

Project Summary:

Brief overview of the project (for HEET's webpage).

The project prioritizes community engagement to explore networked geothermal heating and cooling systems. It aimed to educate residents about geothermal technology, gather feedback, and ensure the initiative aligns with local needs. The old Morse Cutting Tool location is the first site under consideration. It is a decontaminated vacant lot that presents a strong opportunity for geothermal installation.

The second site, the Arnold Mansion, is in a mixed-use area with historic buildings and residential homes—ideal for geothermal due to its dense urban setting and proximity to older infrastructure that could benefit from modern, energy-efficient solutions. These sites offer potential to reduce fossil fuel reliance, lower energy costs, and address climate vulnerabilities on a neighborhood scale. The project involves collaboration with community groups, City Departments, and local partners, with future goals of conducting feasibility studies to assess the full potential of these sites and expand geothermal use throughout the city.

Section 1: Community Engagement**1.1 Method: Describe your approach to educating and gathering feedback.**

Community engagement for this project has included multiple channels, such as surveys, informal educational sessions, and educational materials. Key methods included:

Surveys and Feedback forms: Distributed postcards linking to a short educational video and online survey to gather community input on the project's potential as well as identify neighborhoods with geothermal interest. Educational flyers were also posted in City libraries and neighborhood group meeting locations.

Online and Social Media Outreach: Through the NB Resilient Dashboard and social media, the City shares updates, educational content, and ways for residents to get involved.

Public Information sessions: Held at neighborhood community meetings and local venues such as the Lawler Library to explain the benefits of geothermal technology and gather feedback from residents.

1.2 Best Approach: Highlight successful methods and provide examples.

Social media and our webpage have proven to be the most effective tools for maximizing exposure. By creating a simple homepage and generating a QR code, we can easily direct attention to specific topics. Word-of-mouth remains highly impactful, as trust is often a significant barrier to adoption; combining it with a QR code allows limitless information sharing throughout the community while providing residents an avenue to voice their opinions.

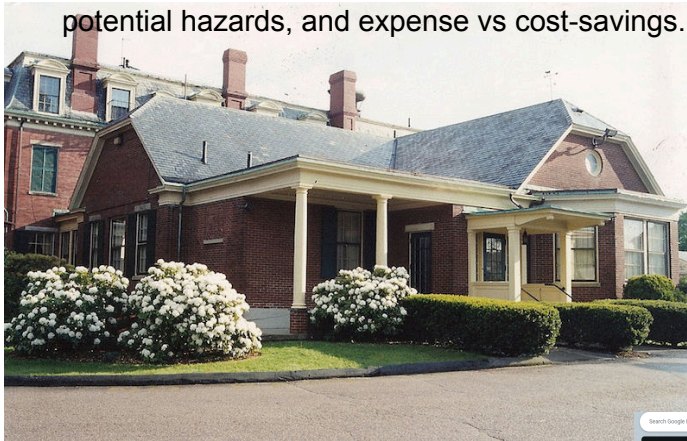
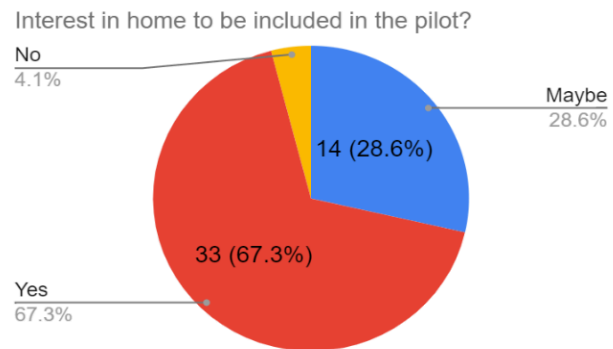
1.3 Supplemental Materials: List of materials used and feedback.

