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ABSTRACT This case study focuses on laws and policies used in Baraboo, Wisconsin land redevelopment projects, including the state laws that regulate cleanup of environmentally contaminated properties, the authorizing laws behind the projects, and the policies incorporated into the projects. It does this by highlighting two successful land reuse projects in the City of Baraboo, Wisconsin: the Veolia Property and the Alliant Property. During the redevelopment of these brownfield sites, Baraboo sought remedy to environmental contamination and maintain the community’s health. Two grant programs assisted Baraboo in achieving these goals: the Wisconsin Department of Commerce Grant and the Environmental Protection Agency Brownfields Grant. The Brownfields Grant provided Baraboo the ability to conduct health monitoring with assistance from the Agency for Toxic Substances and Disease Registry. These redevelopment projects in Baraboo demonstrate successful interagency and interdisciplinary collaboration, as well as the role of law and policy in removing environmental hazards to reuse properties and promote human health by reducing exposure to environmental contaminants. Baraboo used these laws and policies to revitalize brownfields and account for community health in the process. Other localities and states can use Baraboo’s experience as a model to redevelop their own contaminated properties and promote environmental health through the use of their jurisdiction’s laws and policies.

INTRODUCTION

Brownfield sites are “real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant” ([1] p. 1). The Wisconsin Department of Natural Resources (WDNR) 1 has stated that brownfields “present public health, economic, environmental, and social challenges to the rural and urban communities in which they are located” ([2] p. 3). WDNR estimated that there are about 10,000 brownfields in Wisconsin [2]. 2 Eighty-four of those contaminated sites are within Baraboo [3].

Brownfields pose complicated problems and negative impacts, such as harming public health and the environment as well as hindering local economic development. For instance, blight complicates property development and decreases overall property values in the community ([3] p. 162, [4]). Redevelopment can ameliorate these economic concerns and can protect public health and safety from contamination and unsafe structures [4]. It can also lead to revitalization that can provide increased tax revenue for the community and can attract private

1. The Wisconsin Department of Natural Resources is abbreviated in multiple ways, including WDNR, WisDNR, and DNR. This case study uses the abbreviation WDNR except where quoted from another source.
2. The WDNR defines brownfields as “abandoned or under-utilized commercial or industrial properties where expansion or redevelopment is hindered by real or perceived contamination. Examples of brownfields might include a large abandoned industrial site or a small corner gas station” ([3] p. 153).
### The intergovernmental approach in Baraboo’s redevelopment of the Veolia and Alliant properties

<table>
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<tr>
<th>Sector</th>
<th>Laws, Policies, and Programs</th>
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| State Government            | *Wisconsin’s Spills Law (Wis. Stat. Ch. 292)*: Statutory state law that governs the remediation of contaminated properties in Wisconsin [6]  
*NR 700 Administrative Rules*: Regulatory laws administered by WDNR to govern the cleanup of contaminated sites [7]  
*Wisconsin’s RR Program*: Provides a comprehensive plan that consolidates state and federal cleanup requirements, including for brownfield cleanups [8] | *Wisconsin Department of Commerce Grant*: Used to revitalize the riverfront area, including relocating riverside businesses and cleaning the properties [9] |
| Local Government            | *Smart Growth Legislation*: Permitted Baraboo to create the City of BCP [3]  
*City of BCP*: Developed under the authority of the Smart Growth Legislation to guide Baraboo’s physical, social, and economic developments in Baraboo. The BCP encouraged the revitalization of brownfield sites along the Baraboo River. It guides the redevelopment of Baraboo and fosters public participation in the process so that the city’s progress would align with stakeholders’ visions for the city [3] |                                                                 |
| Federal Government          | *ATSDR Action Model Framework*: Served as a starting point for health assessments and determining what issues the community faced with respect to the properties, how redevelopment could address those issues, the health benefit that corresponds to redevelopment, and the health impact of the issue and how to track the issue. Baraboo was a pilot program for ATSDR’s Action Model Framework [10] | *EPA Brownfields Grant to Conduct Community Health Monitoring*: Provided Baraboo the ability to conduct health monitoring with assistance from the ATSDR and the ATSDR Action Model [10] |

**ATSDR, Agency for Toxic Substances and Disease Registry; BCP, Baraboo Comprehensive Plan; EPA, Environmental Protection Agency; RR, Remediation and Redevelopment; WDNR, Wisconsin Department of Natural Resources.**

Amidst investments and businesses to the area ([3] pp. 162–163).

