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## Fort Devens Site Devens, Massachusetts

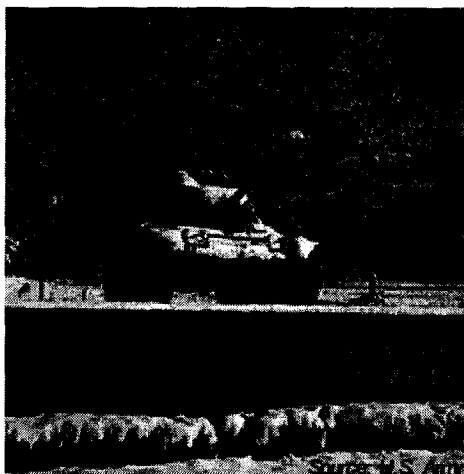
### *A Superfund Redevelopment Success*

#### Fort Devens Superfund Site at a Glance

**Problem:** Contamination of soil and groundwater due to over 70 years of military training activities.

**Solution:** To date, over 40 short-term actions to address immediate threats completed and six long-term actions are underway to control the source of the contamination.

**Redevelopment:** Partnership between EPA, DoD, and State and local governments to clean up the site and implement a comprehensive redevelopment plan that includes public and private commercial and recreational use.

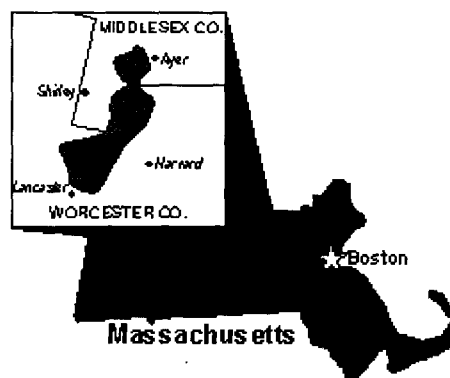


*The former Fort Devens Army base is one of the largest redevelopment projects in Massachusetts' history.*

As part of the Superfund program, EPA is working with other Federal departments, State and local governments, and local developers to clean up and return hazardous waste sites to beneficial uses for the community. Fort Devens, a former Army base located in Middlesex and Worcester Counties, Massachusetts, is one of the many installations affected by the Base Realignment and Closure Act (BRAC), which transfers certain bases to local communities for commercial, recreational, and/or residential use. The closure of the Fort Devens base resulted in an estimated loss of over 7,000 jobs. But, the Fort Devens site redevelopment demonstrates how EPA and the Department of Defense (DoD) can work together to clean up and redevelop bases targeted for closure and foster the economic recovery of neighboring communities. Once a military base with significant contamination, the Fort Devens site is on its way to becoming the largest redevelopment project in the history of Massachusetts. This fact sheet describes the cleanup performed and the redevelopment underway at the Fort Devens site as of April 1998, and provides estimates for the economic impacts and environmental and social benefits that will accrue at and around the site.

#### Site Snapshot

Located 35 miles west of Boston, Fort Devens is a 9,400-acre former U.S. Army base that lies between the towns of Ayer and Shirley in Middlesex County, and Lancaster and Harvard in Worcester County. The Army established Fort Devens in 1917 as a temporary training camp for soldiers during World War I. In 1931, the camp became a permanent installation and operated for over 60 years serving a variety of military purposes. In 1991, the Fort Devens base was targeted for realignment and closure and by 1996, the base was closed and the transformation of the site for public and private use began.



The Fort Devens installation primarily comprises three primary areas, the Main Post, North Post, and South Post. The Main Post provided all base housing, community services, administrative buildings, training facilities, ammunition storage and an 8.8-acre vehicle maintenance yard. The Main Post also is the site of an 84-acre municipal landfill that existed before the base was established, and was used by the Army. The North Post was primarily a military airfield, but was also used to train troops. In addition, it contains a wastewater treatment plant. The South Post contained areas for troop training, firing range activities, and an air drop zone.