Postcards – Mailed to residents with program details and link to online survey

Flyers – educational material posted at City buildings such as City Hall, public libraries and community group locations

1.4 Surveys: Include survey details or summaries.

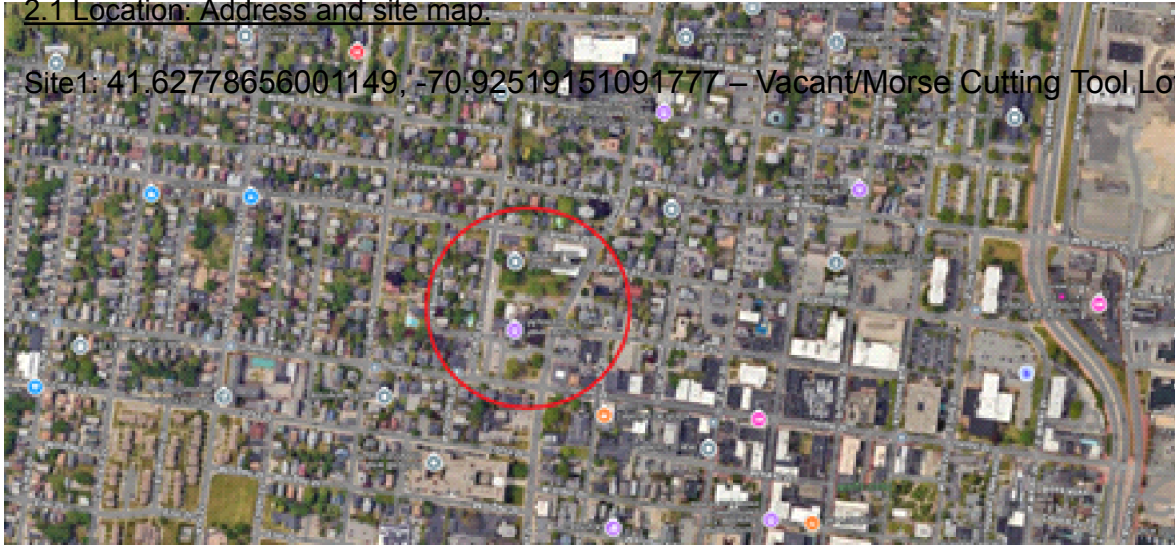
Of the survey takers, single family homeowners who heat with natural gas were the largest single group of respondents (85%). Responses were overwhelmingly positive towards interest in further education on networked geothermal energy, with most respondents (68%) even indicating interest in being considered for pilot programs. The most frequent factors cited as driving this interest include potential energy cost-savings (27%) and a desire to participate in green energy solutions to promote clean energy solutions and reduce fossil fuel reliance (60%). The few uncertain responses (29%) cited lack of knowledge about the solution and no-interest responses (4%) cited concern about upfront cost and disruption due to construction. Positively, over 60% of respondents requested to stay informed on networked geothermal energy initiatives. From responses, we gained valuable insight into the areas of further education which center around logistics for the initial conversion of a home heating system, potential hazards, and expense vs cost-savings.