Undertaking brownfield redevelopment is a large feat, can be very expensive, and involves significant liability issues [5]. Those engaging in brownfield redevelopment must contemplate many steps, including investigating the contamination, cleaning up the property, and drawing businesses back to the area [4]. This revitalization requires intergovernmental collaboration, involving planning, zoning, and economic development offices. However, public health departments also have an important role in redevelopment by assuring public safety and should be engaged as well [4]. Each brownfield will have a unique redevelopment plan, but there is a range of funding sources available to undertake the site assessment, redevelopment planning, and remediation ([3] pp. 162–163).

As is the case in Baraboo, planning for redevelopment, navigating cleanup laws and regulations, and encouraging investment to fund the redevelopment of a property require significant efforts and collaboration. In addition, there was a significant consideration given to public health during the redevelopment process to ensure that the community health was optimized during redevelopment and through the revitalization efforts.

In Wisconsin, WDNR governs the remediation of contaminated properties, as set forth in the Wisconsin Spills Law. The Spills Law also provides for liability exemptions, which help to limit liability for future property owners and encourage investment in the redevelopment of contaminated properties. WDNR streamlines the remediation process through some of its administrative rules, which facilitate the remediation of sites with environmental contamination (Section “State Laws: Regulating the Remediation and Redevelopment (RR) of Brownfields”). Baraboo’s local government is authorized to adopt a comprehensive plan to guide the creation of land use and economic development plans, under Wisconsin’s Smart Growth legislation (Section “Smart Growth Legislation”). Under this authority, Baraboo developed the *City of Baraboo Comprehensive Plan (BCP)* to guide physical, social, and economic developments over the 20 years from the plan’s adoption. The *BCP* incorporated community engagement to
develop a list of key community issues and developed goals, objectives, policies, and recommended actions to address those issues. The BCP encouraged the revitalization of brownfield sites and included a strategy for redevelopment planning by including policies and recommended actions that could advance land reuse and revitalize brownfields, such as its recommendation to aggressively approach the redevelopment of properties along the Baraboo River, an area known as the Baraboo River corridor (Section “City of Baraboo Comprehensive Plan (BCP)”). That recommendation led to the creation of the Baraboo Riverfront Redevelopment Area Plan (BRRAP) (Section “Local Redevelopment Plan: Exploring Redevelopment Potential along the Baraboo River”).

The BRRAP guided the redevelopment of the two properties highlighted in this case study: Veolia Environmental Services and Alliant Energy. It provided a plan for revitalizing the Baraboo River corridor and was implemented with the assistance of a Wisconsin grant that was funded through the US Department of Housing and Urban Development [11]. Baraboo also prioritized community health in the redevelopment process with assistance from a federal Environmental Protection Agency (EPA) Brownfields Grant (Section “State and Federal Grants: Funds to Improve Environmental Contamination and Community Health”).

CASE EXAMINATION

The Properties: Redeveloping Veolia Environmental Services and Alliant Energy

The laws, policies, and grants utilized in Baraboo enabled two successful redevelopment projects of brownfield properties: the Veolia Environmental Services Property and the Alliant Energy Property. Each property was a brownfield site located along the Baraboo River corridor that Baraboo redeveloped through cooperation with the state of Wisconsin, WDNR, state and county health departments, and ATSDR. Not only these brownfield properties were successfully redeveloped after compiling a robust plan but they were also used as a mechanism to improve the public health, maintain the historical character of the area, and promote economic well-being of the community. The community was intimately engaged in improving these properties in an environmentally conscious way that would also benefit the health and needs of the area.

These properties were occupied by industrial facilities, which Baraboo designated as incompatibly located because they were located <75 feet from the Baraboo River and were not what the community envisioned for that area [3, 10]. The city sought to move the facilities to a more compatible area away from the Baraboo River corridor, in line with the vision for the city as determined with the help of community input [3]. Through the relocation of these facilities, Baraboo aimed to reduce or eliminate blight and polluted runoff from the facilities on these properties, which could reduce human exposures to chemical hazards [10]. This would also lead to esthetic improvements in line with Baraboo’s policies for development along the river and would relocate 25% of the incompatible land use facilities along the river [3, 10].