The numerous operations at the Fort Devens base have resulted in the possible contamination of over 80 areas of the installation. Three of these areas were of particular concern to the Superfund program: the maintenance yard and municipal landfill located on the Main Post, and the airfield located on the North Post. The maintenance yard consisted of an unpaved parking area where military vehicles leaked fuel and oil onto the ground. Additionally, underground storage tanks located at the maintenance yard had released waste oil, resulting in contamination of the surrounding soil with polycyclic aromatic hydrocarbons, which are carcinogenic. The municipal landfill had deteriorated to a point where there was a significant threat of arsenic contamination to the groundwater under the site. Groundwater also is contaminated at the North Post, where a plume of polychloroethylene was detected under the airfield. Polychloroethylene is a solvent that was used extensively by the Army to clean parachutes at the airfield. Many other contaminated areas of the Fort Devens site are being addressed under authorities other than Superfund.

At its peak, over 15,000 military personnel and their families lived on the Fort Devens base. The current land use around the site is primarily rural and residential, with an estimated 3,500 households located within two miles of the Fort Devens boundary. In addition, the Nashua River and many of its tributaries run directly through the site, with wetlands located along its banks. The Oxbow National Wildlife Refuge is located just below the southern boundary of the Main Post.

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## Cleanup

In 1989, EPA added Fort Devens to the Superfund program's National Priorities List (NPL)—the Agency's list of hazardous waste sites needing cleanup. Since 1989, the environmental condition of the site has been investigated by DoD under Superfund, BRAC, and other environmental authorities, and over 80 areas with possible hazardous waste contamination have been identified. A Fort Devens BRAC Cleanup Team (BCT), which consists of representatives from the Army, EPA, and the State of Massachusetts, was formed in 1994 to address the contamination on the site. This partnership has been

successful in integrating many of the investigations of the site, which has eliminated an estimated four years of environmental study and saved the government approximately \$5 million. The BCT has also worked closely with the surrounding communities during the investigation and cleanup to address local concerns and to ensure that the cleanup is consistent with future uses of the base.

The cleanup of the contamination on the base was required before redevelopment of the property could occur. A majority of the over 80 contaminated areas are being cleaned up through short-term response actions that address immediate threats. To date, more than 40 short-term actions have been completed and several more are in progress. Actions include removal and disposal of underground storage tanks, asbestos, building debris, scrap metals, and solvent-saturated soils. Several portions of the site are also undergoing long-term cleanup. In particular, cleanup plans were selected by DoD and approved by EPA for six areas on the site, most notably the maintenance yard, the municipal landfill, and the airfield. The remedy selected to clean up the maintenance yard was tailored to the future use of the area while protecting human health and the environment. The cleanup plan called for covering a portion of this area with asphalt for a parking lot and redesigning the storm drainage system. Similarly, a cap was placed over the landfill to control the source of the contamination, while allowing for the possible recreational use of the area in the future. Cleanup at the airfield involves excavation of soil areas with extensive solvent contamination, which has been completed, and the ongoing treatment of the groundwater. Additional cleanup activities are being planned or are underway for the other contaminated areas on the site.

