

Executive Summary

This case study documents the evolution of a portion of the Wells G&H Superfund site from an auto salvage operation to its current use as an ice arena and hub for small businesses, and describes the related benefits for the community.

Woburn, Massachusetts is located 10 miles north of Boston. In the 19th century and through much of the 20th century, the city was home to numerous tanneries as well as other heavy industries. In 1979, contamination was discovered in two of Woburn's municipal drinking water wells (wells G and H) in a section of the city with a long industrial history. Because of soil, sediment and ground water contamination concerns, the U.S. Environmental Protection Agency (EPA) added these wells and the surrounding area to its National Priorities List (NPL) in 1983 as the Wells G&H Superfund site.

Until the early 2000s, one property within the Wells G&H Superfund site, the former Aberjona Auto Parts property, was home to an auto dismantling facility spread across nearly 6.5 acres. Following initial investigations in the 1990s and early 2000s, EPA determined that the levels of soil and shallow ground water contaminants at the former Aberjona Auto Parts property were below human health risk for skin contact, but the ground water did not meet drinking water standards. In 2002, a developer purchased the property and proposed plans to transform much of it into an ice skating arena. Given that the arena would rely on the use of publicly-supplied water, this reuse could occur despite the presence of contaminated ground water. EPA worked with the new owner and the city to provide them with the information on the environmental conditions necessary to support the planning and permitting processes. The new owner has since cleared the junkyard of dismantled/junked cars, and built a new ice skating arena on the property. Successful reuse and continued use of the former Aberjona Auto Parts property is providing jobs and enhancing the city's tax base. The new ice arena is also providing enhanced recreational opportunities for area residents, and helps fulfill a cultural need for a community and region that places a high value on the sport of ice hockey. In addition, continued leasing of a portion of the property supports important local and regional needs, such as dog care, bus storage, landscaping and auto repair services.



Figure 1: Holland Arena opened on the former Aberjona Auto Parts property in 2008.



Figure 2: An industrial/office building constructed on the former Aberjona Auto Parts property in 1988, continues to be used by small businesses.

Positive Impacts

- Redevelopment of the former Aberjona Auto Parts property has transformed a heavily blighted property in Woburn into an ice skating arena and small business hub.
- Six businesses currently using the former Aberjona Auto Parts property employ about 14 people, providing approximately \$575,000 in annual employee income to the community.
- Estimated property taxes to be levied by the city on the two parcels that together make up the Aberjona Auto Parts property were reported to be \$37,000 in 2010.

Introduction

Superfund site action results in restored value to site properties and the surrounding community. Making a property ready for reuse can revitalize the local economy with jobs, new businesses, tax revenues, and local spending, as well as enhance recreational and ecological opportunities. This case study captures the qualitative and quantitative impacts that new development and continued use on a portion of a Superfund site, the former Aberjona Auto Parts property, has had on Woburn, Massachusetts, a small city located 10 miles north of Boston.



Figure 3: Woburn’s location in eastern Massachusetts.

The Wells G&H Superfund site occupies 330 acres in an area just south and west of the Interstate 95 / 93 interchange. The former Aberjona Auto Parts property is located along the southern boundary of the site and occupies 6.5 acres in an area that includes a mix of industrial and commercial businesses, residences, parks and conservation areas. According to 2010 Census data, approximately 14,500 people live in the three Census tracts surrounding the property.

Site History and Cleanup

In 1979, contamination was discovered in Woburn municipal wells G and H. The site was proposed to the NPL in December 1982 and listed in September 1983. In addition to ground water, contaminated media include sediment, sludge and soil. Primary contaminants of concern include volatile organic compounds (VOCs) such as trichloroethylene (in ground water); heavy metals such as arsenic (in Aberjona River sediments); and polycyclic aromatic hydrocarbons, polychlorinated biphenyls, VOCs and pesticides (in soil). The former Aberjona Auto Parts property is located in an area of the site referred to as the “Central Area” or Operable Unit 2 (OU-2).¹