Baraboo used EPA’s brownfields funding to prioritize community health during the redevelopment of these properties. Baraboo developed partnerships with the Sauk County Health Department (SCHD), Wisconsin Department of Health Services, ATSDR, and community groups to assist in maintaining community health during brownfield assessment and development. For example, Baraboo contracted with SCHD to assist the city in conducting community health assessments to monitor community health during the redevelopment process. These health assessments were based on the ATSDR Brownfields/Land Revitalization Action Model Framework and determined what issues the community faced with respect to the properties, how redevelopment could address those issues, the health benefit that corresponds to redevelopment, and how to track the health impact of the issue [10]. An example of one issue that the community identified was the contamination of the properties along the Baraboo River, which Baraboo could address through redevelopment to clean the properties and prevent exposures. Because on-site contamination could lead to exposure concerns, health impacts would be assessed through

1. These properties were not vacant or abandoned, but had environmental contamination. They were determined to be incompatibly located along the Baraboo River Corridor.
2. The BCP recommended that Baraboo “facilitate the relocation of uses in the downtown which are not compatible with other retail, office, and institutional uses in the historic downtown area” and “strive for compatibility of adjacent land uses by requiring site plan review for all multi-family residential, commercial, office, industrial, recreational, and institutional land uses” (§1 p. 77).
3. The BCP listed policies for land use, including the goals to “[e]ncourage redevelopment in the downtown [and] facilitate the relocation of uses in the downtown which are not compatible with other retail, office, and institutional uses in the historic downtown area” (§5 p. 77). See Section “City of Baraboo Comprehensive Plan (BCP)” for more information on these policies.
4. There were eight facilities that the city designated as incompatibly located along the Baraboo River [10].
ATSDR health consultations or technical assistance at the sites [10].

ATSDR worked with the Baraboo community to incorporate sustainable revitalization during the process of redeveloping the Riverfront area. The Action Model was a central focus of this collaboration between ATSDR and Baraboo, and it helped to meet the city’s objective to monitor the health of the community impacted by the redevelopment projects [10].

The city was able to redevelop these properties with the help from Wisconsin’s Voluntary Party Liability Exemption (VPLE), which provides voluntary applicants, like the city government in this case, the ability to investigate and cleanup contaminated properties with oversight from WDNR while reducing future environmental liability [6]. By obtaining insurance policies on these properties during the cleanup, Baraboo was able to apply and obtain the VPLE, which provided a limit on future liability related to the contaminations [12–14] (Figures 1 and 2).

VEOLIA ENVIRONMENTAL SERVICES (EAST). This property served as a waste transfer site that transferred 57,000 tons of residential, commercial, and industrial garbage and 720 tons of recyclables each year [10]. Odors from the waste operations negatively impacted residents and businesses, and there were public health hazards, such as rodents, associated with the waste [10]. Baraboo used a portion of the EPA Brownfields Grants to conduct community health monitoring and site assessments to identify any hazardous materials on the property [10, 15]. Baraboo was empowered by these grants to conduct a phase one environmental site assessment in 2008 and then purchased the land in November 2009 [10, 13, 15]. The city then conducted a phase two-site assessment and a site investigation, required under the NR 700 rules where the site assessment identifies low levels of contaminants like volatile organic compounds and metals [13]. Veolia Environmental Services then completely vacated the site by April 2010 and relocated to another county. Baraboo consulted with WDNR and determined, based on the site assessment results, that the safest action was to demolish the facility and cover the contaminated soil with 18 inches of clean soil [13]. This attracted a buyer who otherwise would have been unable to perform the environmental cleanup because of the time and resources required [13].

The buyer noted that this property was desirable because it is just west of the historic Circus World Museum, which was the original winter location for the Ringling Brothers Circus when it was founded in Baraboo [10, 13]. The buyer developed this site into a distillery and restaurant, which has now been a viable business operation and a popular tourist attraction for several years [13].

ALLIANT ENERGY (WEST). This property served as two coal gasification plant sites for Alliant Energy. Baraboo

7. See Section “Wisconsin’s Spills Law (Wis. Stat. Ch. 292)” for the explanation of Wisconsin Spills Law and VPLE.
used portions of the Department of Commerce (DOC) grant and the two federal brownfield grants to conduct environmental site investigations, a health consultation, and cleanup of the site [16]. Baraboo, through a cooperative program with ATSDR and the Wisconsin Department of Health Services, conducted a health consultation and found on-site soil and groundwater contamination [10].

