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Reuse and the Benefit to Community A Beneficial Effects Economic Case Study for the Eastland Woolen Mill Superfund Site

Introduction

The Eastland Woolen Mill Superfund site is located in the Town of Corinna, Maine, about 25 miles northwest of Bangor (Figure 1). For more than half a century, Eastland Woolen Mill made wool and blended woven fabrics in Corinna. Mill buildings were located in the heart of the community, on both sides of the East Branch of the Sebasticook River. Facility operations resulted in the contamination of soil and groundwater. The textile mill's closure left an economic void as well as an unoccupied property.

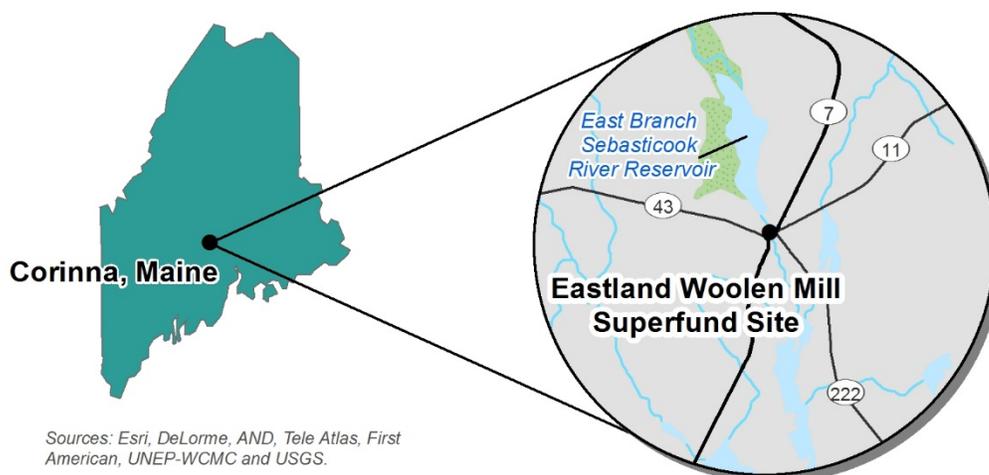
The United States Environmental Protection Agency (EPA), Maine Department of Environmental Protection (MEDEP), the Town of Corinna and local stakeholders worked together to integrate cleanup plans with reuse considerations. Strategic reuse planning provided opportunities for redevelopment, including green space and public river access. Today, the site is home to a 20-unit senior housing facility, green space, a gazebo, a boardwalk, the East Branch of the Sebasticook River and the Corinna Veteran's Memorial and Soldier's Memorial. Parts of the site are for sale. Superfund site restoration and reuse can revitalize local economies with jobs, new businesses, tax revenues and local spending. This case study explores the Eastland Woolen Mill site's cleanup and reuse, illustrating the beneficial effects of Superfund redevelopment.

Beneficial Effects

In 2006, Corundel Commons opened on Site, providing an affordable housing facility for senior citizens.

Coordination among reuse planning and cleanup implementation resulted in a beneficial redevelopment of Corinna and opportunity for additional village style development.

Site properties are currently valued at over \$1.8 million and generate about \$31,000 in annual property tax revenues.



Sources: Esri, DeLorme, AND, Tele Atlas, First American, UNEP-WCMC and USGS.

Figure 1. Location of the Eastland Woolen Mill site in Corinna, Penobscot County, Maine.

Site History

The 25-acre site is located on Main Street in downtown Corinna in Penobscot County, Maine (Figure 3) and operated from the 1930s to 1996. Before it closed, the textile mill employed more than 600 people. Disposal practices during the operation of the mill resulted in extensive contamination of soil and groundwater beneath and near the mill, sediments in the East Branch of the Sebasticook River, and private drinking water wells. Groundwater contamination was first identified in Corinna in 1983.

Surrounding land uses are rural. Corinna is mainly a bedroom community of Bangor, Maine. According to the 2010 U.S. Census, about 2,200 people live in Corinna.¹

Site Cleanup and Transformation

Between 1983 and 1988, granular activated carbon filters were installed on residential and business water supply wells near the mill to mitigate exposure to contaminated groundwater used for drinking water purposes. In 1995, water supply lines were installed to serve the affected properties. In 1997, the MEDEP removed more than 50,000 pounds of hazardous substances from pipes, containers and vessels in the mill. In 1999, EPA placed the site on the Superfund program's National Priorities List (NPL) and began work on the site's long-term remedy.