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## Redevelopment

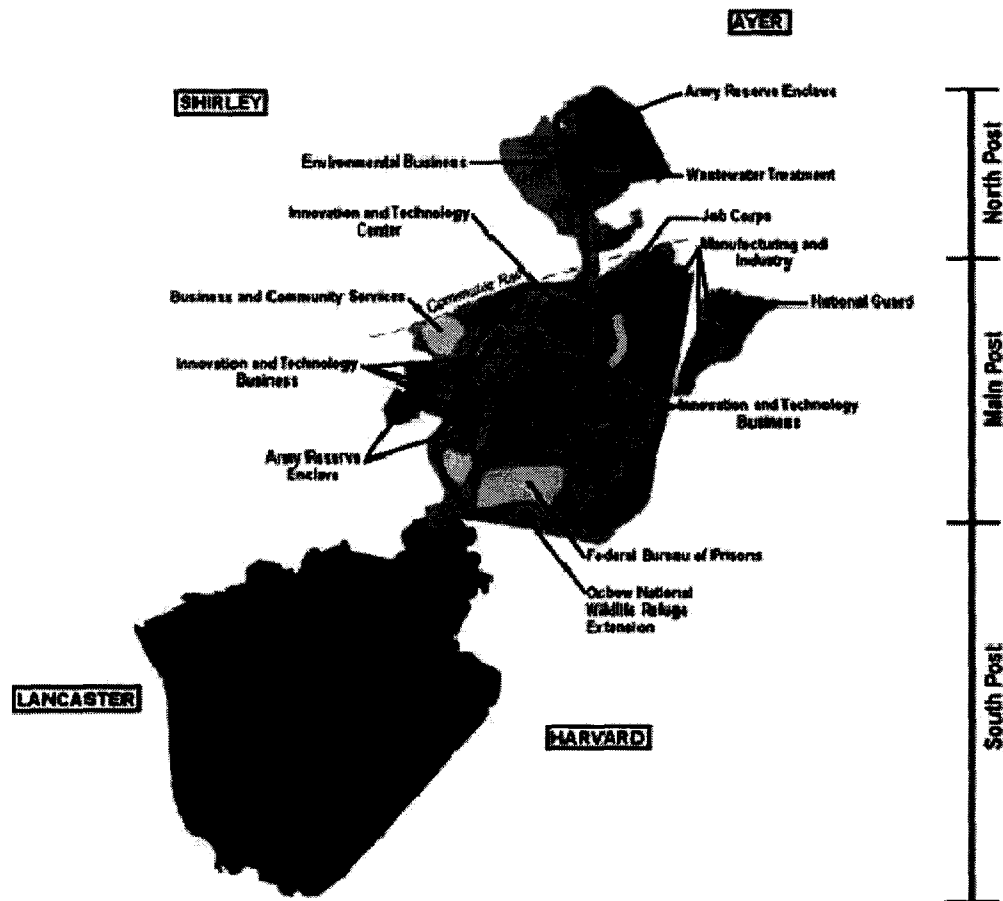
The closure of Fort Devens and the remedies chosen to clean up the site were key factors in its redevelopment. As an Army base, Fort Devens had extensive infrastructure in place and was being used for a variety of operations. At the time of the base's closure, studies indicated that approximately 5.6 million square feet of land and over 2 million square feet of existing buildings and facilities had potential reuse because of their location and access to major highways and rail service. Several public and private sector employers have taken advantage of this redevelopment potential and have located, or are planning to locate, at the site. The redevelopment of Fort Devens is expected to revitalize the local economy impacted by the base's closure.



*A Federal prison hospital is one of the many public redevelopment projects at the site.*

As part of the redevelopment of the Fort Devens site, DoD transferred large portions of the site to other Federal departments and the State to provide public services and attract private businesses. DoD retained control of 5,000 acres of land, including all of the South Post and portions of the Main and North Posts, for construction of a new Army Reserve enclave and training area. DoD transferred the remainder of the site to the Department of Labor (DOL), the Department of Justice (DOJ), and a State-designated developer for public and private development. DoD transferred approximately 22 acres of land to DOL, which is building a Jobs Corp Center; 222 acres to the DOJ, where a Federal Bureau of Prisons Hospital is being built; and approximately 836 acres along the Nashua River to the Fish and Wildlife Service (FWS) for an extension to the Oxbow National Wildlife

Refuge. The remainder of the Main and North Posts was transferred to the Massachusetts Government Land Bank to promote and oversee private redevelopment.



In 1994, Massachusetts passed legislation that helped to define the future use of Fort Devens. The act served four main purposes: (1) creation of the Devens Regional Enterprise Zone (currently known as the Devens Commerce Center), which is the portion of the former military base that is being relinquished by the U.S. Army, as well as pieces of land adjacent to the site owned by B&M Railroad and the State; (2) establishment of the Devens Enterprise Commission, a public agency comprising community members and political appointees, which is responsible for the permitting of all proposed redevelopment projects; (3) empowerment of the Massachusetts Government Land Bank (currently known as MassDevelopment) with the authority to oversee all redevelopment planning and implementation at Fort Devens, including the collection of municipal and other service fees; and (4) authorization for MassDevelopment to issue bonds and to borrow up to \$200 million to redevelop the site. The 1994 legislation also established incentives to stimulate the private sector's interest in redevelopment of the site. Some of these incentives include the designation of the Devens Commerce Center as a State Economic Target and Opportunity Area, establishment of wholesale utility rates, elimination of personal property tax, and access to water and wastewater treatment at reduced rates.

