cost Share (20% of requested federal funds) | $5,500 | $4,000 | $3,000 | $46,580 $70,920 | $130,000 |
| Total BudgetTDC+IC+CS | $10,000 | $12,875 | $32,300 | $724,825 | $780,000 |

Additional cost detail is provided below (timeline assumes implementation will occur Q1-Q8, Town staff (TPD and TSS) rates includes pay plus fringe, (***Cost Share items are in Bold Italics***):

Task 1. Cooperative Agreement Oversight. TPD is allocated 24hrs x $35/hr = ***$840*** for QEP selection; and 3hr/mo x 24mo x $35/hr = ***$2,520*** for program development, organization, and oversight of Brownfields cleanup. TSS are allocated 3hrs/mo x 24 mo x $25/hr (pay plus fringe benefits) = ***$1,800***, for programmatic needs (quarterly Assessment, Cleanup & Redevelopment Exchange System (ACRES) updates, municipal match resource coordination, TPD support, etc.), plus $***340*** supplies. QEP is allocated 36hrs x $125/hr = $4,500 for programmatic support.

Task 2: Community Outreach and Engagement. For monthly Town meetings: TPD is allocated 2hr x 24mo x $35/hr = *$****1,680***; TSS are allocated 2hr x 24mo x $25/hr = *$****1,200***. For four dedicated outreach meetings: 4 ea x 3hrs x $35/hr = ***$420*** TPD; 4 ea x 4hrs x $25/hr = ***$400*** TSS plus ***$300*** supplies (ads, mailer). QEP services ($8,875 include 65hrs x $125/hr plus travel/expenses over the 24-months for outreach. This total includes QEP costs for four dedicated meetings, at $1,125 each (7.5hrs x $125/hr QEP each, plus $750 travel expense and supplies for the four meetings), plus 35hrs x $125/hr in support of monthly meetings.

Task 3: Site Specific Activities. For review and comment on deliverables and participating in contractor selection TPD is allocated 60hrs x $35/hr = ***$2,100***. TSS are allocated, 24hrs x $25/hr = ***$600*** plus ***$300*** postage/copies for bid solicitation, selection and negotiation support. $29,300 is budgeted for QEP services: the ABCA, SSQAPP, specifications and contractor bid documents, bidder Site walk and selection process management, Site survey and AUR preparation.

Task 4: Oversee Site Cleanup. The following are allocated for QEP and contractor communications, cleanup work products review and coordinating Town resources: 40hrs x $35/hr = ***$1,400*** TPD and 20hrs x $25/hr = ***$500*** TSS. The Town is also providing the following services: police detail for truck traffic over 2 weeks ***($6,080***); restoration materials and transportation (1,000 tons gravel: ***$22,000***); Site grubbing before cap placement (***$16,600***). Contractor costs for excavation, stockpiling, loading, disposal, backfill placement, air monitoring, and cap placement are $591,245, estimated. Three disposal rates for chromium impacted soils are factored into this cost: (1) as hazardous waste ($425/ton, (2) as PFAS-impacted ($290/ton), (3) as non-hazardous/non-PFAS ($110/ton). QEP cost for oversight of contractor, soils testing (field screening, confirmatory, waste characterization), and reporting is $87,000. Of the total task contractual budget ($678,245), ***$70,920*** will be cost share. Also, anticipated NH DES leveraged funds will cover a portion of the cap cost; as the total project cost, $912,000, exceeds the TDC+CS budget by an estimated $132,000.

##### 3.b.iv Measuring Environmental Results (5 points): 10 lines

The Town (TPD and TSS) will create a detailed and comprehensive schedule for milestone completion, the outline for which is presented in **Section 3.b.ii**. Progress will be tracked relative to the schedule using appropriate software, deviations will be assessed, corrective measures will be identified and implemented, and the schedule revised as appropriate. Progress will also be tracked and measured via ACRES reporting. Public monthly updates are intended to optimize communication of progress, solicit input, allow for incremental refinements in approach, and garner support. Significant setbacks that are within the control of the Town are, therefore, unlikely. Because the Site and clean-up approach is well defined, adherence to the schedule is likely. The 24-month schedule allows for adjustments and unforeseen delays. Near-term outcomes: removal grossly impacted soils and reduction of risk posed by surface soils will be driven by and documented in project outputs; including outreach documentation, SSQAPP, ABCA/design plans, AUR, and completion report. The NH DES Certificate of Completion will provide State liability relief through the Brownfields Program and the Town will have an attractive site for Brightfield development

#### **4. PROGRAMMATIC CAPABILITY AND PAST PERFORMANCE (30 POINTS)**

##### 4.a Programmatic Capability (15 points)

**4.a.i Organizational Structure (5 points): 10 lines**

The Town of Winchester is well prepared to undertake this Grant Program through the leadership of the Board of Selectmen providing policy direction by approving staff time and resources for this project under the Town Administrator’s responsibility as Project Director for oversight, financial administration, daily management and project support. A clear line of responsibility is made to effectively implement this grant with the TPD tasked with grant oversight/management and enlisting Town senior and support resources as needed. Project Staff include: (1) Karey Miner, Town Administrator, who manages the day to day operations of grants reporting and billing and who will fulfill reporting and related administrative requirements to ensure procedures for handling all grant funds meet all grant agreement requirements; and Amy Bond, Finance Supervisor, who manages the financing for all grant and loan programs for the Town and submits annual audits. In addition, the Town will select a QEP (see **Section 4.a.ii**) with the qualifications necessary to be a team resource for programmatic needs. Our proposed budget allocates sufficient funds for this role and it is envisioned that the TPD and TSS will work closely with the QEP.

##### 4.a.ii Description of Key Staff (5 points): 10 lines

The Town regularly issues Requests for Proposals (RFP), negotiates contracts, and engages contractors to meet Highway Department, Recycling, and Water and Sewer Department needs. In addition, as noted in **Section 2.b.iii** in our first public outreach kick off meeting we will be establishing a Cleanup Task Force comprised of selected community partners/stakeholders, and SWRPC (a successful U.S. EPA Brownfields Assessment grantee), NH DES, and U.S. EPA representatives. The Task Force will assist with procurement of grant services (including QEP and contractor services), which will be in strict accordance with requirements under the U.S. EPA grant agreement and all applicable state and federal requirements. Once selected, the QEP will provide assistance for technical and programmatic project needs, including technical aspects of contractor selection.

##### 4.b Past Performance and Accomplishments (15 points)

##### 4.b.i Currently Has or Previously Received an U.S. EPA Brownfields Grant (6 points)

**Not Applicable.**

**4. b. ii Has Not Received a U.S. EPA Brownfields Grant but has Received Other Federal or Non-Federal Assistance Agreements. (6 points)**

1. **Accomplishments (3 points)**

The Town of Winchester receives State and Federal assistance funds and grants, managed and administered in accordance with funding requirements. Recent examples include: (1) A 2019 NH DES Department of Environmental Services Aquatic Resources Mitigation Grant ($215,488) to design and install a new culvert. The Town hired a State-approved Engineer, selected a contractor through a fair and competitive process, and negotiated a construction contract. Work began on-schedule. Design documents complied with NH DES requirements and expenditures aligned with the budget. (2) Annual State of NH Road Maintenance Grants ($137,000 typical). The Road Agent and Select Board collaborate to prioritize funds use in conformance with an implementation schedule. Projects status and fund expenditures reporting is maintained internally. Work is successfully implemented each year on schedule and on budget. (3) Community Development Block Grant – CDFA ($500,000), federal funds approved by the NH Executive Committee and the Governor to make improvements prior to construction including easement acquisition, appraisals, and easement deeds. Engineers and Contractor were selected through a fair and competitive process. The Town provided updates at public meetings and was accountable to CDFA.

##### Compliance with Grant requirements (3 points)

All of the Town of Winchester’s grant awards management, and project outputs and outcomes (as noted above) comply with agreement requirements, and no corrective actions have been issued.