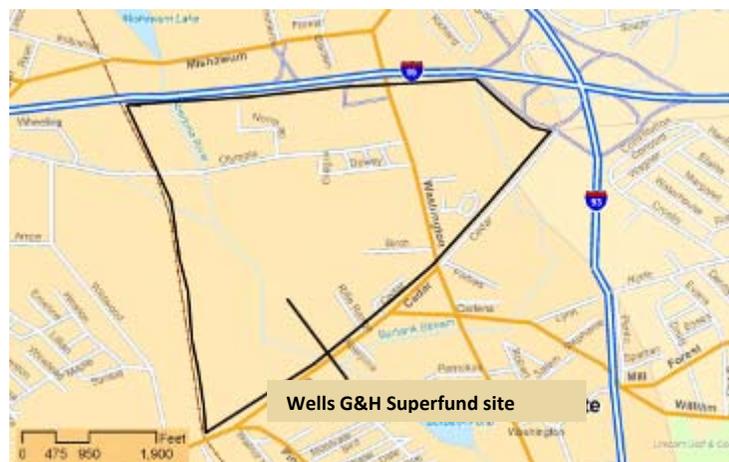


Figure 4: Location of Wells G&H Superfund site in Woburn.

Both immediate and long-term cleanup actions at the site have been implemented or planned. Most actions so far have focused on the source area properties. Millions of gallons of contaminated ground water have been cleaned up and tons of contaminated soils have been removed from the site for treatment. Treatment of ground water and low-level soil contamination continues. A remedial design work plan to implement the planned cleanup for the Aberjona River is being finalized. Efforts to investigate the extent of contamination and possible cleanup approaches for the Central Area are ongoing. Following initial investigations in the 1990s and early 2000s, EPA determined that the levels of soil and shallow ground water contamination at the former Aberjona Auto Parts property were below human health risk for skin contact. Further, it was determined that ground water underneath the former Aberjona Auto Parts property did not meet drinking water standards; however,

¹ For more information on the site’s discovery, listing and remedial actions, please see: <http://www.epa.gov/region1/superfund/sites/wellsgh/index.html>.

because ground water underneath the property was not being used, it was not considered to be a potential human health threat.

Property Evolution and Transformation

Aberjona Auto Parts began operations on the property in the mid-1950s for the sale and reconditioning of used and wrecked automobiles. Most of the property was a fenced auto salvage yard, but it also contained a gasoline service station. The property also included three buildings: an industrial/office building that housed an auto parts store and offices, a house (residence) and a detached garage. These buildings remain on the property today.



Figure 5: Former Aberjona Auto Parts property prior to construction of ice arena.

In early 2002 a local auto recycler and former ice hockey coach purchased the Aberjona Auto Parts property. At the time, broken down automobiles remained scattered across the property even though the auto recycling operation had ceased. An auto service business continued to operate in the industrial/office building remaining on site. Although the owner could have sought to have the auto recycling license for the property reinstated, he chose instead to clear the junkyard of dismantled/junked cars, hoping to redevelop the site for a different use.

As justification for his proposal to construct an ice arena, the owner noted that hockey leagues in the area needed more opportunities to practice. He characterized his proposal as both a civic contribution and business venture.²

Initially the owner wanted to build an ice arena that would attach to and utilize the large industrial/office building remaining on site. The owner revised his plan after a dispute with a nearby property owner and successfully built an ice arena a short distance from the industrial/office building. EPA worked with the new owner and the city to provide them with the information on the environmental conditions necessary to support the planning and permitting processes. The owner has continued to lease other portions of his property to small businesses. One auto supplier service has been operating from the industrial/office building for approximately 20 years. More recently, other businesses have located there as



Figure 6: Aerial image of the former Aberjona Auto Parts property. Lot no. 380105 shows the building footprint of the ice arena completed in 2008. Lot number 380106 shows the building footprint of the former Aberjona Auto Parts building that is currently being leased for use by small businesses.

² For more information on the former Aberjona Auto Parts property and the initial redevelopment plan, please see the following two reports: 1) *Baseline Human Health and Ecological Risk Assessment Report for Wells G&H Superfund Site, Southwest Properties, OU-2*, February 2006. <http://www.epa.gov/ne/superfund/sites/wellsgh/70383.pdf> (large file, 297 pg, 23.8M). 2) Appendix 6N in the *Draft Final Multiple Site Groundwater Response Plan Remedial Investigation Report, Industri-plex Superfund Site, Operable Unit 2, Woburn, MA*, March 2005.

http://www.epa.gov/ne/superfund/sites/industrialplex/213091_Industri-Plex%20Draft%20MSGRP%20RI.pdf

well. Some of them are also using portions of the area behind the building to support their operations. For example, one business operates a dog kennel inside the building and a large dog run directly outside. Alongside the dog run, a bus fleet operator uses a portion of the property as a bus yard. A landscaping business also uses a portion of the property near the bus yard to support its operations.

