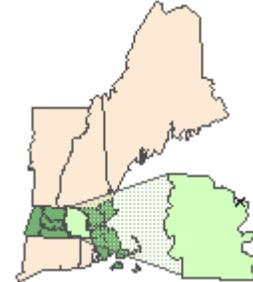


## Fort Devens Superfund Site Ayer, Harvard, Lancaster & Shirley; Massachusetts



### Background

The Fort Devens Superfund Site (Site) is a former military base located approximately thirty-five miles northwest of Boston and twenty miles northeast of Worcester. The base comprised approximately 9,310 acres divided into the North, Main and South Posts. In 1991, under the Defense Base Realignment and Closure Act (BRAC), the North and Main Posts were slated for closure and the South Post for realignment. These actions were completed in March 1996, at which point Fort Devens ceased to exist and the remaining Army mission was assimilated

by the Devens Reserve Forces Training Area. Only the South Post and about 345 acres of the former Main Post has been retained by the military.

#### Quick Facts

<b>Location:</b>	Central Massachusetts
<b>Acreage:</b>	9,310 acres
<b>Current Uses:</b>	Commercial, residential, open space, public administration and services, and military
<b>Ownership:</b>	Public and private
<b>Cleanup Status:</b>	Substantial cleanup completed and additional investigations are on-going
<b>Surrounding Land Uses:</b>	Mixed, generally rural

Over nearly eight decades of operation, a variety of contaminants were released to the environment, which led to the base being listed on EPA's National Priority List as a Superfund site in November 1989. The U.S. Army and EPA subsequently entered into a Federal Facilities Agreement in November 1991 establishing a framework and timetable for investigating and cleaning the Site. While the Massachusetts Department of Environmental Protection (MADEP) is not a party to this agreement, they fully participate in key cleanup decisions. In recognition of the economic impact that the base closure would have on the surrounding communities, a concerted effort has been made to expedite this timetable to facilitate the reuse of the base.

Today, a great deal of cleanup progress has been achieved. Of the 324 potential areas of contamination identified by the Army through comprehensive investigations, over 230 have been approved for "no further action," either because cleanup had been completed or the contamination already met acceptable cleanup levels. In addition, Records of Decisions (RODs) – which specify the remedial actions necessary for long-term

protectiveness of human health and the environment – have been issued for 23 areas being addressed under the Superfund program.

Importantly, this expedited cleanup has enabled ownership of all but 149 acres of the 4,400-acre former North and Main Posts to be transferred to other federal agencies and MassDevelopment, a quasi-public state finance and development authority. Transfer of the remaining leased properties is not expected to occur until the Army determines, and EPA concurs, that the necessary remedies are in place and operating properly and successfully. These property transfers and lease arrangements have greatly contributed to the rapid transformation that is taking place on the former base.

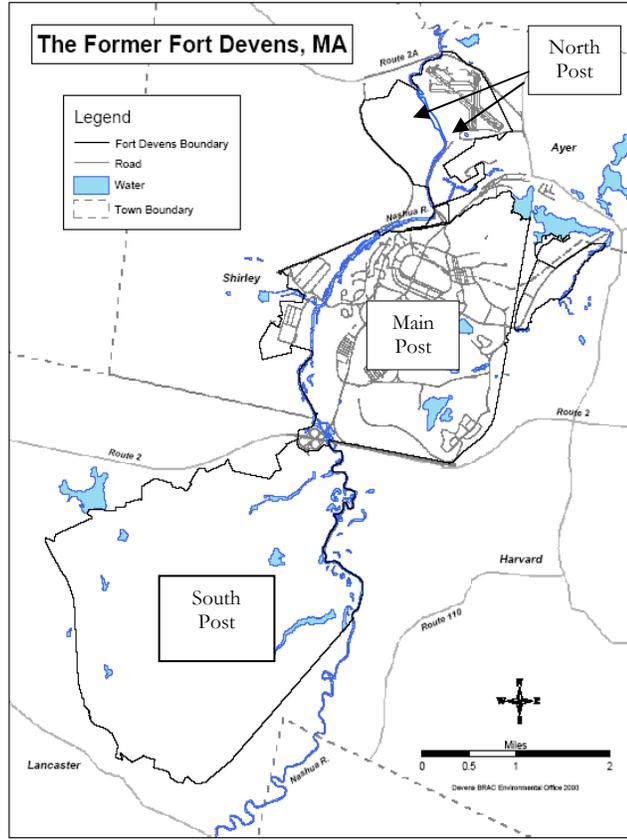


Figure 1 - Site Map

## Reuse Status

### **Reuse History**

In 1994, the Massachusetts General Court passed legislation, commonly known as Chapter 498, establishing the legal foundation for redevelopment of the 4,400-acre North and Main Posts. This included designating the 4,400 acres as the Devens Regional Enterprise Zone (Devens) and creating the Devens Enterprise Commission, a public agency charged with approving all future land uses. Chapter 498 also provided \$200 million in bonding authority and gave the Massachusetts Government Land Bank – which later merged with the Massachusetts Industrial Finance Agency to form MassDevelopment – the authority for acquisition, control, maintenance and redevelopment of Devens. Chapter 498 further stipulates that prior to July 1, 2033 a report must be prepared recommending a permanent government structure for Devens.