Figure 2. A view of the Route 7 bridge installed as part of the cleanup.

EPA's selected cleanup remedy to address soil, sediment and groundwater contamination were documented through a Non-Time-Critical Removal Action in 1999 and two Records of Decisions in 2002 and 2004, respectively. EPA's cleanup activities included demolition of buildings in the mill complex, excavation and treatment of contaminated soil, and groundwater treatment. It also included relocation of Odd Fellows Hall, a historic building on site, as well as the Route 7 highway and the riverbed of the East Branch of the Sebasticook River, restoration of the former Mill Pond, and repair of Corundel Dam.

Funded by a grant from EPA's Superfund Redevelopment Initiative, the town of Corinna developed a reuse plan for Corinna Village Center in 2002.² The Corinna Village Center Reuse Plan focused on development of a new Village Center District that would provide local and regional services and support economic development. As the Plan stated, "The future townscape is to reflect the size and scale of Corinna's rural character, and its growth shall be built upon a village plan that recognizes its natural beauty, is pedestrian friendly and promotes civic activities." EPA and MEDEP integrated the reuse plans into cleanup decisions.

In 2012, after construction of the site's remedy, EPA deleted about 80 percent of the site's land area (22 acres) from the NPL (Figure 3). The area removed from the NPL includes several properties currently available for reuse. Site stakeholders hope the deletion will add further clarity to the site's cleanup status and help create even more reuse. Groundwater monitoring is ongoing and in-situ chemical oxidation to reduce the levels of contamination in the overburden and bedrock groundwater was completed in fall 2018.

¹ https://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml.