**4.b.iii Never Received Any Type of Federal or Non-Federal Assistance Agreements (3 points)**

**Not Applicable.**

**Narrative Proposal Attachment 1 - Documentation of Committed Leveraged Resources**

* + Copy of Quick Claim Deed Showing Town Ownership Attached



**Attachment – Response to III.B. Threshold Criteria for Cleanup Grants, FY22 GUIDELINES FOR BROWNFIELDS CLEANUP GRANTS**

1. **Applicant Eligibility**

The Town of Winchester is the property owner and affirms that it is the eligible applicant as a Unit of Local Government.

1. **Previously Awarded Cleanup Grants**

The Town of Winchester affirms that it has not previously received a U.S. EPA Clean-up Grant for this Site (or any Site).

1. **Expenditure of Multipurpose Grant Funds**

The Town of Winchester does not have an open U.S. EPA Brownfields Multipurpose Grant.

1. **Site Ownership**

The Town of Winchester affirms that it is the sole owner of the Site (which for the purposed of this application is defined as Lot 3 on Map 30), and has owned the Site since October 13, 1993 (Cheshire County Registry of Deeds reference: Book 1465, Pages 390-392) through tax foreclosure and will maintain sole ownership of the property until the grant services are completed and the grant is closed out.

1. **Basic Site Information**

Name of the Site: Former A.C. Lawrence Tannery (also known as Former A.C. Lawrence Property, A.C. Lawrence Leather, and A.C. Lawrence Leather Tannery)

Address of the Site: 15 Bridge Street\*

 Winchester, NH 03470

Current Owner of the Site: Town of Winchester

\**Note: 15 Bridge Street is a portion of the larger site listed in NH DES and U.S. EPA data bases at 1 Bridge Street*

**6. Status and History of Contamination at the Site**

**a) Whether this site is contaminated by hazardous substances or petroleum;**

The A.C. Lawrence Tannery Site is comprised of two adjoining parcels (Tax Map 30, Lots 3 & 4) on 18.42-acres. This grant application pertains to Lot 3, comprised of 10.9 acres, which has been impacted by a mixture of hazardous substances and petroleum used in the former operations of the former A. C. Lawrence Tannery, which include:

* Varsol (with a range of petroleum constituents) in soils and groundwater. The petroleum product was used as solvent used to de-fat hides.
* Chlorinated solvents in soil and groundwater. Chlorinated solvents were used as a replacement to Varsol to de-fat the hides.
* Chromium (hexavalent and trivalent) in soils and groundwater. Sodium dichromate salts were reportedly used in tanning hides.
* Polynuclear aromatic hydrocarbons (PAHs) and metals (arsenic) indicative of coal combustion residuals in soils, used to fire a former on-site steam plant
* Per and polyfluoroalkyl substances (PFAS) in groundwater, presumably used to treat shearling coats to resist staining or water permeation.

These areas of contamination are inferred to overlap, spatially.

**b) The operational history and current use(s) of the site;**

The A.C. Lawrence Tannery was constructed on the Subject Property circa 1908. The facility was a shearling tannery and manufactured shearling products from sheep skins. The tannery ceased operations at the Subject Property circa 1987. Tannery production operations were historically located on Lot 3, and the adjoining Lot 4, which is not part of this grant application, was primarily used for wastewater treatment and landfilling of tannery wastes. The tannery structures on Lot 3 have been demolished; however, foundations, slab and masonry flooring remain in many of the building footprint areas on the parcel.

The property has largely remained vacant and has not been redeveloped under Town Ownership. State and federally funded assessments/investigations/surveys, removal actions/abatement/ demolition, and remediation planning were implemented before and during Town ownership, from circa 1990 through 2005.

**c) Environmental concerns, if known, at the site; and**

Environmental investigations completed at the Site documented chromium-impacted soils and groundwater, petroleum (Varsol) impacted soil and groundwater, and tetrachloroethylene (PCE) and trichloroethylene (TCE) impacted soil and groundwater associated with the former A.C. Lawrence Tannery at concentrations above New Hampshire Env-Or 600 Soil Remediation Standards (SRSs) and Ambient Groundwater Quality Standards (AGQSs). In addition, several PAHs and the metals arsenic and lead were detected in Site soils at concentration above SRS, and are likely attributed to coal and/or coal combustion by-products that are present over much of the ground surface in the former operational areas that were not occupied by buildings. PFAS has also been documented in Site groundwater samples from Site monitoring wells at concentrations above AGQS; no soil remediation standards have been established for PFAS by the New Hampshire Department of Environmental Services (NH DES).

No nearby impacted potable water supply wells have been identified (one potable supply well was identified but permission for sampling was denied by the owner), and much of the area is serviced by municipal water. The potential for human exposure risk to surficial soils is inferred, as the fence surrounding the property has done little to keep interlopers away. The potential for impact to the water and sediments of the adjoining Ashuelot River is probable due to migration of impacted groundwater to the river, and surficial erosion of surface soils to the river is likely in extreme flooding events.

**d) How the site became contaminated, and to the extent possible, describe the nature and extent of the contamination.**

The location of Site impacts and the documented Site history clearly tie the impacts at the Site to the former (pre-1988) Tannery operations.

Soils with exceedances of the chromium (hexavalent and trivalent) SRSs were identified in the area of the former Tannery Leach House, specifically in shallow soils underlying the floor slab and at the northeast and southwest corners of the building slab extending down into the water table. Shallow soils outside of the footprint of the former Leach House were previously remediated by the U.S. EPA in 2003. The remediation activities included excavation of approximately 788 tons of chromium-impacted soils to depths of up to approximately 4.5 feet below grade. The distribution of dissolved chromium concentrations in groundwater has supported the former Leach House area as the source area. Recent (2020) detailed spatial soil characterization conducted with Southwest Region Planning Commission (SWRPC) U.S. EPA Brownfields Assessment grant funds has documented a mass of chromium-impacted soils inferred to exceed the SRS for trivalent chromium of over 1,750 tons. Some of these soils may be a characteristic hazardous waste based on their high total chromium concentrations. The source of the chromium impacts is likely attributed to or at least partially attributed to spills and overflows from tanning baths incidental to the tanning process or releases of sodium dichromate salts at the ground surface. The RCRA listed waste codes do not appear to apply to the chromium detected in Site soils. Dissolved chromium (including hexavalent chromium) has been detected at concentrations above NH DES AGQSs in groundwater samples from monitoring wells in the impacted soils area.

Site soils have not been analyzed for the presence of PFAS and there are presently no PFAS SRSs in New Hampshire. However, based on the presence of elevated (above AGQS) concentrations of PFAS detected in groundwater samples collected from monitoring well MW12 located adjacent to the Leach House (and at least two other monitoring wells on Site) it is possible that PFAS-impacted soils are co-located with chromium-impacted as well as other impacted soils at the Site. PFAS was likely historically used to treat leather products. Remediation of chromium-impacted soils is likely to mitigate soils possibly impacted by PFAS in the area of the former Leach House.

The inferred extent of Varsol-impacted soils located within the northern portion of the Site has been delineated and the estimated volume of Varsol-impacted soils *above the water table* is approximately 26,000 cubic yards (assuming the average depth to groundwater is 15 feet below ground surface); but a slightly greater volume is inferred, at approximately 30,000 cubic yards, when soils impacts within the groundwater saturated zone are included. Varsol free phase light non-aqueous phase liquid (LNAPL) has been measured floating on the groundwater surface in the impacted area at decreasing thicknesses over the years, and dissolved benzene, naphthalene, 1,2,4-trimethylbenzene, and/or 1,3,5-trimethylbenzene have detected in Site groundwater above NH DES Ambient Groundwater Quality Standards in the Varsol release area.

The chlorinated solvents PCE and/or TCE were detected at concentrations exceeding the corresponding NH DES SRS in two shallow soil samples. Based on field screening, PCE and/or TCE contaminated soil appears to be limited to more shallow soils, where it has been detected. The PCE and TCE impacts are likely due to the historic storage, use, and releases of PCE within an area of the former Main Process Building and in an area of former fuel oil storage. Based on dissolved contaminant concentrations in groundwater and the distribution of detected CVOCs, the chlorinated solvent plume is not inferred to be extensive, and the relatively low concentrations detected are not indicative of a significant source or likely to indicate the presence of free-phase chlorinated solvents.