Local Impacts

The successful redevelopment and continued use of the former Aberjona Auto Parts property is creating positive local impacts for the community. New businesses that have located on the former Aberjona Auto Parts property include: Holland Arena, Winchester Dog Club, Oliver Enterprises and Lenny's Auto Repair. Atlantic Express recently began using a portion of the site for bus fleet storage. In addition, Callahan's Auto Service, a long-time tenant, continues to operate from the industrial building. The businesses support about 14 jobs and contribute approximately \$575,000 in annual employee income to the community.^{3,4}

Tax-related Benefits

Reuse and continued use of the former Aberjona Auto Parts property is also creating economic impacts through the increased tax revenue earned on sales taxes resulting from commercial activity. Although sales taxes are dedicated to the state, state taxes earned on local sales indirectly result in funding to support services for Woburn residents. In 2011, total annual sales generated by all businesses operating on the former Aberjona Auto Parts property was estimated to be at least \$1.1 million, with two businesses not reporting.

Another important way that the redevelopment of property can have positive local economic impacts is through local tax revenue generated from property taxes, the primary source of revenue for most Massachusetts communities.⁵ The estimated *land* value for the two parcels comprising the former Aberjona Auto Parts property was nearly \$650,000 for fiscal year (FY) 2010. The estimated *improvement* value, which includes buildings, was just above \$800,000. Together, the estimated total (land plus improvement) value for the two parcels that make up the former Aberjona Auto Parts property for 2010



Figure 7: Bus yard and dog run located on the former Aberjona Auto Parts property.

Businesses Located on the Former Aberjona Auto Parts Property Provide Jobs and Income

- Callahan's Auto Service employs four and contributes nearly \$160,000 in annual employee income to the community.
- Oliver Enterprises, a landscaping business, employs four and contributes over \$157,000 in annual employee income to the community.
- Holland Arena employs two and contributes over \$112,000 in annual employee income to the community.
- Lenny's Auto Repair employs two and contributes over \$87,500 in annual employee income to the community.

³ Bureau of Labor Statistics, 2009 Quarterly Census of Employment and Wages State Occupational Employment and Wage Estimates, Middlesex County, Massachusetts.

⁴ Two businesses do not report annual employment data. One job was assumed to be associated with each of these businesses.

⁵ Data on the most recently assessed property value for the parcels comprising the former Aberjona Auto Parts property was collected from property records accessible through the City of Woburn Assessors online property records database and through communications with the City's Treasurer/Collector's Office.

approaches \$1.5 million. In FY 2010, estimated property taxes to be levied by the city on these two parcels combined were reported by the city to be \$37,000. The largest share of the total estimated property tax was attributable to the parcel containing the ice arena. The new ice arena opened for business in late 2008. A year later, assessed property values for the ice arena property increased by over \$300,000. Between the time the new owner purchased the property in 2002 and 2010, the assessed value of the ice arena property has increased by over \$700,000.

Improved Aesthetics and Environment

Removal of the junk car dismantling facility has reduced the chances that potential contaminants from deteriorating automobiles could contaminate the environment. The removal of the junkyard and its replacement with a new building that serves as an ice arena has also helped enhance the aesthetic appearance of the area. The removal of the junk cars has also invited other uses that are more appropriate on the property. For example, an official with the



Figure 8: Entrance to Oliver Enterprises on the former Aberjona Auto Parts property. Callahan's Auto Service is located on the left. An occupied house that remains on the property is located on the right.

“The former Aberjona Auto Parts property was an eyesore. The cleanup of the property was a night and day difference.”
 - Woburn City Engineer, 2010

Woburn Redevelopment Authority explained that even though a portion of the property continues to support auto-oriented uses, the fact that it is now being used as a bus storage facility instead of an auto recycling facility is very positive. The official added that maintaining operational buses has considerably less impact on the environment than auto recycling, which involves cutting up cars and draining engine oils and coolants.