² <https://semsub.epa.gov/src/document/01/32505>

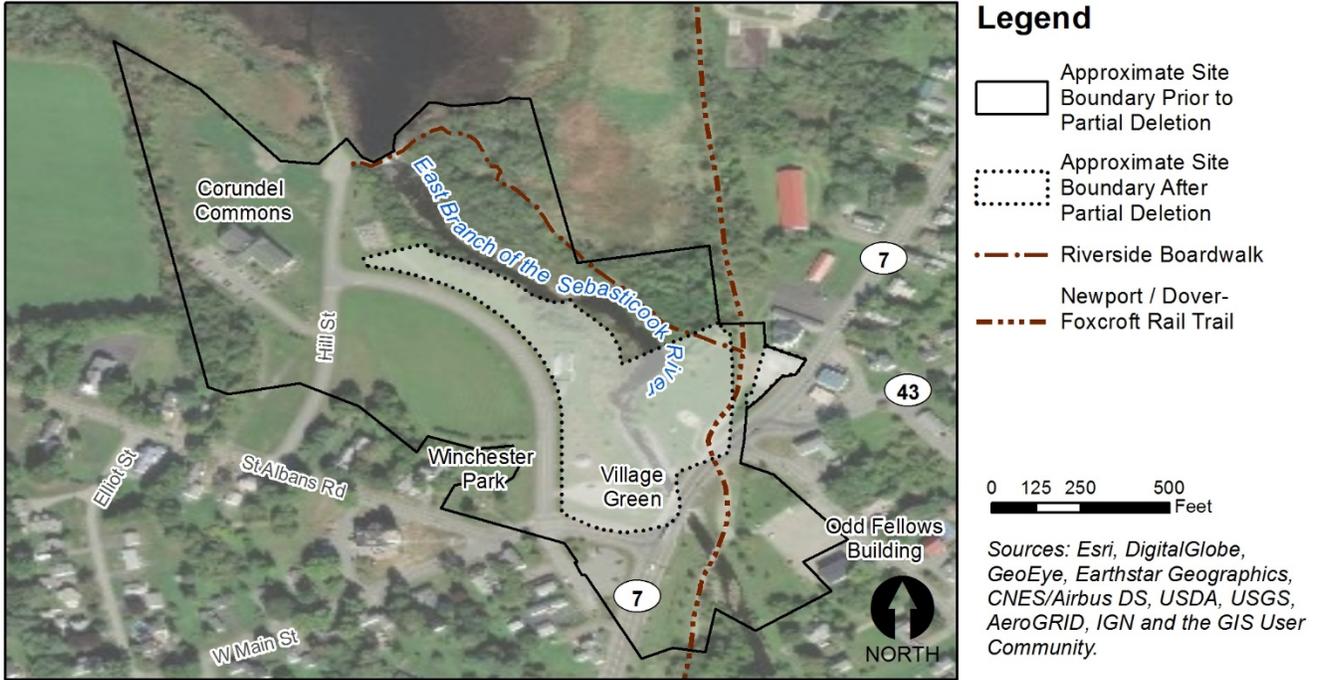


Figure 3. Detailed map of the Eastland Woolen Mill site in Corinna, Maine.

Beneficial Effects

Today, the site is home to a 20-unit senior housing facility, green space (Winchester Park and the Village Green), a gazebo, a boardwalk and the East Branch of the Sebasticook River. The historic Odd Fellows building was relocated from the site to a new location across Route 7. The Corinna Veterans Memorial and Soldier’s Memorial are located on site. Parts of the site are for sale. Site cleanup decisions support future development, including ensuring pedestrian friendly development that promotes the area’s natural beauty. The business that operates on site bolsters the local economy and helps generate local and state tax revenues. This section describes the beneficial effects of reuse at the site.

Table 1. Site Business/ Economic Summary Information (2017)^a

Site	Businesses	Total Employees	Total Annual Income	Total Annual Sales	Total Mkt Value Land/Improvement	Total Property Tax
Eastland Woolen Mill	1	2	\$50,024	\$75,000	\$1,816,800	\$31,174

^a See Technical Appendix for more details.

Corundel Commons

This 20-unit senior housing facility that opened in 2006, built by Penquis Community Action Program (CAP) and Penquis Development, is located on the western part of the site. The area was once used to stockpile contaminated soil awaiting treatment. The soil has been cleaned up and the facility has become a valuable asset for the community. Jobs at the housing facility contribute about \$50,000 in estimated annual employment income to the community. In 2019, sales revenue was about \$75,000.

Odd Fellows Building

This historic structure was relocated during cleanup to a new spot across Route 7 from the site. After a comprehensive renovation, it is now home to The Farmer’s Table. The family-style restaurant serves breakfast and lunch during the week and breakfast, lunch and dinner on weekends. The building is also home to Parian Lodge #160, a Masonic lodge.

Recreational and Ecological Uses

The center of Corinna, known as the Village Green, is now home to green space, a gazebo and Riverside Boardwalk. The boardwalk travels along the East Branch of the Sebasticook River up to the river’s reservoir and across the reservoir dam. Also, the Newport/Dover-Foxcroft Rail Trail (Four Seasons Adventure Trail) runs north-south along the eastern edge of the site. Trail users include bikers, hikers, horseback riders, snowmobilers, all-terrain vehicle users, skiers and dogsledders. It travels along the East Branch of the Sebasticook River. The river provides beautiful views and ecological habitat.



Figure 4. Corundel Commons senior housing facility overlooks Corinna.



Figure 5. The Farmer’s Table Restaurant in the historic Odd Fellows building.



Figure 6. The East Branch of the Sebasticook River.



Figure 7. Views of Village Green park and recreation facilities.

Property Values and Tax Revenues

On-site properties help generate property tax revenues that support local government and public services. Today, site properties have a combined value of over \$1.8 million. In 2018, site properties will generate over \$31,000 in property tax revenues.

Conclusion

Collaboration and cooperation among EPA, MEDEP, the town of Corinna and local stakeholders was vital to the successful cleanup and beneficial reuse of the Eastland Woolen Mill Superfund site. EPA's and MEDEP's carefully designed remedy protects public health and the environment and is compatible with uses at the site. EPA's deletion of 80 percent of the site from the NPL sent a clear signal that the site was ready for reuse and can host additional redevelopment in the years to come.

This once-contaminated area now supports businesses that provide jobs and services. Today, on-site businesses support local economic growth, providing about 2 jobs and about \$50,000 in estimated annual employee income. In 2019, on-site businesses generated about \$75,000 in sales revenue.