Four PAH compounds exceeded their corresponding SRS and the elevated PAH detections appear to be due to coal debris observed in the soil samples. An elevated concentration of arsenic above the corresponding NH DES SRS was also detected in this soil sample. The concentrations of PAHs, and arsenic documented for soils with coal and coal by-products have not impacted groundwater and are inferred to be exempt from regulation under Env-Or 600 due to their association with coal combustion residuals. Coal combustion residuals are present at the ground surface over much of the eastern and northeastern portion of Lot 3 in the areas not occupied by foundations.

**7. Brownfields Site Definition**

To the best of our knowledge, the Town of Winchester affirms that the A.C. Lawrence Site is: a) not listed or proposed for listing on the National Priorities List; b) not subject to unilateral administrative orders, court orders, administrative orders on consent, or judicial consent decrees issued to or entered into by parties under CERCLA; and c) not subject to the jurisdiction, custody, or control of the U.S. government.

Further, the AC Lawrence Site is a real property, the expansion, redevelopment, or reuse of which is complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.

**8. Environmental Assessment Required for Cleanup Grant Applications**

Most recently the Site was the subject of a Phase II ESA conducted in 2019, and Analyses of Brownfields Cleanup Alternatives/Remedial Action Plan entitled: Supplemental Phase II Environmental Site Assessment and Analysis of Brownfields Cleanup Alternatives / Remedial Action Plan, prepared by Ransom Consulting, LLC, dated June 21, 2021, for the SWRPC and the Town of Winchester. This work was conducted to assess specific recognized environmental conditions for remediation planning. Detailed spatial assessment of the known chromium-impacted soils areas was conducted using field screening supported by laboratory analyses. In addition, the array of monitoring wells in the Varsol impacted area was gauged for LNAPL and monitoring wells were sampled for VOCs to assess contaminant trends, also for remediation planning.

A listing of previous key investigations since closure of the AC Lawrence Tannery to assess site conditions, plan for U.S. EPA removal actions or hazardous materials abatement and demolition, characterize areas of concern, plan for remediation, and for monitoring groundwater and surface water quality, follows:

1. A.C. Lawrence Leather Co., Inc. Industrial Landfill – Groundwater Permit, June 1987
2. Groundwater Analytical Results (Groundwater Permit 8706-01W), A.C. Lawrence Leathers; SP Engineering, October 1990
3. Site Status Report, NH DES, December 1990
4. NH DES Activity Report, August 1991
5. PCB Compliance Inspection at A.C. Lawrence Co., New Hampshire Air Resources Division, 1991
6. U.S. EPA Region I Removal Preliminary Assessment and Removal Site Investigation, November 1991
7. A.C. Lawrence Site Preliminary Assessment, New Hampshire Division of Public Health Services, Bureau of Risk Assessment, 1993
8. Task Work Plan for Sediment Sampling, Roy F. Weston, Inc. Superfund Technical Assessment and Response Team (START), April 1996
9. Draft Site Inspection Report, Weston START, October 1997
10. Removal Program Preliminary Assessment/Site Investigation Report, Weston START, July 1998
11. Brownfields Pilot Project, July 1999 Site Investigation, GZA GeoEnvironmental, Inc. (GZA), October 1999
12. U.S. EPA Pollution Report, November 1999
13. Asbestos and Hazardous Materials Building Demolition Survey, GZA, August 2000
14. Remedial Action Plan, GZA, January 2001
15. Report Following Soil Gas Sampling at the Former Lawrence Leather Co., Ecoremediation, Inc., May 2001
16. U.S. EPA Pollution Report, May 2004
17. Removal Program After Action Report, Weston START, December 2004
18. Site Characterization Summary Report, Sanborn Head Associates, February 2005
19. Phase I Environmental Site Assessment, Ransom Consulting, Inc, November 18, 2011
20. Phase II Environmental Site Assessment, Ransom Consulting, Inc., December 2012
21. Pre-Permit Application Sampling, Ransom Consulting, Inc., June 9, 2017
22. Application for Groundwater Management Permit, Ransom Consulting, Inc. September 4, 2018
23. Pre-Permit Application Sampling, Ransom Consulting, Inc., January 2, 2019
24. Monitoring Well Installation and Winter/Spring 2020 Groundwater Sample Collection and Analyses Data Submittal, Ransom Consulting, LLC, April 29, 2020

**9. Enforcement or Other Actions**

There are no ongoing or anticipated environmental enforcement actions or other actions related to the Site known to the Town of Winchester.

**10. Sites Requiring a Property-Specific Determination**

The Town of Winchester affirms that to the best of its knowledge, the Site does not need a Property-Specific Determination.

**11. Threshold Criteria Related to CERCLA/Petroleum Liability**

The predominant class of contaminants for which funding is being sought through this grant application is hazardous substances.

In response to the applicable **11.a.i.(3) Property Acquired Under Certain Circumstances by Units of State and Local Government:**

The Town of Winchester took ownership of the property though tax-deeding as a result of the previous owner’s tax delinquency.

The Town of Winchester acquired the property on October 13, 1993 (Cheshire County Registry of Deeds reference: Book 1465, Pages 390-392) through tax foreclosure.

The Town of Winchester affirms that it did not cause or contribute to the release or threatened release of a hazardous substances at the property.

Furthermore, the Town of Winchester affirms that it has not, at any time, arranged for the disposal of hazardous substances at the site or transported hazardous substances to the site.

**12. Cleanup Authority and Oversight Structure**

* 1. The Town of Winchester, through its designated Town Project Director (Town Administrator Karey Miner, with oversight by the Select Board) and Town support staff (Director of Finance and Assistant) will administer the grant. The Town Project Director will oversee the development, organization, and administration of programmatic and cleanup activities; assemble a Brownfield Cleanup Task Force comprised of Town, SWRPC, U.S. EPA, and NH DES staff and community stakeholders.

The Town of Winchester is enrolled in the NH Brownfields Covenant Program. The A.C. Lawrence Site is actively managed in the NH DES HWRB Brownfields Program and is the beneficiary of active regulatory oversight through that Bureau and Program.

The Town will select a Qualified Environmental Professional (QEP) through a fair and competitive process in accordance with all applicable Federal regulations, including 40 CFR 30 and 2 CFR 200.317 through 200.327, and State and Town requirements. In addition, the Town will select a cleanup contractor by similar means, using bid specifications and a request for proposal and qualifications prepared by the QEP with selection achieved through a fair and competitive process and in accordance with all applicable Federal, State, and Town requirements.

* 1. Access to adjacent and neighboring properties is anticipated for the proposed or envisioned cleanup actions; however, if access is required then the Town of Winchester will secure necessary access authorization form those affected landowners.

The Town of Winchester understands that it is required to comply with all applicable Federal and State laws and ensure that the cleanup project protects human health and the environmental.

**13. Community Notification**

* 1. **a. Draft Analysis of Brownfield Cleanup Alternatives**

A draft ABCA was made available for public review and comment and is included as an attachment to the Proposal (attached). The ABCA summarized information about:

* the site and contamination issues, cleanup standards, and applicable laws;
* the cleanup alternatives considered (including information on the effectiveness, the ability of the applicant to implement, the resilience to address potential adverse impacts caused by extreme weather events, the cost, and an analysis of the reasonableness for each alternative); and
* the proposed cleanup alternative.
1. **Community Notification Ad**

A community notification advertisement was placed on the Town of Winchester, NH website on November 7, 2021, a posted paper flyer on November 8, 2021 (at the Post Office and Town Hall), and in the Keene Sentinel on November 7, 2021 stating:

* that a copy of the grant proposal, including the draft ABCA(s), is available for public review and comment;
* how to comment on the draft proposal;
* where the draft proposal is located (Town Hall); and
* the date and time of a public meeting (November 17, 2021).
	1. **c. Public Meeting**

The public meeting was held on November 17, 2021 at the Town Hall, in Winchester, New Hampshire.