Wisconsin Department of Health Services conducted environmental consultations, which included “reviewing environmental data to determine whether or not people have been or could be in contact with hazardous substances. [Then, a] scientific determination [was] made as to whether or not there [would] be any harmful effects from these exposures, which result[ed] in a conclusion statement of risk to human health” [10].

This health consultation confirmed that the contaminant levels posed no human health concerns [10]. Soils that had been contaminated were 3–5 feet below ground and covered by a protective layer, so people would not come into contact with or be harmed by it. Vapor intrusion from the contaminated soil was also determined to be unlikely to reach indoor air and would not harm people in nearby buildings [16]. Since the time that the health assessment was completed, Alliant Energy relocated 2 miles west of the original site, the property was excavated, and contaminated soil was removed, further removing any potential for human exposure. This site became the location of a new Municipal Building for the City Administration, Engineer’s Office, and Police Department in April 2018 [10].

Redevelopment in Baraboo continues, as a third adjacent property has since received grants for environmental testing and remediation planning that is now being redeveloped into a 65-unit apartment project.

State Laws: Regulating the Remediation and Redevelopment (RR) of Brownfields

The WDNR regulates the redevelopment of contaminated properties as permitted by Wisconsin Spills Law,
such that Baraboo is required to coordinate environmental planning efforts related to potentially contaminated sites with WDNR [9]. Therefore, Baraboo's redevelopment of the Veolia and Alliant properties followed the process for investigations into contamination and cleanup as set forth in the Spills Law and in the NR 700 administrative rules, which are administered by WDNR.

**Wisconsin’s Spills Law (Wis. Stat. Ch. 292).** Wisconsin’s Spills Law generally governs investigation and cleanup after a hazardous substance spill [17, 18]. This law sets requirements for remedial action and requires that a “person who possesses or controls a hazardous substance which is discharged or who causes the discharge of a hazardous substance... restore the environment to the extent practicable and minimize the harmful effects from the discharge to the air, lands, or waters” of Wisconsin [6]. WDNR provides a redevelopment guidance document that outlines essential steps to successfully redevelop brownfields and incorporate the Spills Law requirements [7, 19].

**Voluntary party liability exemption.** Importantly, the Spills Law allows for a VPLE [20]. VPLE allows an individual, business, or government unit to submit an application to conduct an environmental investigation and cleanup of a contaminated property [21]. The applicant is a “voluntary party” in the cleanup and WDNR may collect fees from them to offset WDNR’s costs [22]. The voluntary party will have to follow state requirements for cleaning up the property with oversight from WDNR, including both the Spills Law and WDNR regulations (NR 700, discussed below) [14]. If WDNR requires, the voluntary party might also need to obtain an insurance policy that lists the state as the covered party and covers the cost of restoring the environment and minimizing harmful effects in case the cleanup fails [23]. In exchange for complying with these requirements, this program provides the voluntary party with an exemption from future environmental liability for issues involving hazardous substance releases that occurred before WDNR granting the exemption [14]. Baraboo used this program in redeveloping the Veolia and Alliant properties to reduce liability concerns for future property owners.

**NR 700 Administrative Rules.** While the Spills Law sets general requirements for redeveloping contaminated properties, the NR 700 administrative rules provide more detailed guidelines for land reuse requirements [7]. The rules are the regulatory laws administered by WDNR to govern the cleanup of contaminated sites [17]. The purpose of these laws is to provide “consistent, uniform standards, and procedures that allow for site-specific flexibility, pertaining to the identification, investigation, and remediation of sites and facilities which are subject to regulation under [Wisconsin’s Spills Law]” [19].

**State Environment Programs: Providing Guidance on Brownfields Redevelopment**

Wisconsin's RR Program is WDNR’s division that “oversees investigation and cleanup of environmental contamination and the redevelopment of contaminated properties” ([17] p. 1). The RR Program provides a comprehensive plan that consolidates state and federal cleanup requirements, including for brownfield cleanups [8].

