

Former Chesapeake Supply Brownfield Revitalization Rapid Health Impact Assessment (HIA)

BACKGROUND

The City of Dover, and Kent County, Delaware are seeking to redevelop a vacant and formerly contaminated property, or brownfield, to spur revitalization in the Downtown Dover area. As a part of this effort, local and state officials looking to increase food access in and around Dover sought assistance from EPA with examining a cleaned brownfield site for economic development through food production, with aquaponics being of particular interest. Aquaponics is a type of farming that grows fish and plants together in an integrated system.

Previously, an EPA land revitalization project, in collaboration with community partners, developed an Aquaponics Business Plan User Guide (www.epa.gov/land-revitalization/aquaponics-business-plan-user-guide) and accompanying worksheets to assist communities facing the challenge of identifying and implementing reuse alternatives for brownfields.

Building on the successes of the Aquaponics User Guide, EPA hosted a training workshop on Health Impact Assessment (HIA) for states from Delaware, Pennsylvania, Washington, D.C., and interested parties from Delaware State University, City of Dover, Kent and Sussex Counties, and Delaware State agencies. As a result of this workshop, EPA staff agreed to work with local and state officials and community partners to conduct an HIA.

ABOUT HIAs

EPA considers HIA one of the many tools that provide science-based resources and information for community-driven initiatives. An HIA is a systematic process that uses



Former Chesapeake Supply before (left) and after (right) remediation. (Source: Compliance Environmental, Inc.)

multiple data sources, analytical methods and input from stakeholders to determine the potential impacts of a proposed policy or project on the health of a population and how those impacts are distributed among the people in that population. An HIA also will recommend ways to monitor and manage those impacts.¹

The goal of an HIA is to provide decision-makers and the public with a set of evidence-based recommendations to inform the health-related issues associated with a given plan. The recommendations provide practical solutions for magnifying positive health impacts and minimizing negative impacts.

ABOUT THE BROWNFIELD HIA

A rapid HIA is an abbreviated form of HIA that uses limited primary research and stakeholder engagement. EPA used a rapid HIA with this brownfield project to help decision-makers select among brownfield revitalization projects to improve food security in Dover. The City of Dover has identified the Former Chesapeake Supply as a potential site for revitalization and the focus of this rapid HIA. The site is one of five brownfield properties in the area where EPA grant funds

were directed or where targeted brownfield assessments have occurred. The half-mile radius around the proposed site has a population of 2,508 residents, which includes 61% low-income, 67% minority and 13% children under the age of five years old (compared to Delaware State averages of 28%, 36%, and 6%, respectively).² Factors such as poverty, unemployment, and a lack of access to healthy foods could be indicators of environmental justice concerns in this area.

Local HIA partners planned to focus on a food production project, with options that include an aquaponics farm, a hydroponics facility, a combination of the two, or another viable alternative. The rapid HIA evaluated how the proposed project would influence five factors that affect health selected by stakeholders to meet community needs. These factors include: 1) access to fresh and affordable food; 2) employment opportunities; 3) brownfield redevelopment and urban revitalization impacts; 4) crime and perceived safety; and 5) household and community economics. To evaluate how the proposed brownfield revitalization project would

affect these health factors, the HIA team analyzed qualitative and quantitative data such as census statistics, geographic information system (GIS) mapping information and scientific literature.

RESULTS

HIAs are often used to address a specific decision point and analyze a series of alternatives. This HIA was an exploratory exercise, meaning there were many details about the potential project that were not finalized before the HIA began. Therefore, the ability of the HIA to identify both short-term and longer-lasting impacts to community health is limited. However, a number of recommendations were provided to the City of Dover for consideration in their decision-making process; both site-specific and general revitalization recommendations that promote health. Table 1 provides several examples.

This rapid HIA touched upon some connections between the proposed project and the health factors considered in the HIA. It is suggested that development of a food production enterprise at the Dover brownfield site might result in a potential net positive public health impact due to multiple social, environmental and economic benefits. Additionally, an aquaponics alternative could be a sustainable method to provide a source of healthy, fresh and cost-effective

foods to the local community, while providing job and educational opportunities for residents.

IMPACT

The HIA report documents the analyses, findings and recommendations for the City of Dover to consider health in decisions around this revitalization project and outlines opportunities for further development and future assessments. Furthermore, this collaboration raises awareness of HIAs as a decision-support tool that considers direct and indirect health consequences, both benefits and harms, before a decision on a proposed project is made.

Importantly, this HIA brought together decision-makers at the local, state, regional and federal levels to promote health, equity and sustainability.

WHERE TO LEARN MORE

The full Former Chesapeake Supply Brownfield Revitalization Rapid Health Impact Assessment (HIA) report will be located at www.epa.gov/healthresearch/health-impact-assessments.

RELATED LINKS

- Aquaponics Business Plan User Guide: www.epa.gov/land-revitalization/aquaponics-business-plan-user-guide

REFERENCES:

1. National Research Council. (2011). Improving health in the United States: the role of health impact assessment. National Academies Press.
2. US Census Bureau, American Community Survey, 2011-2015.

CONTACTS:

LARONDA KOFFI,
koffi.laronda@epa.gov
 EPA, Region 3, Hazardous Site Cleanup Division,
www.epa.gov/aboutepa/epa-region-3-mid-atlantic

SHANNON GRIFFIN,
griffin.shannon@epa.gov
 EPA, Office of Research and Development, www.epa.gov/ord

Table 1: Example recommendations to City of Dover, DE from Brownfield rapid HIA

| Health Factor | Example Recommendation |
|---|--|
| Food Access | Establish a varied produce/fish selection for community nutritional needs and maintain interest of residents (and potentially local restaurants/schools). |
| Employment | Provide employment opportunity to clients of the nearby Interfaith Mission for Housing; consider a formal partnership and job training. |
| Brownfield and Downtown Revitalization | Consider including the other four identified Brownfields in the area for an area-wide approach to revitalization. For example, the target site could be best used for food production, while other sites may be better located for distribution. |
| Crime | Increase street lighting along the proposed project site and install sufficient lighting on the site. |
| Household and Community Economics | Consider alternative models of food distribution, such as a Community Shared Agriculture (CSA) program, which would reduce costs to residents and assist local farmers with production issues. |