*For more information about EPA's Superfund Redevelopment Initiative, visit:
<https://www.epa.gov/superfund-redevelopment-initiative>.*

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In May 2017, EPA established a task force to restore the Superfund program to its rightful place at the center of the Agency's core mission to protect health and the environment.

epa.gov/superfund/superfund-task-force



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Technical Appendix

Employment Information for On-Site Jobs

EPA obtained the data included in this appendix directly from reputable sources and reported the data as presented by those sources. Information on the number of employees and sales volume for on-site businesses came from the Hoovers/Dun & Bradstreet (D&B) database.¹ EPA also gathered information on businesses and corporations from D&B. D&B maintains a database of over 300 million businesses worldwide.

Wage and Income Information for On-Site Jobs

EPA obtained wage and income information from the U.S. Bureau of Labor Statistics (BLS). Part of the U.S. Department of Labor, the BLS is the principal federal agency responsible for measuring labor market activity, working conditions and price changes in the economy. All BLS data meet high standards of accuracy, statistical quality and impartiality.

EPA used the BLS Quarterly Census of Employment and Wages database to obtain average weekly wage data for businesses at the Eastland Woolen Mill Superfund site. Average weekly wage data were identified by matching the North American Industry Classification System (NAICS) codes for each type of business with weekly wage data for corresponding businesses in Penobscot County. If weekly wage data were not available at the county level, EPA sought wage data by state or national level, respectively. In cases where wage data were not available for the six-digit NAICS code, EPA used higher-level (less-detailed) NAICS codes to obtain the wage data.

To determine the annual wages (mean annual) earned from jobs generated by each of the selected businesses at the Eastland Woolen Mill Superfund site, EPA multiplied the average weekly wage figure by the number of weeks in a year (52) and by the number of jobs (employees) for each business.

Table 1. Eastland Woolen Mill Superfund Site: Information for On-Site Organizations and Businesses

On-Site Business	NAICS Code ^a	NAICS Title	Number of Employees ^b	Average Weekly Wage (2019) ^c	Annual Wage (Mean Annual) per Employee	Total Annual Employee Income ^d	Annual Sales (2019) ^b
Corundel Commons Senior Housing Associates Limited Partnership	623311	Continuing Care Retirement Communities	2	\$481	\$25,012	\$50,024	\$75,000
Total			2			\$50,024	\$75,000

¹ <http://www.dnb.com>

^a NAICS code provided in the D&B database.

^b Data are from the D&B database.

^c Average weekly wage per employee based on BLS 2019 Average Weekly Wage data.

^d Total annual employee income figures derived by multiplying “Number of Employees” by “Annual Wage (Mean Annual) per Employee.”

Property Values and Local Tax Revenue Generated from Property Taxes

EPA obtained data on the most recently assessed values for property parcels at the Eastland Woolen Mill Superfund site in November 2018 through property records accessible through Penobscot County’s online property appraisal database.² EPA also obtained 2018 property tax information for the site parcels.

Table 2. Property Value and Tax Summary for Taxes Payable in 2018

Parcel ID No.	Total Market Value of Land and Improvements (2018)	Total Property Tax (2018)
18-053	\$4,600	\$0.00
18-054	\$71,400	\$0.00
18-055	\$8,500	\$0.00
18-056	\$2,600	\$0.00
18-118	\$19,600	\$0.00
18-143	\$8,400	\$0.00
18-144	\$8,700	\$0.00
18-145	\$8,900	\$0.00
18-146	\$10,100	\$0.00
18-147	\$9,500	\$0.00
18-148	\$12,400	\$0.00
18-149	\$18,000	\$0.00
18-055A	NA	NA
20-004	\$4,400	\$84.72
20-026	\$1,614,600	\$31,089.12
20-027	\$15,100	\$0.00
20-P/O18-147	NA	NA

² Located at: <http://reonline.harriscomputer.com/research.aspx?ClientID=1009>

Parcel ID No.	Total Market Value of Land and Improvements (2018)	Total Property Tax (2018)
20-P/O18-148	NA	NA
	\$1,816,800	\$31,174

NA = Not available

A property tax of \$0.00 denotes that the parcel is tax-exempt, due to being owned by either the locality, state or federal government.