The towns of Ayer, Harvard, Lancaster, and Shirley, together with MassDevelopment, developed the *Devens Reuse Plan* (1994 Reuse Plan) in 1994 following extensive community involvement. The 1994 Reuse Plan was approved later that year at simultaneous town meetings.

The 1994 Reuse Plan was built around three major strategic themes: (1) Attract technology and innovation enterprises that will draw on the rich academic and research base of the region, (2) Capitalize on the existing rail, inter-modal and highway

infrastructure, and (3) Preserve valuable natural areas and integrate open space and recreational use into all aspects of land use planning. As would be expected for a reuse project of this magnitude and complexity, the 1994 Reuse Plan was designed to be implemented in several phases over 40 years.

To further assist the redevelopment efforts, the Commonwealth of Massachusetts designated Devens as a State Economic Target and Opportunity Area. This provided a number of incentives that included: wholesale utility rates, no personal property taxes, reduced water and sewer rates, and a unified permitting process to expedite permit review.



**Kraft Company**

MassDevelopment has so far spent approximately \$144 million on infrastructure development, site preparation and other related projects.

### ***Reuse Highlights***

#### *Commercial/Industrial Use*

Devens is now home to more than 80 businesses employing over 4,000 workers. Despite the 4,100 military jobs and 2,900 civilian jobs that were lost due to the base closure, unemployment rates for the four host towns have rebounded impressively. Estimated wages for Devens totaled nearly \$130 million in 2005.



**Devens Commons retail stores**

According to MassDevelopment, Devens is not only attracting new businesses, but many existing companies are making significant capital investments to expand and improve their operations. As a result, Devens has already achieved about 51% of the 8.2 million square-foot commercial build-out goal set in the 1994 Reuse Plan.

A recent addition is the \$660 million dollar Bristol-Myers Squibb Co. plant that, once completed, will create about 550 new jobs. Also, the recently-built 27-acre, \$40 million Devens Common commerce center provides key services, such as a 121-room Marriott hotel, a 24,000 square foot conference facility, banks, restaurants and retail stores.

Most commercial and industrial development has occurred in the East and West Rail Industrial Parks and Jackson Technology Park, which are currently at 89%, 96% and 73% of development capacity, respectively.



**View overlooking the Oxbow National Wildlife Refuge**

occurred with the transfer of 836 acres to the U.S. Fish and Wildlife Service to create the 1,667-acre Oxbow National Wildlife Refuge. The refuge protects ecologically-valuable wetland and upland areas that provide habitat for an abundant variety of species, including twenty listed by the state as endangered. A limited trail system provides public access to the refuge and the U.S. Fish and Wildlife Service plans to construct a visitor center in the future. Other open spaces that have been preserved include Mirror Lake, Little Mirror Lake, Black Spruce Bog, Cold Spring Brook, and a parcel containing a glacial esker.

### *Residential Use*

Under the 1994 Reuse Plan, housing was limited to 282 units, of which 25% would be made available as affordable housing. Emphasis was placed on renovating the highest quality housing, particularly those in established neighborhoods that afford ready access to recreational areas and community services. Careful consideration was also given to maintaining a network of open space to buffer these neighborhoods from commercial and industrial use areas. As of 2006, over 100 housing units have been renovated.

### *Open Space and Recreational Use*

Open spaces and recreational areas were an integral component of the 1994 Reuse Plan, which devoted more than a third of Devens' land area to these uses.

An especially notable open space land transaction occurred with the transfer of 836 acres to the U.S. Fish and Wildlife Service to create the 1,667-acre Oxbow National Wildlife Refuge. The refuge protects ecologically-valuable wetland and upland areas that provide habitat for an abundant variety of species,

**“Unlike typical development planning that considers open space to be that land leftover after all the development is located, the Devens Reuse Plan started with the definition of open space and environmental network as the basis for the plan.”**

**1994 Reuse Plan**

The highly acclaimed Red Tail Golf Club – named for the red-tailed hawks that often soar overhead -- was established in the southeast corner of Devens in 2002. This 18-hole championship golf course was honored as the first Audubon International Signature Sanctuary golf course in New England for its environmentally-sustainable design and management practices.