#### Public Redevelopment at Devens

- DOJ will build 245-acre Federal Bureau of Prisons Hospital
- DOL will build a 25-acre Job Corps Center
- DoD is retaining approximately 182 acres of land for an Army Reserve enclave and 132 acres for a training site
- FWS is expanding the Oxbow National Wildlife Refuge by 836 acres

For the provisions in the legislation to become effective, a plan had to be developed that would delineate the future private use of the former base. This plan, called the Devens Reuse Plan, was prepared by MassDevelopment and representatives from the towns of Ayer, Harvard, and Shirley, and was approved by these communities in 1994. The Plan lays out the goals and objectives for the redevelopment of Fort Devens according to several overarching uses: innovation and technology; business and community services; environmental business; research and development; rail, industry and trade-related; and open space and recreation.

By March 1998, 13 private sector facilities, each over 10,000 square feet in size, were built or were under construction. For example, the Gillette Corporation, a Fortune 200 company, has built a 410,000 square foot warehouse and distribution center on the former base. In addition, 33 facilities, each smaller than 10,000 square feet, have been built. Four public facilities also have been built or are under construction and MassDevelopment has built two facilities. In all, 49 redevelopment projects have already been completed at Fort Devens. Two additional projects are currently underway, and one more project will begin construction soon. Of the private sector companies, several manufacturing firms have been constructed on a portion of the space designated for industrial use, and several computer software and graphics companies have constructed facilities in the area intended for research and development operations.

#### **Private Redevelopment at the Devens Commerce Center**

- The Gillette Co. constructed a warehouse and distribution center.
- Companies such as CeCorr, Inc. and Parker Hannifin have helped to redevelop to manufacturing/industrial space.
- Image Software Services, Inc., Xinetics, and Ellora Software, Inc. are among the computer software and graphics companies that have built research and development facilities.

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**"Uncommonly convenient highway and rail access, and the cost savings benefits of the low utility rates and no personal property taxes were key factors in the Gillette Company's decision to lease two facilities at The Devens Commerce Center."**

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*- Eric Krauss, The Gillette Company*

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## **Benefits**

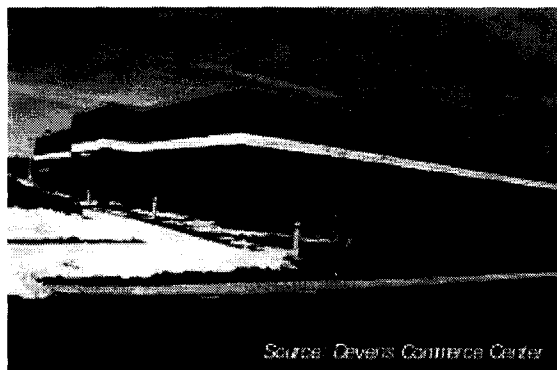
The partnership among EPA, DoD, and State and local governments to clean up and redevelop the Fort Devens site has had a positive effect on the local community. In particular, the cleanup and redevelopment of the site has resulted in positive economic impacts, as well as significant environmental and social benefits. A summary of these benefits is provided below and reflects information as of April 1998. Additional information on the calculations used to estimate the economic impacts is provided in the Technical Appendix to this fact sheet.