The WDNR RR Program also provides tools that assist with adhering to these laws during brownfield redevelopment. For example, the RR Program provides an introduction to cleaning up contaminated properties and lists six steps to cleaning up contaminated soil or groundwater. These include: (1) notifying WDNR of contamination; (2) finding professional help from an environmental consultant; (3) investigating the site to define the extent and type of contamination; (4) evaluating cleanup options to take remedial action; (5) completing cleanup and requesting state approval for case closure; and (6) adhering to post-closure obligations where there is residual contamination [18, 24]. The RR Program provides resources and guidelines for complying with each of these steps, such as explaining how to report a hazardous spill and how to select an environmental consultant [18].

The RR Program also created a process and timeline infographic that provides an overview of the basic steps of remediating contaminated soil or groundwater and cites to relevant NR 700 regulations where applicable [24]. The infographic demonstrates the regulatory requirements for
Wisconsin's Smart Growth legislation permitted Baraboo to create the BCP, which guides the redevelopment of Baraboo so that progress would align with stakeholders' visions for the city. Specifically, its sections on Agricultural, Natural and Cultural Resources, Land Use, and Economic Development provide many policies and recommendations for cleaning up environmentally contaminated properties, including the Veolia and Alliant properties along the Baraboo River corridor [3].

SMART GROWTH LEGISLATION. In Wisconsin, local governments are authorized, under the state’s Smart Growth legislation, to adopt a comprehensive plan, which is a “guide to the physical, social, and economic developments of a local governmental unit” [29, 30]. Under this legislation, the plan must include specific elements, including intergovernmental collaboration, natural resources, land use, neighborhood development, and an economic development element that should “evaluate and promote the use of environmentally contaminated sites for commercial or industrial uses” [31].

To adopt a plan, cities must conduct a well-publicized formal public hearing and review process to foster support for the proposed plan’s goals and recommendations. Baraboo’s city leadership also provided considerations for the plan to ensure that they understood and endorsed the recommendations [3].

CITY OF BARABOO COMPREHENSIVE PLAN (BCP)

Developing the BCP. While the city was completing its Smart Growth Plan update, the opportunity to redevelop several old brownfield sites arose and was supported by the downtown businesses, the public, and elected officials [10]. Baraboo’s local government worked to foster public participation in preparing the comprehensive plan, as required by the Smart Growth law [32]. To do this, the government hosted vision setting workshops, a planning exercise, and several other events to engage the community.

Vision setting workshops. Baraboo held “vision setting workshops” to develop the plan in a way that reflected the shared vision of Baraboo’s residents and other stakeholders. Responses from community members during the workshops included core themes for Baraboo’s future, such as Baraboo’s values and trends faced by Baraboo. These themes led to “vision statements,” which included a vision for the environment and quality of life in Baraboo. Some of these visions included establishing “a growth strategy that maintains, preserves, and enhances the beauty of our natural environment,” maintaining “Baraboo’s small town atmosphere and quality of life through planned, controlled growth,” creating “unique retail opportunities in the downtown, river, and South Blvd areas,” and encouraging “public participation in community decision making” ([3] pp. 22–23).

Planning exercise. Baraboo also held a planning exercise to identify key issues that would have a role in the growth of the city, including land use and the environment. The city then developed basic strategies that could address each of these issues. For example, under the land use issue, the BCP encouraged the promotion of “redevelopment . . . and rehabilitation of residential commercial,

Local Policies: Guiding Baraboo’s Redevelopment

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11. Under this legislation, comprehensive plans must include nine elements: (1) Intergovernmental Cooperation, (2) Issues and Opportunities, (3) Agricultural, Natural and Cultural Resources, (4) Land Use, (5) Transportation, (6) Utilities and Community Facilities, (7) Housing and Neighborhood Development, (8) Economic Development, and (9) Implementation. For further discussion of this law’s implementation, see Section “Environmental Contamination and Redevelopment in the BCP”.

12. Baraboo’s leadership that provided feedback on the plan includes the City’s Plan Commission, the Baraboo Economic Development Commission (BEDC), and Common Council.

13. “The governing body of a local governmental unit shall adopt written procedures that are designed to foster public participation, including open discussion, communication programs, information services, and public meetings”[4]
Under the issue of environment, the Committee listed the need to “cleanup environmentally contaminated sites within the city” ([3] p. 24). These issues and strategies highlight the importance of Baraboo placed on environmental initiatives in redevelopment, particularly in the redevelopment of the Veolia and Alliant properties.

**Further engaging the community.** After the vision setting workshops and planning exercise, Baraboo hosted focus groups, interviewed community leaders, and sent surveys to residents. Each of these methods of soliciting community input identified the need for redevelopment of the Baraboo River corridor [3].