**Red Tail Golf Club**

The network of open space and recreational areas that was created throughout Devens contributes to the rural character of the area and provides numerous opportunities for recreation. A prominent example is the 44-acre Rogers Field which was previously a military parade ground and now functions as a community green and playing fields. Because of its central location and

proximity to neighborhoods, Rogers Field is easily accessible to residents and helps to consolidate the Devens community by providing a focal area for recreational activities.

## Cleanup Status

As noted previously, environmental assessments by the Army identified 324 potential areas of contamination. The primary contaminants found at the Site include polychlorinated biphenyls (PCBs), pesticides, volatile organic compounds, heavy metals, and petroleum-related compounds. Of the 324 contaminated areas, over 230 have been approved for “no further action,” and Superfund RODs have been issued addressing 23 others. Environmental investigations for the remaining areas of the Site are currently ongoing.

Under Superfund, those areas where a ROD has been issued and contamination will remain in place must be reviewed every five years to confirm that the remedy is operating as intended and is protective of human health and the environment. The second of these so-called “Five-Year Reviews” was completed in September 2005. The Five-Year Review and other relevant background information can be found at EPA’s Superfund website listed in the following section. Generally, the Five-Year Review determined that the implemented remedies are protective and exposures controlled for all but the Shepley’s Hill Landfill, a former 84-acre landfill located on the northeast corner of the Main Post. The Five-Year Review also noted that additional groundwater monitoring was necessary at several areas.

<b>Key Events</b>	
<b>1917</b>	Fort Devens founded
<b>1989</b>	Site listed on federal NPL
<b>1991</b>	Fort Devens proposed for closure and realignment  Army and EPA sign Federal Facilities Agreement
<b>1994</b>	Chapter 498 passed by Mass. General Court  Devens Reuse Plan prepared
<b>1996</b>	Base closure and realignment finalized

The remedy selected under the ROD for Shepley’s Hill Landfill consisted of landfill closure, long-term monitoring of ground water and landfill gases, landfill maintenance, and institutional controls to restrict land and ground water use. The ROD also specified contingent actions that included a groundwater extraction and treatment system should the other elements of the remedy prove inadequate. The Army has since implemented and is continuing to operate this ground water treatment system. The Five-Year Review also noted areas of poor drainage and ponding on the landfill cover, along with other deficiencies, that were in the process of being addressed by the Army. In addition, the Army has been conducting additional studies to evaluate cap integrity and identify other actions necessary to ensure long-term protectiveness of the Shepley’s Hill Landfill cleanup.

Releases from the Shepley’s Hill Landfill have also been linked to elevated arsenic contamination in portions of Plow Shop Pond. Plow Shop Pond is located east-northeast of the landfill and is one of a string of six inter-connected ponds that fall outside the boundary of Devens. Plow Shop Pond and Grove Pond, which is immediately upstream, have undergone extensive study for more than a decade to evaluate whether

contamination within the ponds pose unacceptable risks and to identify potential contamination source areas. These studies also investigated whether the Town of Ayer Well Field and Grove Pond Well Field were being impacted by releases from Devens. A 2002 report by EPA, *Grove Pond Arsenic Investigation: Final Report*, confirmed that the well fields were not being affected.

In August 2006, EPA released a report entitled, *Expanded Site Investigation Report: Remedial Oversight of Activities at Fort Devens Plow Shop Pond and Grove Pond (Revised Final)* (ESI Report) that consolidated the previous studies of this area done by the U.S. Army, EPA, the U.S. Fish and Wildlife Service, U.S. Geological Survey, and the MADEP and supplemented these studies with additional field investigations. Among the key conclusions of the ESI Report was that elevated arsenic in groundwater coming from Shepley's Hill Landfill resulted in unacceptable human and ecological risks to the western shore of Plow Shop Pond, particularly in an area known as Red Cove. Unacceptable risks from lead contamination and possibly polyaromatic hydrocarbons (PAHs) were also associated with the area adjacent to the former Railroad Roundhouse located on the southern shore of Plow Shop Pond. The Army is further evaluating these areas to determine what additional actions might be necessary to address these concerns.

Because the 1994 Reuse Plan envisions additional residential housing will need to be constructed, particular attention has been placed on investigating and cleaning up areas targeted for this purpose. Since 2002, former military housing complexes in the Grant, Locust, Cavite, Shirley, Davao, Oak, Maple, Buena Vista and Salerno neighborhoods were demolished or are planned for demolition in order to clean up pesticide-contaminated soils located below the building slabs. Several of these areas are also undergoing further investigation and remediation for PCBs and military munitions debris. All necessary actions will be taken to ensure that they will be safe for residential use before any residential development takes place.

## Additional Information

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EPA Superfund Website: [www.epa.gov/region1/superfund/index2.htm](http://www.epa.gov/region1/superfund/index2.htm)

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