As required, attached to the Proposal are:

* the comments or a summary of the public comments received;
* the Town of Winchester’s response to those comments;
* meeting notes or a summary of the public meeting(s); and
* meeting sign-in sheets.
1. **Submission of Community Notification Documents**

As required and noted above in the applicable sections, attached to the Proposal (as Threshold Criteria - Attachment 1) are:

* a copy of the draft ABCA;
* a copy of the ad (or equivalent) that demonstrates notification to the public and solicitation for comments on the proposal;
* the comments or a summary of the comments received;
* the applicant’s response to those public comments;
* meeting notes or summary from the public meeting(s); and
* meeting sign-in sheets.

**14. Statutory Cost Share**

1. For this $900,000 cleanup project, a grant in the amount of $650,000 is being sought. The Town is seeking a waiver of the match in an attached “Hardship Waiver Request” as Threshold Criteria – Attachment 2. If all or some of the Town’s Hardship Waiver Request is not approved by the U.S. EPA, then the Town of Winchester commits to the following 20% ($130,000) statutory cost share, albeit to the detriment of other municipal infrastructure projects anticipated in the same time window:
* Town Project Programmatic Costs personnel costs and supplies expenses ($14,400, estimated);
* Town Police Department service/equipment hourly fees for police detail (car and cruiser) for security services and for Site traffic control (2 weeks) as trucks enter and leave the Site ($6,080, estimated);
* Town Highway Department equipment plus operator fees and backfill material costs for the transportation and placement of clean backfill once the Site has been remediated ($22,000, estimated);
* Town Highway Department equipment plus personnel fees for grubbing 4 acres of the Site in preparation for contractor’s placement of the cap consisting of geotextile marker barrier plus 4 inches of crushed stone ($16,600, estimated);
* In addition to the above, payment of cost-share/match from dedicated funds for the balance ($70,920, estimated); and
* No administrative fees (direct or indirect) have been budgeted for cost share or reimbursement.

**15. Waiver of $500,000 Limit**

The Town is seeking a waiver of the $500,000 limit and is requesting $650,000 to support the cleanup project. See “$500,000 Limit Waiver Request” as Threshold Criteria – Attachment 3.

**16. Contractors and Subrecipients**

The Town of Winchester has no identified or prequalified Contractors or Subrecipients.

The Town will use a fair and competitive process as outlined in Item 12.a, above, after grant award in cooperation with the U.S. EPA Project Officer to select a QEP and Cleanup Contractor.

**Threshold Criteria - Attachment 1**

**Community Notification Documents**

* 1. Draft ABCA
	2. Copy of the Advertisement Demonstrating Public Notification and Solicitation for Comments
	3. Summary of Comments Received (*comments on Draft ABCA received*) and

Applicant’s Response to Public Comments (*response provided on Draft ABCA PDF*)

* 1. Meeting Notes or Summary from the Public Meeting
	2. Meeting Sign-in Sheet

**Attachment 1.1**

Draft ABCA

**Analysis of Brownfields Cleanup Alternatives – Preliminary Evaluation A.C. Lawrence Tannery Site, 15 Bridge Street, Winchester, NH**

**NH DES Site No: 198406006 by the Town of Winchester**

1. **Introduction & Background**
	1. **Site Location**

The two-parcel (Lot 3 and Lot 4 on Tax Map 30), 18.42-acre former A.C. Lawrence Tannery Property is located at 1 Bridge Street in Winchester, New Hampshire and the “Site” as defined herein consists of the 10.9 acres that comprises Lot 3 and identified on Town records as 15 Bridge Street. The Site is owned by the Town of Winchester and is currently vacant.

* 1. **Previous Site Use(s) and any Previous Cleanup/Remediation**

The Site formerly housed the A.C. Lawrence Tannery shearling tannery which was constructed on the Site circa 1908 and manufactured shearling products from sheepskins until circa 1987. The main tannery operations were historically conducted within Lot 3 of the Site, which is located off the northerly side of Bridge Street.

The New Hampshire Department of Environmental Services (NH DES) and the U.S. Environmental Protection Agency (U.S. EPA) conducted several investigations and cleanup activities at the Subject Property from approximately 1982 through approximately 2004. At Lot 3 these activities included an inventory and sampling event conducted in 1991 identifying drums, tanks, and wastes that were left behind after A.C. Lawrence ceased operations at the Site; the removal of drums and sludge from various tanks and pits in the wastewater treatment plant in 1992; a 1998 site investigation including the collection of 56 water, soil, sediment, wood, and concrete/brick samples primarily throughout the main operations building, Varsol (a petroleum solvent used to remove wool grease from sheepskin) distilling house, leach house, maintenance building, and nearby water tanks and coal silo for various contaminants of concern; a 1999 groundwater investigation; cleanup activities conducted in 1999, including the removal of approximately 52 tons of chromium-contaminated floor sludge/sweepings from the former leach house, the removal of 1,727 gallons of tetrachloroethene (PCE)-contaminated water from a containment berm within the tank room (first floor of the former main operations building), and asbestos removal activities and building demolition in 2000.

In October 2003, approximately 788 tons of chromium-impacted soils were excavated and disposed off-site by the U.S. EPA in a targeted but limited removal action. The chromium-impacted soils were located adjacent to the former Leach House. Chromium-impacted soils were removed to a depth of up to 4.5 feet below grade. Upon completion of the U.S. EPA limited removal action, some chromium-impacted soils were left in place either beneath the former Leach House concrete slab or covered with a geotextile fabric and clean placed backfill.

The Town of Winchester (and Site) is enrolled in the New Hampshire Brownfields Covenant Program. The A.C. Lawrence Site is actively managed in the NH DES HWRB Brownfields Program and is tracked under NH DES Site Number 198406006.

* 1. **Site Assessment Findings**

Numerous environmental assessments have been conducted at the Site; summarized below are findings from the most recent work. Ransom Consulting, LLC (Ransom) conducted a Phase I Environmental Site Assessment (ESA) for Lots 3 and 4 in November 2011. Ransom’s Phase I ESA identified recognized environmental conditions (RECs) at the Site, including the following:

Soil and groundwater contamination due to historic releases of Varsol (a petroleum solvent), chlorinated volatile organic compounds (CVOCs), and chromium have been documented on Lot 3.

Hazardous tannery wastes were historically disposed of in the tannery landfill located in the southern portion of the Site (Lot 4). Although approximately 360 drums of tannery sludge impacted with PCE and contaminated soils were removed from the landfill, there is the potential that contaminated sludge remains in the landfill and is an ongoing source for groundwater impacts.

Dark gray soils/fill materials and stressed vegetation were observed along the ground surface throughout central portions of Lot 3 of the Site. It is possible these surficial soils have been impacted with coal ash or other hazardous substances.

Lead-based paint (LBP) was identified on the former tannery buildings in previous environmental reports. There is the potential that historic deposition of LBP may have impacted surficial soils along the perimeters of the former tannery buildings.

Ransom conducted a Phase II ESA in December 2012 to evaluate selected recognized environmental conditions (RECs). Specifically, the Phase II ESA was intended to focus on potential petroleum impacts on the Site. Results of the Phase II ESA included the following:

1. Evidence of residual Varsol contamination was identified throughout the northern portion of the Site at depths ranging from 2 feet below ground surface (bgs) to 20 feet bgs. The extent of residual Varsol contamination appears to extend from AOC 1 into the northern portion of AOC 2 and the mass of contaminated soils was estimated at approximately 30,000 cubic yards.

1. CVOCs, PCE and/or trichloroethylene (TCE) were detected at concentrations exceeding their corresponding NH DES Soil Remediation Standards (SRSs) in two soil shallow soil samples collected from soil borings. The PCE and TCE impacts are likely due to the historic storage, use, and releases of PCE within this area of the former Main Process Building and a former petroleum storage area and have been inferred to be limited in extent. Polynuclear aromatic hydrocarbon (PAH) compounds and arsenic exceeded their corresponding NH DES SRSs were detected in soils from one boring with obvious coal combustion residuals present.
2. Varsol-impacted groundwater was detected in samples collected from monitoring wells throughout much of the northern portion of Lot 3. Floating product was measured in three of the sampled wells.
3. PCE and TCE were detected in groundwater samples collected from two monitoring wells at concentrations exceeded NH DES Ambient Groundwater Quality Standards (AGQSs). Lead was also detected in a groundwater sample at a concentration above its NH DES AGQS.
4. Chromium was detected in a groundwater sample at a concentration of 24,000 micrograms per liter (µg/L, exceeding its AGQS of 100 µg/L), in the vicinity of where approximately 788 tons of shallow chromium-impacted soils were removed.