The focus group discussions gathered more detailed considerations for the visions and strategies that were identified during the vision setting workshop. The group included business owners, neighborhood organizations, local developers, and recreational groups. There was a strong agreement that the corridor should be redeveloped. Baraboo also held interviews with community leaders—including business owners, environmentalists, and long-time residents—to discuss Baraboo’s community, development practices and policies, future direction, community opportunities, and shortcomings. One of the themes that arose in the interviews was the need to redevelop the corridor and Baraboo downtown areas. Baraboo also sent a community survey to all 4,100 households in the city to gauge public sentiment on various topics, including the Baraboo River corridor and Water Street redevelopment. In this survey, the residents identified areas along the Baraboo River, such as Water Street, as needing revitalization [3].

This engagement spurred redevelopment of the Baraboo corridor by prompting the realization that the industrial use of the corridor was not what the community envisioned for the area.

**Environmental contamination and redevelopment in the BCP.** Baraboo adopted the BCP in 2005 based in part on this community feedback [3, 33]. It was designed to identify areas for development and preservation, recommends land use for specific areas in Baraboo, identify necessary community facilities for future land use, direct housing and commercial investment, and to provide strategies for implementing the plan’s recommendations [3]. The BCP specifically recommended developing a strategy to redevelop the Baraboo River corridor [3].

**BCP’s chapters.** The BCP contains nine chapters that align with the elements required by the Smart Growth law. Each chapter includes goals, objectives, policies, and programmatic recommendations. The goals are broad and advisory statements about public priorities and how Baraboo should engage in preservation and development issues. Objectives provide directions that would contribute to fulfilling each goal. Policies are the “rules, courses of action, or programs” to implement the objectives ([3]. p. 38). Programs are the recommended actions to achieve the goals, objectives, and policies [3].

Three of these chapters mention policies and recommendations related to Baraboo’s efforts to improve environmental contamination and health through land reuse and redevelopment.

**Agricultural, natural, and cultural resources.** The chapter on Agricultural, Natural and Cultural Resources included a section related to the redevelopment of the Baraboo River corridor and recommended researching potential partnerships in reusing brownfield properties. This section recommended protecting Baraboo’s natural resources by partnering with local governments and property owners in the “identification, assessment, remediation, and reuse of ‘brownfield’ sites . . .” because of their potential to contaminate groundwater. This chapter also flags that state and federal grants are available for brownfield assessment, planning, and clean-up ([3] p. 50).

**Land use.** The chapter on land use was designed to guide the land uses in Baraboo over a 20-year planning period and introduced the idea of sustainably redeveloping areas near the Baraboo River, especially those that were underutilized or inconsistent with the other land use in the area. This chapter promoted the redevelopment of Veolia and Alliant properties.

The BCP recommended redeveloping downtown Baraboo along the river and listed examples of what the tools for redevelopment may include, such as brownfield clean-up procedures. It noted that redevelopment would likely require “detailed site investigations for underground contamination and specific clean-up activities before any development proposals are put forward” ([3] p. 82).

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14. This included the area along Water Street, which is along the Baraboo River (see maps above).

15. See Section “Smart Growth Legislation.”


Economic development. The chapter on economic development promoted stabilizing Baraboo’s economic base and use of contaminated sites for commercial uses, as required under the Smart Growth law, and included a strategy for land redevelopment, including for brownfields. To frame the chapter, the city included a discussion of environmentally contaminated sites, cited WDNR’s definition for brownfields, and provided examples of brownfields. The discussion also referenced the RR Program’s list of contaminated sites and noted that brownfields “may need special attention for successful redevelopment to occur.” The contaminated sites on this list were considered in the BCP’s land use recommendations because Baraboo “[promoted] appropriate cleanup and reuse of these sites.”

This chapter included a goal of attracting businesses to enhance Baraboo’s small-town character by actively encouraging development of vacant land and redevelopment of underutilized properties downtown while considering preservation of Baraboo’s historic downtown sites.

Overall, this chapter recommended actively pursuing brownfield redevelopment and advancing redevelopment and revitalization along the Baraboo River corridor. It noted that experience across the country in rehabilitating contaminated properties has shown “careful planning, site assessment, public-private partnerships, redevelopment incentives, and persistence over several years are required.” The chapter also noted the benefits of reusing a brownfield property, such as revitalizing surrounding areas, reducing blight, and attracting businesses and economic growth, and that various funding sources are available to assist in the cleanup of brownfields.