Enhanced Recreational Opportunities

Most towns in the northeast United States share a passion for ice hockey. Woburn is no different. Before constructing Holland Arena, the new owner observed that hockey leagues needed more opportunities to practice. Since its opening in 2008, considerable use of the new skating facility suggests that it is a welcome addition by Woburn and area residents. In 2009-2010, Holland Arena hosted 25 practices for the Middlesex Braves, a junior hockey squad. The arena has also recently hosted instructional programs, including programs focused on skating, balance and edgework as well as advanced hockey training.

“The owner deserves a lot of credit for the redevelopment of the ice arena. Local governments are no longer in the business of building ice rinks. For new ice rinks to be developed, it will have to be done by private entrepreneurs, like him.”
 - Woburn Redevelopment Authority Official, 2010

Conclusion

The beneficial continued use and reuse of the former Aberjona Auto Parts property demonstrate that it is possible to generate benefits for the broader community on a Superfund site. Because of an inspired entrepreneur, committed city leaders, and committed state and federal cleanup officials, one portion of the former Aberjona Auto Parts property continues to provide space for multiple businesses that offer important services for the community; another portion now supports a use that provides enhanced recreational opportunities for the community as an ice arena. Moreover, this use as an ice arena integrates seamlessly with a regional culture that puts a high value on ice hockey. As explained by an official with the Woburn Redevelopment Authority, “People in Woburn are probably thrilled about the arena. Woburn residents are rabid about hockey, especially youth hockey.”



Technical Appendix

Positive Impacts: Employment Information for On-site Jobs

Each on-site business was researched in the Dun & Bradstreet (D&B) Database, from which the number of employees and sales volume information was gathered. D&B is a company that provides information on businesses and corporations. It maintains a database of over 179 million companies globally and over 53 million professional contact names using a variety of sources including public records, trade references, telecommunication providers, newspapers and publications, telephone interviews among other various sources (<http://www.dnb.com/>).

The Data Universal Numbering System (DUNS) number is a unique nine-digit identification number assigned by D&B to each business and its location within the D&B database for the purpose of identifying each business.¹

Callahans Auto Service: 4 employees

DUNS Number: 807491188

Sales Volume (US\$): \$270,000

Holland Arena, Inc.: 2 employees

DUNS Number: 023214581

Sales Volume (US\$): \$110,000

Lenny’s Auto Repair: 2 employees

DUNS Number: 834066177

Sales Volume (US\$): \$160,000

Oliver Enterprises: 4 employees

DUNS Number: 837891803

Sales Volume (US\$): \$600,000

Businesses featured in “Reuse and the Benefit to Community: Wells G&H” case study which did not report to D&B
Two on-site businesses located at the Wells G&H site featured in the report do not submit data to D&B. These include: Atlantic Express Bus Yard and Winchester Dog Club. One job was assumed to be associated with each of these businesses.

Positive Impacts: Wage and Income Information for On-site Jobs

Wage and income information was gathered using the Bureau of Labor Statistics (BLS) data. The BLS is a governmental statistical agency that collects, processes, analyzes and disseminates essential statistical data to the American public, the U.S. Congress and other Federal agencies in the broad field of labor economics and statistics. The data provided by the BLS has high standards of accuracy and consistently high statistical quality and impartiality in both subject matter and presentation.

¹ D&B updates its company reports on an annual basis. Data from D&B used for this analysis was collected in May 2011.

Average weekly wage data for each of the businesses located at the former Aberjona Auto Parts property was collected from the BLS Quarterly Census of Employment and Wages database. Average weekly wage data was identified by matching the six-digit North American Industry Classification System (NAICS) codes corresponding with each type of business with weekly wage data for corresponding businesses in Middlesex County.² To determine the annual wages (mean annual) earned from jobs generated by each of the business located at the former Aberjona Auto Parts property, the average weekly wage figure was multiplied by the number of weeks in a year (52) and by the number of jobs (employees) for each of the businesses.