Results of November 2018 sampling and analyses documented exceedances of the per-and polyfluoroalkyl substances (PFAS) 70 nanogram per liter (ng/L) AGQS (now modified and lowered) for perfluorooctanesulfonic acid (PFOS) and perfluorooctanoic acid (PFOA) in samples collected from three sample locations, as well as confirming the presence of other dissolved Site contaminants of concern above AGQS, albeit at decreasing concentrations in the Varsol area, chromium area, and solvent-impacted (PCE) area. The November 2018 sampling round also documented no impacts (above laboratory detection limits) of surface water quality for VOCs or metals at two surface water gauging areas where, 20 years ago, evidence of low-level impacts believed to be associated with breakout of Site groundwater had been documented.

To support the development of an Analysis of Brownfields Cleanup Alternative (ABCA) / Remedial Action Plan (RAP) Ransom conducted a Supplemental Phase II ESA in July 2019. The key findings of this work are summarized below.

Thirty-one soil borings were advanced in the area of the former Leach House to further delineate the extent and to better estimate the mass of chromium-impacted soils with contaminant concentrations above SRSs. Soil samples were field screened with an x-ray fluorescent analyzer (XRF) for total chromium. Soil samples were collected for laboratory analyses from each soil boring where XRF field screening results indicated the highest chromium concentrations.

Both trivalent and hexavalent chromium contaminated soils were documented in the area of the former Leach House at concentrations exceeding SRSs. Soil laboratory results document chromium SRS exceedances for trivalent chromium (16 of 47 samples) and hexavalent chromium (2 of 12 samples). Laboratory analytical results documented total chromium at concentrations ranging from 4.2 milligrams per kilogram (mg/kg) to 94,600 mg/kg. Laboratory analytical results for hexavalent chromium concentrations range from none detected to 4,080 mg/kg. From a groundwater clean-up perspective, trivalent chromium is relatively insoluble and hexavalent chromium is soluble. Therefore, removal or reduction of hexavalent chromium is important to improve groundwater quality. However, because trivalent chromium can oxidize to hexavalent chromium, removal of soils with elevated chromium in either valence state is a consideration for any source removal effort.

Using both laboratory and field screening results, the inferred aerial extent of chromium soil impacts exceeding the trivalent chromium SRS of 1,000 mg/kg at discrete depth intervals was mapped and the volume of chromium-impacted soils above SRSs, and soil volume targeted for remediation/removal, was then estimated at 1,325 cubic yards (1,725 tons, assuming 1.3 tons/ cubic yard); the two separate areas with impacts consisted of 775 (east area) and 550 (west area) cubic yards, respectively corresponding to 1000 and 725 tons.

Toxicity characteristic leaching procedure (TCLP) chromium analyses have not been performed on samples of the impacted soils. Without supporting TCLP results for specific Site soils, estimating TCLP chromium concentrations based on total chromium concentrations is not feasible.

To help in evaluating remedial alternatives Ransom reviewed trends in light non-aqueous phase liquid (LNAPL) thickness and dissolved contaminants as part of the December 2019 ABCA / RAP which including information collected as part of the associated Supplemental Phase II ESA as well as historical data. Sanborn, Head & Associates, Inc. (SHA) gauged the thickness of Varsol LNAPL from October 2001 to August 2003 in five monitoring wells located in the northeastern portion of the Site. The LNAPL thickness was observed to be greater during the drier seasons, with lower water table elevations. Most recently (2019) gauging did not detect LNAPL in any of the monitoring wells. Assessment of LNAPL thickness trends indicate that the thicknesses are decreasing and/or no longer present, however, this is based on a limited number of recent gauging rounds.

Varsol-impacted groundwater was detected in April 2019 groundwater sampling activities throughout the northern portion of Lot 3. Contaminated groundwater does not appear to be currently affecting the Ashuelot River water quality as no evidence of breakout of Varsol or related dissolved contaminants was documented in surface water samples collected from the river in the November 2018 sampling.

PCE and TCE were detected in groundwater samples collected in April 2019 from monitoring wells in the central and southeastern portions of Lot 3 at concentrations exceeding AGQSs. No trend is apparent for the dissolved PCE and TCE concentrations detected in Site monitoring wells. However, there is also no evidence that the PCE/TCE “plume” is migrating off-site with groundwater at concentrations above AGQSs or that it is impacting surface water quality (based on the most recent (fall 2018) surface water results).

Dissolved chromium was detected in the groundwater sample collected from a monitoring well in the Leach House source area at a concentration of 660 µg/L (the AGQS is 100 µg/L) in 2019 round; and has been detected at concentrations as high as 24,000 µg/L (in 2012) under lower groundwater conditions. Chromium-impacted soils in this area of the Site are the inferred source of the dissolved chromium impacts. No trend is apparent for the dissolved chromium concentrations detected in the groundwater samples.

* 1. **Project Goal**

The Town of Winchester in collaboration with interested solar developers and the NH DES (for Brownfields reuse and pre-permitting considerations) has established that redevelopment of the Site for use as a solar photovoltaic power generation facility (a Brightfields) is feasible and has been in transactional negotiations with a solar energy production company for the Site for a finite lease period (likely 20 to 25 years). Negotiations for the Brightfields lease agreement were put on hold largely due to uncertainty relative remediation requirements and potential that chromium-impacted soils would require remediation during the leasehold time-period. This ABCA/ RAP was developed to map a plan of remedial implementation that will facilitate Brightfields leasing and meet NH DES clean-up objectives to be protective of human health and the environment both near-term and long-term. Following the expiration of the solar installation land lease, Contaminant of Concerns (COC) impacts to Site groundwater will be reevaluated and the additional remedial action would be implemented as may be warranted at that time.

* 1. **Regional and Site Vulnerabilities**

Flood Insurance Rate Maps from the Federal Emergency Management Agency (FEMA) National Flood Insurance Program (NFIP) depict the Lot 3 as primarily within a designated Special Flood Hazard Area (SFHA) subject to inundation by one percent annual chance flood (or the 100-year flood). The one percent annual chance flood is the flood that has a one percent chance of being equaled or exceeded in any given year. The majority of Lot 3 is located within Zone AE, where base flood elevations have been determined. As such, Site surface soils with known PAH and arsenic impacts are subject to erosion in extreme flooding events, and fine-grained soils would be likely to eroded by and washed downstream in the Ashuelot River. Remedial action plans would need to consider this risk and likely adverse outcome.

Any Site re-use would also need to be compatible with flooding vulnerability.

1. **Applicable Regulations and Cleanup Standards**
	1. **Cleanup Oversight Responsibility**

Any cleanup will be overseen by the Town of Winchester’s Qualified Environmental Professional (QEP; i.e., a firm authorized by the State of New Hampshire to practice engineering, with a New Hampshire-licensed Professional Engineer in responsible charge) and the NH DES.

* 1. **Cleanup Standards for Major Contaminants**

The current applicable Soil Remediation Standards codified in the Chapter Env-Or 600 will be the clean-up standards for regulated contaminants at the Site, but Site-specific leaching based-standards may be developed based on long term groundwater monitoring trends. Risk Characterization and Management Policy (RCMP) Method 1 NH S-3 standards will apply for inaccessible regulated contaminants to eliminate human contact exposure risk to those regulated contaminants.

No PFAS SRSs have been established by the NH DES although it is possible and perhaps likely that SRSs will be established for both leaching-based considerations and for human contact exposures to soils.

As is required by statute, the clean-up goal for groundwater is attainment of AGQSs in the Groundwater Management Zone (GMZ) (defined as the subject property, Lot 3 and Lot 4).