The economic development chapter described two necessities in redeveloping brownfields: (1) evaluating the condition of the redevelopment area—through assessing environmental constraints and conducting brownfield site assessment—and (2) aggressively pursuing the implementation of the redevelopment through techniques such as developing a statutory redevelopment plan and conducting brownfield remediation. The BCP even went as far as to say that the first priority in redeveloping the Baraboo River corridor was to cooperate with the CDA in creating a statutory redevelopment plan and a TIF District to remediate blighted properties along the corridor.

TIF is a financial tool used by local governments to promote the redevelopment of blighted properties or promote economic development by investing in the infrastructure of a community. TIFs generate revenue by diverting future property taxes from properties in a specified redevelopment district, or Tax Increment District. This future property tax is the amount the taxes would increase from the current amount of property taxes, generated by the growth in property values due to redevelopment. The revenue is then turned over to the city to pay for the redevelopment costs incurred on the properties within the redevelopment district. The local government can use this revenue stream to provide development subsidies for an improvement project or underwrite projects in the District to encourage community growth.

The statutory redevelopment plan provides the legal mechanism for Baraboo and the CDA to conduct these TIF redevelopment activities and identifies blighted properties, which is information that is used to qualify for status as a TIF district. The statutory redevelopment plan also defines the boundaries of the redevelopment district to determine which properties are eligible for tax incremental financing.

Baraboo implemented this financing tool as part of its redevelopment strategy for the Veolia and Alliant properties. The city created a TIF District for the riverfront development area, so the buyers of these properties received financial assistance for their development projects through TIF. For example, on the Veolia property site, the purchaser agreed to construct a US$5 million dollar distillery and restaurant with private investment by exhibiting City commitment in the form of policies and monies to the area. The city created a TIF District for the riverfront development area, so the buyers of these properties received financial assistance for their development projects through TIF. For example, on the Veolia property site, the purchaser agreed to construct a US$5 million dollar distillery and restaurant with private investment by exhibiting City commitment in the form of policies and monies to the area.”

19. The WDNR defines brownfields as “abandoned or under-utilized commercial or industrial properties where expansion or redevelopment is hindered by real or perceived contamination. Examples of brownfields might include a large abandoned industrial site or a small corner gas station.”
20. “There are several opportunities for brownfield redevelopment in the city. While brownfield redevelopment can present complicated problems, these sites provide a tremendous opportunity to engage public and private funding sources in a plan for long-term economic development.”
21. “Redevelopment strategies for each brownfield are extremely site-specific, dependent upon factors such as previous ownership, past land use, and the type of potential environmental contamination. The city’s first priority should be to cooperate with the Community Development Authority (CDA) in the redevelopment of the Water Street/Baraboo River corridor through the creation of a statutory redevelopment plan and Tax Increment Financing (TIF) District to remediate blighted parcels. This will attract private investment by exhibiting City commitment in the form of policies and monies to the area.”
22. See Section “Local Redevelopment Plan: Exploring Redevelopment Potential along the Baraboo River.”
US$291,000 in financial assistance from the Baraboo’s riverfront development TIF [13, 14].

Local Redevelopment Plan: Exploring Redevelopment Potential along the Baraboo River
Following the BCP’s adoption and recommendations, Baraboo made plans to revitalize portions along the Baraboo River corridor. Baraboo also followed the policies and recommended actions within the BCP related to redeveloping brownfields, such as the recommendations to conduct site assessments and to develop a unique redevelopment plan [3]. Baraboo commissioned the BRRAP to guide the redevelopment process in the areas along the Baraboo River, including the Veolia and Alliant properties.

The BRRAP was developed by a private economic planning and design firm to explore the development potential along the Baraboo River [9]. This was a “vision document” that provided a look at the future redevelopment in Baraboo [35]. This document analyzed Baraboo’s role in the regional economy, researched market opportunities, and provided planning guidance for the redevelopment [9].