## **Economic Impacts**

The cleanup and redevelopment of the Fort Devens site has resulted in (and will continue to result in) numerous positive economic impacts in the form of jobs and associated income and local spending. These economic impacts will help to offset the effects of the base closure, including lost civilian jobs and earnings and the reduction in local spending by military personnel and civilians. Cleanup of the site will provide an estimated 121 short-term jobs per year for a total of 26 years, while redevelopment projects, completed and underway, will provide an estimated 114 short-term on-site jobs per year for 3.75 years. These short-term cleanup and redevelopment jobs are expected to result in an annual income of over \$6 million. Full implementation of the Reuse Plan for private companies and development by the Federal government may result in over 2,500 permanent on-site jobs. These permanent jobs are associated with the public and private sector employers who have already developed or have committed to redevelop the site. These jobs may generate almost \$70 million in direct salary and result in almost \$56 million in annual spending. Moreover, growth in jobs and incomes should result in an increase by over \$4 million in State income tax and almost \$3 million in sales taxes. In addition, the cleanup may lead to an estimated increase of up to \$2 million in total residential property values within two miles of the site.

#### Positive Economic Impacts

- An estimated 121 short-term cleanup jobs per year for 26 years and 114 short-term redevelopment jobs per year for 3.75 years.
- \$6 million in annual income associated with cleanup and redevelopment jobs.
- Over 2,500 potential permanent on-site jobs associated with future redevelopment.
- Over \$70 million in annual income associated with permanent on-site jobs resulting in \$56 million in personal spending.
- Up to \$2 million increase in total residential property values within two miles of the site.



*The Gillette Corporation was the first private corporation to locate in the new Devens Commerce Center.*

The redevelopment of the site will act to preserve the surrounding towns that for years have been economically tied to the Army base. Many local businesses once again may become viable with the redevelopment of the Fort Devens site. Moreover, property values in the surrounding communities may increase further as jobs are created, people return to the area, and the local economy is further stimulated by redevelopment.

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### *Environmental Benefits*

In keeping with EPA's mission, the primary benefit achieved through the cleanup of Fort Devens is the long term protection of human health and the natural environment. Because of the size and multiple uses of the former military installation, the U.S. Army investigated the entire site, and found that many areas of the site were not a threat to public health or the environment. Of the over 80 areas with identified contamination, the Fort Devens BCT addressed immediate threats to

human health and the environment, such as removal and disposal of underground storage tanks, asbestos, building debris, scrap metals, and contaminated soils. The cleanup of the maintenance yard, the 84-acre landfill, and the airfield will protect residents, workers, recreational users, and future visitors to the site from risks associated with exposure to contaminated soils and groundwater, and minimize future migration of contaminants.

#### Environmental Benefits

- Elimination of immediate on-site risks in 40 areas.
- Cleanup to eliminate exposure to contaminants in soil and water.
- Protection of critical natural resources, including the National Wildlife Refuge.
- Preservation of habitat used by State-listed species of special concern.

The Devens Reuse Plan ensures the protection and enhancement of critical natural environmental resources including wetlands, rivers, streams, open waters, sensitive habitats, vegetation, and aquifers. Cleanup and redevelopment of Fort Devens will protect the Nashua River and its tributaries, as well as the adjacent Oxbow National Wildlife Refuge, which will be expanded as part of the site redevelopment.

Fort Devens has become one of the best characterized ecological sites in the state of Massachusetts. The characterization process has identified several State-recognized endangered or threatened plant species on the site. Also, several State-recognized endangered, threatened, or special concern animal species inhabit the site, such as the upland sandpiper (*Bartamia longicauda*). While cleanup of the site has protected the ecological resources at and around the site, redevelopment planning also will carefully consider the effect of new development on these rare and sensitive species.