* 1. **Laws & Regulations Applicable to the Cleanup**

If cleanup is to be funded in whole or in part through federal grants, then the laws and regulations that are applicable include the Federal Small Business Liability Relief and Brownfields Revitalization Act, the Federal Davis-Bacon Act, state environmental law, and town ordinances and regulations. Federal, state, and local laws regarding procurement of contractors to conduct the cleanup will be followed. Regardless of funding source, federal and state environmental law, and town ordinances and regulations are applicable.

The primary regulatory requirements related to soils remediation at this Site are contained in New Hampshire administrative rules:

1. New Hampshire Code of Administrative Rules Chapter Env-Or 600 Contaminated Site Management;

New Hampshire Code of Administrative Rules Chapter Env-Hw 100-1200 Hazardous Waste Rules;

New Hampshire Code of Administrative Rules Chapter Env-Sw 100-2100 Solid Waste Rules; and

Federal stormwater regulations under the National Pollutant Discharge Elimination System (NPDES) program.

Also, all work is to comply with applicable Occupational Safety and Health Administration (OSHA) requirements, including, but not limited to: General Industry, Construction Industry (29 CFR 1926), Personal Protective Equipment (29 CFR 1910.132), Hazard Communication (29 CFR 1910.1200), Occupational Noise Exposure (29 CFR 1910.95), Respiratory Protection (29 CFR 1910.134), and Hazardous Waste Operations and Emergency Response standards (29 CFR 1910.120).

Capping of broad areas of the Site and proximal to Ashuelot River would trigger regulation and permitting through the New Hampshire Water Division (for example, from the Alteration of Terrain Bureau and the Wetlands Bureau) and the Town prior to construction activities. The Town has adopted the NH Shoreland Water Quality Protection Act (Chapter 483-B) standards for all development within the boundaries of this district. For the A.C. Lawrence Site, no development is allowed within 50 feet of the normal high water line of the Ashuelot River. The protected shorelands within 50 feet of the normal high water line of the river must be maintained as a Waterfront Buffer.

All appropriate permits (e.g., Dig Safe, soil transport/disposal manifests, etc.) will be obtained prior to the work commencing.

In addition, if federally funded then remediation work will be implemented in accordance with U.S. EPA’s Clean and Green Policy for Contaminated Sites, Revised February 2012 (Green Remediation Principals) to the extent practicable.

1. **Evaluation of Cleanup Alternatives**
	1. **Cleanup Alternatives Considered**

Four remedial alternatives were considered for the Site to remediate chromium-impacted soils and reduce or remove the sources of contaminated groundwater, including:

Alternative #1: Monitored Natural Attenuation (MNA)

1. Restrict groundwater use and manage soils in place under and Activity and Use Restriction (AUR);

 Control Site surficial soils exposure (to coal combustion residuals) via a security fence and possible cover soils; and

 Manage and monitor groundwater under a Groundwater Management Permit (GMP).

Alternative #2: Excavate and Dispose of Soils with SRS Exceedances

1. Remove and properly dispose of regulated soils with impacts greater than SRS, predominantly, chromium and Varsol-impacted soils;
2. Control groundwater use and potential soils exposure to remaining soils under an AUR via a security fence and possible cover soils; and
3. Manage and monitor groundwater under a GMP.

Alternative #3: Excavate and Dispose of Chromium-Impacted Soils, Varsol Area MNA

1. Remove and properly dispose of regulated soils with chromium impacts greater than SRS;
2. Leave Varsol-impacted soils in place and monitor attenuation;
3. Control groundwater use and potential soils exposure to remaining soils under an AUR via a security fence and possible cover soils; and
4. Manage and monitor groundwater under a GMP, albeit for an extended time period.

Alternative #4: Excavate and Dispose of Chromium-Impacted Soils, Varsol Area Oxidant Injection

1. Remove and properly dispose of regulated soils with chromium impacts greater than SRS;
2. Treat Varsol-impacted soils in place using steam injection to remove Varsol, followed by persulfate injection to oxidize residual contamination in the saturated zone;
3. Control groundwater use and potential soils exposure to remaining soils under an AUR via a security fence and possible cover soils; and
4. Manage and monitor groundwater under a GMP, albeit for an extended time period.
	1. **Cost Estimate of Cleanup Alternatives**

Each of the four remedial alternatives were assessed using the following evaluation criteria: (1) overall protection of human health and the environment; (2) technical practicality; (3) ability to implement; (4) reduction of toxicity, mobility, and volume; (5) short term effectiveness; (6) resiliency to climate change conditions; and (7) cost.

After assessing each alternative using the previously listed evaluation criteria, the alternatives were compared using the decision matrix approach. The decision matrix technique allows both objective and subjective parameters to be evaluated quantitatively.

For each Alternative, a value was assigned to each of the seven criteria. A value of 1 is the lowest ranking, a value of 5 is the highest ranking. The rationale for assignment of values is presented below:

1. *Overall Protection of Human Health and the Environment* – A value of 2 was assigned for Alternative 1 (MNA). This reflects that a security fence will be installed as part of the planned redevelopment; therefore, a reduction in exposure risk will be achieved by eliminating/reducing exposure to the public and/or trespassers to shallow Site soils; however, because no effort will be made to reduce the sources of impacts to groundwater a long term requirement for monitoring of groundwater (50 years) has been assumed. Contaminated soils will remain in place and require continued management under an AUR. Alternative 2 (excavate soils above SRS) was assigned a value of 5 because inferred sources of contamination will be removed, and the remaining contaminated groundwater will attenuate following removal of the source of contamination. Alternative 3 (excavate soils with chromium impacts above SRS, with AUR for other soils) will reduce the risk of human exposure to chromium-impacted soils, but Varsol-impacted soils (as well as other Site COCs) will remain in place and require continued management under an AUR. A value of 3 was assigned. Alternative 4 (excavate soils with chromium impacts above SRS, Varsol area steam and oxidant injection) will reduce the risk of human exposure to chromium-impacted soils and reduce Varsol impacts. A value of 5 was assigned.
2. *Technical Practicality* – Alternative 1 (MNA) presented no significant challenges to technically practicality and was assigned a value of 5. Alternative 2 (excavate soils above SRS) presents standard potential excavation safety concerns and was assigned a value of 4. Alternative 3 (excavate soils with chromium impacts above SRS, with AUR for other soils) has the same excavation safety concerns of Alternative 2 although smaller scale. A value of 4 was assigned. Alternative 4 (excavate soils with chromium impacts above SRS, Varsol area steam and oxidant injection) has the same excavation safety concerns of Alternative 2 although smaller scale. Injections of chemical oxidants have an additional risk of oxidant breakout into the adjacent Ashuelot River, although treatment vendors have opined that this is a low risk. A value of 4 was assigned.
3. *Ability to Implement* – There were no significant limiting technical factors or the materials or services availability affecting the ability to implement Alternatives 1 or 3. However, due to the large quantity of soil requiring off-site disposal necessary to implement Alternative 2 (excavate and dispose of soils with SRS exceedances), limited landfill space could result in significant delays and increased costs if alternate facilities are necessary. Based on these considerations Alternatives 1, 2, and 3 were assigned values of 5, 3, and 5, respectively. The success of steam and oxidant injection programs is contingent upon successful delivery of the steam and oxidant to the contaminant mass which can be difficult in some geological conditions. The Site geology (relatively uniform sands) lends itself to greater control of the injected chemicals and higher likelihood of oxidant contact. Given the inherent complexity of successful oxidant injection, Alternative 4 was assigned a value of 3.
4. *Reduction of Toxicity, Mobility, and Volume* – A value of 1 was assigned for Alternative 1 (MNA). This reflects a long time period for the process of contaminant attenuation (through dilution only) but a reduced risk of soils exposure while the source remains. Alternative 2 (excavate soils above SRS) was assigned a value of 5 because the known and inferred sources of contamination will be removed, and the remaining contaminated groundwater will attenuate following removal of the source of contamination. Alternative 3 (excavate soils with chromium impacts above SRS, with AUR for other soils) was assigned a value of 3 because the most grossly impacted soils will be removed, remaining impacted soils will be managed under an AUR, and the contaminated groundwater will attenuate over time. Alternative 4 (excavate soils with chromium impacts above SRS, Varsol area steam and oxidant injection) was assigned a value of 5 because impacted soils will be removed or treated, remaining impacted soils will be managed under an AUR, and contaminated groundwater will attenuate over a shorter period of time.
5. *Short Term Effectiveness* – Alternative 1 (MNA) is expected to require many years for remediation due to the uncertainty of contaminant attenuation rates at this Site. An AUR for remaining soils will result in effective near-term reduction of human exposure risk to soils. A value of 2 was assigned. Alternative 2 (excavate soils above SRS) will eliminate short-term exposure risks for regulated impacted soils (unregulated impacted soils could be managed under an AUR) and eliminate or reduce source area contributions to groundwater impacts and therefore a value of 5 was assigned. Alternative 3 (excavate soils with chromium impacts above SRS, with AUR for other soils) will eliminate short-term exposure risks for chromium-impacted soils and eliminate or reduce source area contributions to groundwater chromium impacts. Remaining impacted soils will be managed under an AUR and contaminated groundwater will attenuate over a period time. A value of 4 was assigned. Alternative 4 (excavate soils with chromium impacts above SRS, Varsol area steam and oxidant injection) will eliminate short-term exposure risks for chromium-impacted soils and eliminate or reduce source area contributions to groundwater chromium and Varsol impacts. Remaining impacted soils will be managed under an AUR and contaminated groundwater will attenuate over a period time. A value of 4 was assigned.
6. *Resiliency to Climate Change Conditions* – Climate change will increase the frequency and intensity of precipitation events which could result in the Ashuelot river flooding the Site and mobilizing impacted Site soils and groundwater. Considering Alternative 1 (MNA), contaminated soils will not be remediated and will be subject to potential adverse effects from flooding indefinitely. A value of 2 was assigned. Alternatives 2 and 3 provide reduction in contaminated soil volume. Values of 4 and 3 were assigned to alternatives 2 and 3, respectively with consideration for the volume of impacted soil remaining on Site following remediation. A value of 4 was assigned for Alternative 4, considering low-level residual Varsol-impacted soils may remain in the vadose zone and could come into contact with groundwater as a result of rising groundwater elevations.
7. *Costs* – Alternative 1 (MNA) has no construction costs other than capping and installation of a security fence, but the long duration of monitoring increases the life cycle cost ($535,000). Hence a value of 5 was assigned. Costs for Alternative 2 (excavate soils above SRS) are an order of magnitude higher than the other alternatives ($11,875000, including monitoring), therefore a value of 1 was assigned. Excavation and disposal costs for Alternative 3 ($1,480,000, including monitoring) are significantly less than for 2; a value of 4 was assigned. The estimated costs to implement Alternative 4 ($4,030,000, including monitoring) are significantly higher than alternatives 1 and 3, and a value of 2 was assigned.