The BRRAP determined the responsibilities of city leadership, including Baraboo’s City Council, BEDC, and Plan Commission. City Council would be responsible for creating policy and decision making for expenditures related to the Baraboo redevelopment projects. The BEDC and the Plan Commission would be responsible for determining the compatibility of land use with the visions set forth in the BCP and BRRAP and the requirements set forth in zoning and land division ordinances [9]. The BRRAP also required that “all environmental planning efforts, such as those related to the Baraboo [River] or potentially contaminated sites, must be coordinated with WisDNR” ([9] p. 31). 23

State and Federal Grants: Funds to Improve Environmental Contamination and Community Health
These projects received US$5.06 million in grant dollars from the Wisconsin DOC and the EPA. 24 Baraboo contributed an additional US$3.5 million, for a total of US$8.56 million dedicated to these projects. The DOC and EPA grants assisted Baraboo in redeveloping these environmentally contaminated properties and in maintaining community health in the process. This funding led to redevelopments that are valued at US$17 million. 25

WISCONSIN DOC GRANT. Baraboo received a DOC grant for US$2.5 million in 2006 [9, 35]. The grant was used to revitalize the riverfront area, including actions such as relocating riverside businesses and cleaning “environmentally contaminated properties” ([9] p. 4). 26

EPA BROWNFIELDS GRANT AND COMMUNITY HEALTH MONITORING. Baraboo also received two EPA Brownfields grants, each for US$200,000 in 2007 [10, 13, 37]. These were federal grants that allowed up to 10% of the funding to be allocated to health monitoring of populations potentially exposed to environmental contaminants [38, 39]. Baraboo made a commitment to maintain the public’s health while redeveloping these properties and indicated that the city planned to use this 10% of funding on health monitoring, with the help of the ATSDR Action Model, in the city’s brownfield assessment [10].

CONCLUSION
Overall, Baraboo’s actions to redevelop these contaminated sites were made possible by implementing laws and policies that accounted for environmental contamination and human health. The policies were created with the help of community input and were supplemented by WDNR laws and guidance on brownfield redevelopment. Baraboo’s redevelopment actions have improved the health of the Baraboo community and the environment. Now, these previously contaminated sites along Baraboo River are cleaner and provide a better environment for water recreation along the Baraboo River.

Baraboo’s redevelopment came from a multitude of elements, including community engagement, leadership, successful acquisition of funding, integration of the ATSDR Action Model, and dexterous use of laws and policies. These factors were amalgamated amidst the intergovernmental approach adopted by Baraboo. These

23. See Section “NR 700 Administrative Rules” for the explanation of WDNR Regulations.
24. The Wisconsin DOC was replaced by the Wisconsin Economic Development Corporation (WEDC) in 2011 [36].
25. Redevelopment in the Baraboo River corridor area is valued at about US$4 million in private development and US$13 million in public development. Baraboo is currently working on a new apartment building project in the area that will add additional US$9 million in private development value.
26. This grant was used to implement plans laid out in the 2006 City of BRRAP. This Plan incorporated the BCP recommendations to revitalize the riverfront area. See Sections “City of Baraboo Comprehensive Plan (BCP)” and “Local Redevelopment Plan: Exploring Redevelopment Potential along the Baraboo River.”
redevelopment projects required significant leadership to establish and oversee the necessary planning and implementation efforts, including how to finance them. The success of these projects also depended upon strong political leadership and garnering support for the financial impacts of the redevelopment. The significant public input solicited during the planning stages of the redevelopment helped to solidify the political support, and therefore the financial allocation, for these projects. Finally, this success was also made possible by the city’s integration of the ATSDR Action Model, a consideration that added to the unique character of Baraboo’s efforts by accounting for the community health during the environmental projects. This step provided the framework for Baraboo’s already engaged community to undertake the redevelopment project while utilizing a wholistic approach.

Between this intergovernmental approach, the community motivation and involvement, and the consideration for public health, Baraboo was able to successfully revitalize the Baraboo Riverfront, improve the local economy, and work to attract interest in living in the area.

CASE STUDY QUESTIONS
1. How did ATSDR, Wisconsin, Sauk County, and the City of Baraboo demonstrate intergovernmental cooperation?
2. How did the laws and policies, especially those at different governmental levels, simultaneously play a role to allow these projects to happen?
3. What roles were taken by federal laws? By state laws? By local laws?
4. Outside of these laws and policies and the agency cooperation, what things do you think led to the redevelopment success? Is there anything you think could have made the project even better?

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COMPETING INTERESTS
The authors have declared that no competing interests exist.

DISCLAIMER
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