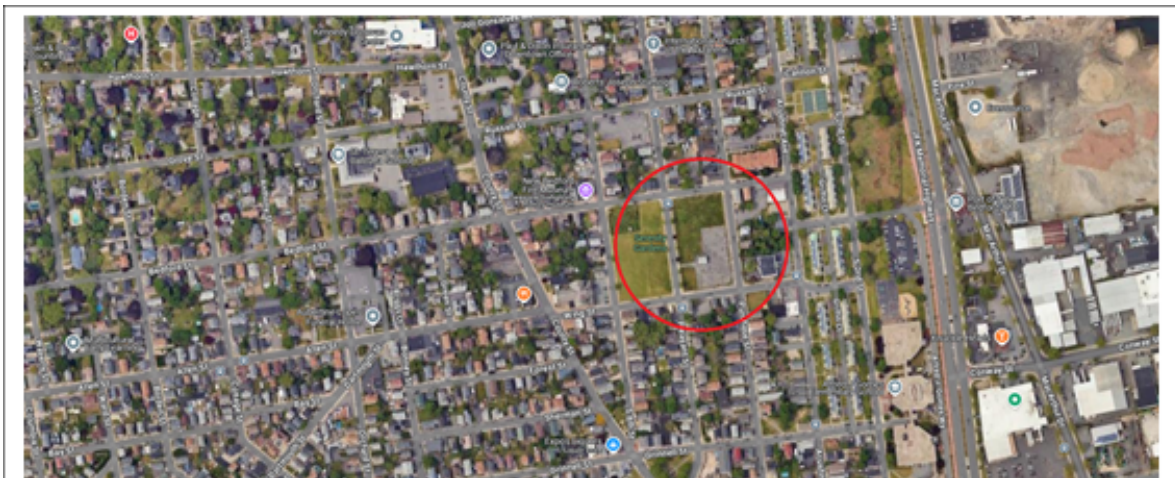
Section 2: Site Selection

2.1 Location: Address and site map.

Site1: 41.62778656001149, -70.92519151091777 – Vacant/Morse Cutting Tool Lot



Site 2: 427 County St, New Bedford, MA 02740 - Arnold Mansion



2.2 Buildings: Description of buildings and proximity.

Site 1:

- Residential
- Central Kitchen Grill (Restaurant) ~ 419'
- Fire Museum ~ 450'
- Bay Village Properties (Public housing) ~ 476'
- Palace Pizza (Restaurant) ~ 713'
- International Church of the Nazarene ~ 736'
- Alfred J Gomes Elementary School ~ 960'
- St. Teresa of Calcutta School ~ >1k'

Site 2:

- Residential
- Delicias de Anita (Restaurant) ~ 550'
- School Administration (School/Office mix) ~ 670'

- Havenwood Rest Home (Nursing home) ~ 980'
- Brandon Woods of New Bedford (Apartment building) ~ >1k'

2.3 Potential Partners: List and engagement details.

- Eversource (Utility)
 - Provided locations in the City with gas pipes that have potential leaks or constraints to service
- Wamsutta Club
 - A local private club expressed interest in geothermal options. Their current heating/cooling system was shared and want to explore geothermal as part of their suitability efforts.
- City offices (Accessor's, Building, Zoning, Library, School, Fire,)
 - Provided technical support and access to property records/building details as well as locations to post outreach materials
- New Bedford Housing Authority (NBHA)
 - Established communication for potential future partnerships or collaborations
- Neighborhoods United
 - Reestablished communication with the local neighborhood groups like the Brooklawn Neighborhood and Cove Street Neighborhood Associations
- KICKSTART MA HEET
 - Funding, education, strategic guidance, and connections to other municipalities with similar geothermal initiatives

Section 3: Pre-Feasibility

3.1 Location Suitability: Justify site selection.

Site 1: City owned lot, was contaminated.

Site 2: Interest from property owner, Wamusutta club.

The boundaries will be established based on both the available location(s) and capacity of the Ground Heat Exchanger (GHEX) and the load diversity of the Off-takers.

Site boundaries will be established in the future

3.2 Ownership Model: Proposed ownership and partnerships.

In early phases, no set decision. Open for discussion.

Site 1 + 2: TBD

3.3 Potential Barriers: Identify barriers and solutions.

Much of New Bedford's housing stock was built prior to 1950 and system upgrades will be necessary in most homes to support geothermal. We will need to work with energy burdened in

EJ communities to create a plan to assist low-income households with necessary upgrades. As an older industrial city, New Bedford has several Brownfields and two Superfund sites. This may limit all new systems to utilize closed loop networking.

Reaching Landlord for multi-residential homes

3.4 Lessons Learned: Summarize key takeaways.

Building age and current heating equipment efficiency level

Section 4: Geological Information

4.1 Environmental Assessment: Include 21E and AUL details.

4.2 Surficial Geology

4.3 Bedrock Lithology

4.4 Depth to Bedrock

4.5 Wells and Types

4.6 Gas Leaks

Additional Requirements:

Spending Reports: Include periodic financial updates.

Exit Meeting Notes: Plan for exit meeting after final report submission.

This structure will help you gather and organize necessary information, making it easier to complete the report and address funder questions.



Proximity of new Devalles School to Site 1 & 2