Weighting factors were then applied as a multiplier for ranked criteria as noted below and a total score calculated for each alternative. Weighting factors are somewhat subjective, range from a high of 4 to a low of 1, and are used as a multiplier to reflect the significance of each criteria relative to project goals. The highest weighting factor, 4, was assigned to Overall Protection of Human Health and the Environment and to Cost. The lowest weighting factor, 1, was assigned to Resiliency to Climate Change, because of the relatively long timeframe to realizing the full effects of climate change conditions. The remaining criteria (Technical Practicality, Ability to Implement, Reduction in Toxicity/Mobility/Volume, and Short Term Effectiveness) were equally weighted at a multiplier of 3 which acknowledges the importance of each of these factors in successful implementation of any corrective action.



* 1. **Recommended Cleanup Alternative**

Based on the results of the criteria rankings and weighting factors, Alternative 4: “Excavate and Dispose of Chromium-Impacted Soils, Varsol Area Oxidant Injection” has been selected as the preferred remediation alternative. This alternative is proven to protect human health and the environment; is effective, technically feasible, and practical.

As part of this alternative:

1. Chromium-impacted soils with impacts greater than SRSs would be removed;

Varsol-impacted soils would be treated by a steam injection (under low groundwater elevation conditions) and LNAPL recovery program followed by an injection of persulfate (under moderate to high groundwater elevation conditions) to reduce residual contamination in the saturated zone; and

A security fence and crushed stone cap will be installed in preparation for the planned redevelopment; therefore, a reduction in exposure risk will be achieved by eliminating/reducing exposure of the public and/or trespassers to shallow Site soils. Remaining soils would be managed in place under an AUR.

However, considering the extensive soil and groundwater contamination and high cost for remediation; limited access to the Site; and the need to attract a productive reuse of the property to fund full, long-term remediation, the NH DES has concurred with the approach that Alternative 4 be implemented incrementally (and timed with the availability of clean-up funding).

Under this incremental approach, the east area of chromium-impacted soils would be removed and disposed of off-site, earthen areas of the operational area of the Site that are not covered with concrete or masonry slab would be capped with 4 inches of crushed stone over a geotextile. This approach would significantly reduce the source area contributing to chromium impacts to groundwater, reduce contaminant mobilization potential and human exposure risk posed by PAH and arsenic-impacted surface soils, and provide for a security fence which would then facilitate a security leasehold agreement between the Town and a solar developer for the installation of a solar array. Varsol area residual contaminant treatment is not proposed during the lease period due to the extent of Site access required and the likely extent of leased-use infringement related to treatment. The delay of treatment of the Varsol area until after the lease period is supported by the LNAPL trends (decreased presence) as well as the inferred diminished potential for Varsol impacts to the adjoining river. The estimated cost for this approach is about $650,000 for remediation and $250,000 for capping and fencing, not including groundwater monitoring under a permit.

This incremental approach promotes productive reuse of the Site as a solar generation facility in the short-term, generate revenue for the Town to implement ongoing groundwater monitoring, save income from the project for possible follow-up remediation needs, and preserves the opportunity to reconsider the need for additional chromium and/or Varsol source reduction at the end of the lease period at which time groundwater quality trends would be re-assessed for chromium and Varsol constituents, as well as CVOCs and PFAS attenuation status assessed, and any additional source reduction measures would be tailored to the existing conditions at that time.

Under this ABCA / RAP, the following general AUR requirements are proposed and will be further detailed in a draft AUR subject to NH DES approval:

1. Use of Lot 3 proposed redevelopment area will be low exposure frequency human occupancy, light industrial land (e.g., solar development) use unless otherwise approved by the NH DES;
2. Construction and maintenance of a perimeter fence or other engineering controls for the proposed areas of leasehold improvements) to control access and potential soils exposure;
3. Restriction of Site groundwater use, and management of soils under a NHDES-approved Soil Management Plan;
4. Annual report to the NH DES to document integrity of required engineering controls (security fence) as well as any changes in land use;
5. NH DES notification of proposed lease extensions and any anticipated substantive change in land use, or change in land ownership;
6. Re-evaluation of the provisions of the AUR for and change in land use, ownership and/or after the term of the lease; and
7. Recordation of the AUR in the County Registry of Deeds and Chain of Title.

Green and Sustainable Remediation Measures for Selected Alternative

The remediation will be implemented in accordance with the U.S. EPA’s Clean and Greener Policy for Contaminated Sites, Revised February 2012 (Green Remediation Principals). As much as feasible, the remediation contractors will use well maintained, appropriate-sized machinery, which may reduce fuel consumption and emissions. When economically feasible, materials of value will be salvaged for reuse. For example, as part of full ABCA / RAP implementation, durable building materials, such as the former Leach House concrete slab will be recycled off-site for reuse as an aggregate following appropriate testing and characterization.

The remediation will be conducted in a manner which is ultimately protective of the air (via dust control and minimizing equipment idling emissions), nearby stormwater and surface water drainages (through stringent erosion and sedimentation control measures), and human receptors (via physical barriers and restrictions to prevent human contact with the impacted areas).