Table 1: Aberjona Auto Parts Property Businesses: NAICS Code and Title, Average Weekly Wage and Annual Wage per Employee

On-site Business	NAICS Code ^a	NAICS Title	Average Weekly Wage (2009)	Annual Wage (Mean Annual) per Employee (2009)
Atlantic Express Bus Yard	811111 ^b	<u>General Automotive Repair</u>	\$767	\$39,884
Callahans Auto Service	811111 ^a	<u>General Automotive Repair</u>	\$767	\$39,884
Holland Arena, Inc.	561990	<u>All other support services</u>	\$1,079	\$56,108
Lenny's Auto Repair	811118	<u>Other automotive mechanical and electrical repair and maintenance</u>	\$842	\$43,784
Oliver Enterprises	561730 ^a	<u>Landscaping Services</u>	\$755	\$39,260
Winchester Dog Club	812910 ^b	<u>Pet Care (except Veterinary) Services</u>	\$356	\$18,512
Average Weekly Wage data source: BLS Quarterly Census of Employment and Wages (2009) Middlesex County, Massachusetts, http://www.bls.gov/cew/ Annual wage (Mean Annual) per Employee is based upon BLS Average Weekly Wage data. ^a NAICS code provided in D&B unless otherwise noted. ^b NAICS code assumed.				

² D&B uses six-digit NAICS codes to classify businesses reporting to D&B. For businesses not reporting to D&B, assumptions about the most appropriate NAICS code for those particular businesses were made.

Table 2: Aberjona Auto Parts Property Businesses: Employees, Wages and Total Annual Wage

On-site Business	Employees ^a	Annual Wage (Mean Annual) per Employee ^b	Total Annual Wages ^c
Atlantic Express Bus Yard	1	\$39,884	\$39,884
Callahans Auto Service	4	\$39,884	\$159,536
Holland Arena, Inc.	2	\$56,108	\$112,216
Lenny's Auto Repair	2	\$43,784	\$87,568
Oliver Enterprises	4	\$39,260	\$157,040
Winchester Dog Club	1	\$18,512	\$18,512
Total	14	NA	\$574,756

^aAll employee data is from D&B, except for Atlantic Express Bus Yard and Winchester Dog Club. The total number of employees for each of these two businesses was assumed to be one.

^bTotal annual wage figures were derived by multiplying "Employees" by "Annual Wage (Mean Annual) per Employee."

Positive Impacts: Local Tax Revenue Generated from Property Taxes

Data on the most recently assessed property values and the estimated annual property taxes for the two parcels comprising the Aberjona Auto Parts property were collected from property records accessible through the City of Woburn Assessors on-line property records database (<http://data.visionappraisal.com/WoburnMA/DEFAULT.asp>) and through communications with the City's Treasurer/Collector's Office.

Table 3. Estimated Property Values for Fiscal Year 2010 for Former Aberjona Auto Parts Property

Parcel ID	Estimated Land Value (2010)	Estimated Improvement Value (2010)	Total Estimated Value (2010)
380106	\$259,000	\$301,500	\$560,500
380105	\$387,500	\$501,900	\$889,400
Total	\$646,500	\$803,400	\$1,449,900

Property values source: <http://data.visionappraisal.com/WoburnMA/DEFAULT.asp>

Table 4. Total Estimated Property Values and Annual Property Tax for Former Aberjona Auto Parts Property

Fiscal Year	Total Estimated Value (Parcel ID 380105)	Total Estimated Value (Parcel ID 380106)	Estimated Annual Property Tax (Parcel ID 380105)	Estimated Annual Property Tax (Parcel ID 380106)
2000	\$164,000	\$537,000	\$4,102	\$12,665
2001	\$164,000	\$728,700	\$3,787	\$14,638
2002	\$112,700	\$694,100	\$2,440	\$14,076
2003	\$112,700	\$734,000	\$1,237	\$12,382
2004	\$571,000	\$615,900	\$1,323	\$13,566
2005	\$571,000	\$631,800	\$1,310	\$13,803
2006	\$564,000	\$630,800	\$1,213	\$12,916
2007	\$564,000	\$630,800	\$1,239	\$13,202
2008	\$565,000	\$621,700	\$1,275	\$13,366
2009	\$565,000	\$621,700	\$1,387	\$14,518
2010	\$889,400	\$560,500	\$23,213	\$13,921

Property values source: <http://data.visionappraisal.com/WoburnMA/DEFAULT.asp> and Don Jenson, City of Woburn Treasure/Collector. Property tax data not available from the City's on-line property records database was made available by Don Jenson, City of Woburn Treasure/Collector (February 8, 2010).