**Attachment 1.2**

Copy of the Advertisement Demonstrating Public Notification and Solicitation for Comments



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**Attachment 1.3**

Summary of Comments Received (*comments on Draft ABCA received*)

and

Applicant’s Response to Public Comments (*response provided on Draft ABCA PDF*)

**Attachment 1.4**

Meeting Notes or Summary from the Public Meeting

**Attachment 1.5**

Meeting Sign-in Sheet

**Threshold Criteria - Attachment 2**

**Hardship Waiver Request**

Basis for Request: Please note that with no sales or income tax, NH’s communities are more reliant on property taxes than most other states to meet a variety of needs, because other forms of revenue collection are prohibited by law. What’s more, the cost of services and infrastructure have been increasingly downshifted from the State to local municipalities, putting even greater pressure on local property taxes. This has been the case since 2010 when the state eliminated its’ $25 million shared revenue program, which used to divide money among NH cities and towns. As such, the Cleanup of A.C. Lawrence Site, which has the immediate cost of $900,000 (and an estimated continuing environmental obligation costs of $200,000 over 35 years on top of yet another $2,000,000 necessary in order to clean up the Varsol impacted area on the Site) will be fiscally challenging for Winchester in any circumstance. A waiver however under this grant would provide significant relief. If awarded the grant, the Town will move forward with or without the match waiver, however. If all or some of the Town’s Hardship Waiver Request is not approved by the U.S. EPA, then the Town of Winchester commits to the 20% ($130,000) statutory cost share, albeit to the detriment of other municipal infrastructure projects anticipated in the same time window.

Winchester has been a distressed community for a very long time facing constant economic challenges. These challenges today have not improved. The Town’s manufacturing jobs (once one of the highest paying job opportunities in the community) continues to decline and today the Town is losing manufacturing jobs at a rate of 12% since 2010.[[20]](#footnote-20) There are also 3 vacant buildings and 4 vacant storefronts located on Main Street as well as a disproportionate number of low income housing and apartment units (93) concentrated in the Downtown.[[21]](#footnote-21) The Town’s population is continuing its downward trend currently declining at a rate of 2.37% since 2010. [[22]](#footnote-22) In addition, the Town has one of the highest poverty rates (18.98%) in Cheshire County; a rate which is much higher than the state of NH average of 7.6% (one of the lowest rates in the nation) and the U.S. average of 11.4%.[[23]](#footnote-23)

In addition to losing manufacturing jobs, the Town suffers from a disproportionate high local property tax burden among other cities and towns in the county and the state.[[24]](#footnote-24) These challenges makes it extremely difficult for the Town to raise monies for all its infrastructure needs as well as a $130,000 match for a grant of $650,000. The Town is hopeful that upon cleanup, a solar farm can be built on the Site providing much needed revenue and resources to assist not only with this project but future cleanup efforts as well. Specifically the Town is hopeful that the solar farm lease agreement will generate sufficient revenues to further fund monitoring and possible additional remedial action at the end of the 25 year lease period. Additionally the Town will seek as much as $200,000 of clean up funds from the NH Department of Environmental Services revolving loan fund to fund the cover cap and security fence for the turnkey solar farm as part of this grant project. For these specific reasons, a waiver of the required match for this grant would be extremely helpful to move this cleanup project forward

**Threshold Criteria - Attachment 3**

**Waiver of $500,000 Limit**

Basis for Request: The Town of Winchester is seeking a waiver of the $500,000 limit and is requesting a total of $650,000 in U.S. EPA funds to support the cleanup grant project. The A.C. Lawrence Tannery site presents many clean up challenges, most particularly are the significant and high costs required to excavate, remove and cap the site and to protect it and the Ashuelot River from further environmental impacts due to chromium impacted soils and extensive groundwater contamination. Specifically the recommended remediation approach as outlined in the attached ABCA (which U.S. EPA has reviewed and agreed to) is to implement an incremental clean up approach with promotes productive reuse of the Site as a solar generation facility in the short-term, generate revenue for the Town to implement ongoing groundwater monitoring, save income from the project for possible follow-up remediation needs, and preserves the opportunity to reconsider the need for additional chromium and/or Varsol source reduction at the end of the lease period at which time groundwater quality trends would be re-assessed for chromium and Varsol constituents, as well as CVOCs and PFAS attenuation status assessed, and any additional source reduction measures would be tailored to the existing conditions at that time (see page 39 of the ABCA).

As described in the ABCA. under this approach, the east area of chromium-impacted soils would be removed and disposed of off-site, earthen areas of the operational area of the Site that are not covered with concrete or masonry slab would be capped with 4 inches of crushed stone over a geotextile. This would significantly reduce the source area contributing to chromium impacts to groundwater, reduce contaminant mobilization potential and human exposure risk posed by PAH and arsenic-impacted surface soils, and provide for a security fence which would then facilitate a security leasehold agreement between the Town and a solar developer for the installation of a solar array. Varsol area residual contaminant treatment is not proposed during the lease period due to the extent of Site access required, the inferred diminished potential for Varsol impacts to the adjoining river as well as the high costs (estimated $2M) for remediation and clean up. It is estimated that it will cost $650,000 for the remediation work and $250,000 for capping and fencing, not including groundwater monitoring under a permit. Therefore, in order to implement this incremental clean up approach, a waiver of the U.S. EPA grant limit of $500,00 is requested.

1. 2020 US Census [↑](#footnote-ref-1)
2. Only 6% of the land cover is developed; USGS National Land Use Cover Database (NLCD) 2019. [↑](#footnote-ref-2)
3. Town of Winchester Planning Department Estimate as of 2020 [↑](#footnote-ref-3)
4. The Town’s manufacturing employment shrank 12% from only 2009 to 2019; (Source: 2009-2019) Economic & Labor Market Information Bureau, NH Employment Security, January 2021. [↑](#footnote-ref-4)
5. Town of Winchester Planning Department Estimate as of 2020 [↑](#footnote-ref-5)
6. 2010 and 2020 US Census [↑](#footnote-ref-6)
7. Winchester’s poverty rate is 53% greater than the county average of 8.98%; 2020 US Census [↑](#footnote-ref-7)
8. Winchester, NH in 2017 was one of the few NH communities in Cheshire County to adopt a Complete Street Policy and in 2019, the Town received a Complete Street grant to make sidewalk improvements and add bicycle lanes and signage which aligns with its revitalization strategy. [↑](#footnote-ref-8)
9. U.S. Department of Agriculture, Rural Business Development Grant (RBDG), Restoring the Ashuelot Rail Trail, 2021. [↑](#footnote-ref-9)
10. The Town last cleared the trees and overgrown vegetation from the property on December 14, 2020 at a cost of $9,850. [↑](#footnote-ref-10)
11. Town of Winchester Grant Application, page 5, Section 4.3 Project Benefits of USDA (RBDG) grant. [↑](#footnote-ref-11)
12. Ibid., page 6. [↑](#footnote-ref-12)
13. For example, in 2010, the state eliminated the $25 million shared revenue program, which used to divide money among NH cities and towns. [↑](#footnote-ref-13)
14. Including possible follow-up remediation of the Varsol impacted area on the site of $2 million dollars. [↑](#footnote-ref-14)
15. Official Poverty Rates as of 2020 U.S. Census [↑](#footnote-ref-15)
16. New Hampshire State Cancer Registry, 2015 [↑](#footnote-ref-16)
17. New Hampshire State Cancer Registry, 2015 [↑](#footnote-ref-17)
18. Behavioral Risk Factor Surveillance Survey, 2015 [↑](#footnote-ref-18)
19. US Census and ACS, 5-Year Estimate. [↑](#footnote-ref-19)
20. The Town’s manufacturing employment shrank 12% from only 2009 to 2019; (Source: 2009-2019) Economic & Labor Market Information Bureau, NH Employment Security, January 2021. [↑](#footnote-ref-20)
21. Town of Winchester Planning Department Estimate as of 2020 [↑](#footnote-ref-21)
22. 2010 and 2020 US Census [↑](#footnote-ref-22)
23. Winchester’s poverty rate is 53% greater than the county average of 8.98%; 2020 US Census [↑](#footnote-ref-23)
24. Winchester’s property tax rate is below the city of Keene and towns of Hindsdale and Marlborugh which have the highest rates in Cheshire County. State of NH Dept. of Revenue, 2020. [↑](#footnote-ref-24)