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### *Social Benefits*

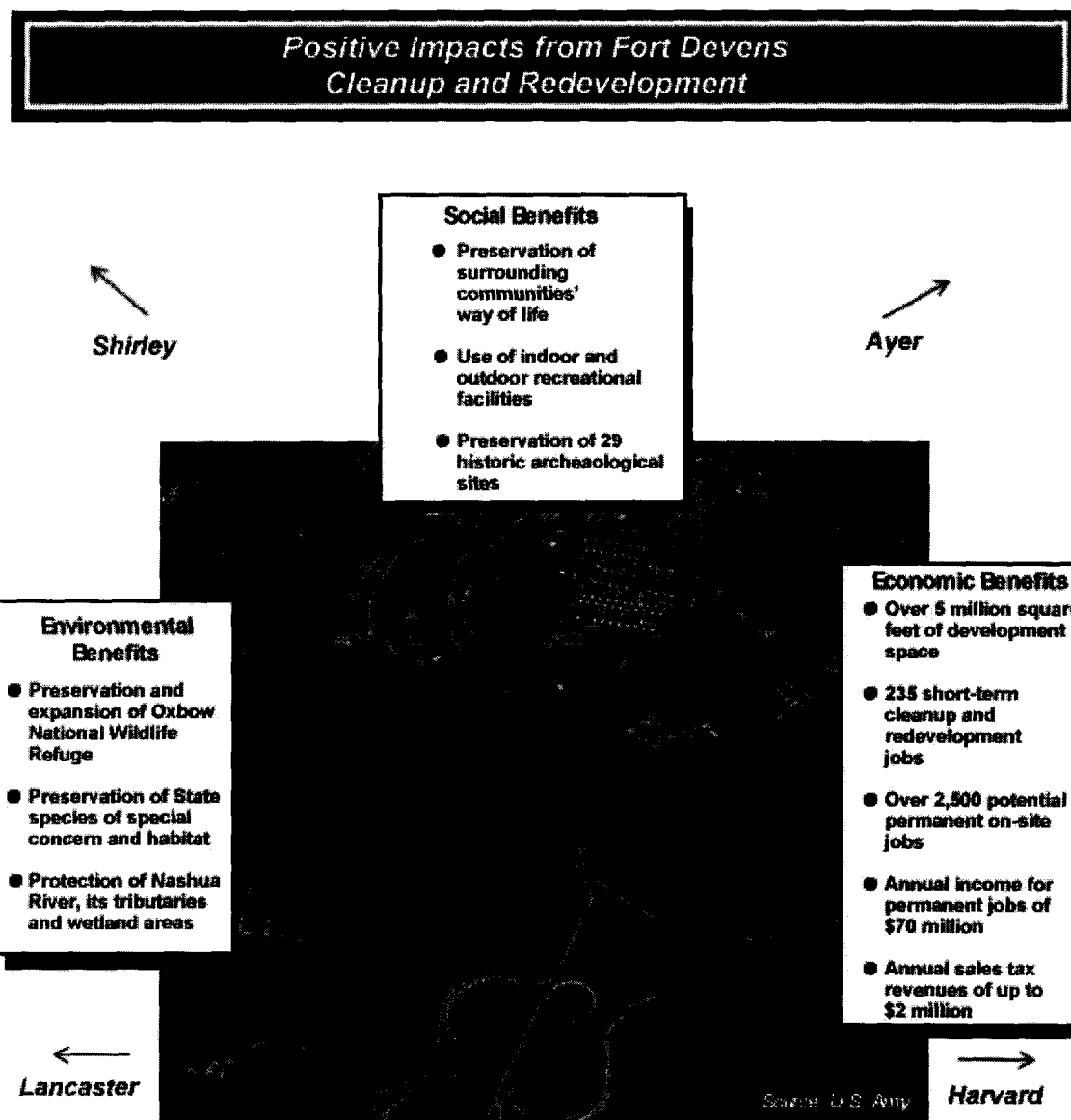
Perhaps the greatest social benefit stemming from the cleanup and redevelopment of the Fort Devens site is the preservation of the surrounding communities and their established way of life. Local communities will benefit from preservation of open space and greater access to a wide range of existing indoor and outdoor recreational resources.

Outdoor recreational assets include the Nashua River corridor and nature center, lakes, ponds, streams, bike and equestrian trails. Indoor recreational facilities include a gymnasium, a pool, entertainment facilities, and other sports facilities. Also, the Devens Commerce Center is planning to build a new golf course.

#### Social Benefits

- Preservation of the surrounding communities and their way of life.
- Increased access to recreational and historical sites.
- Preservation of historic architectural buildings.
- Reduced perception of societal loss associated with base closure.

According to the Reuse Plan, redevelopment also will emphasize preservation of sensitive architectural and landscape designs. Vicksburg Square, a National Register historic district, will receive special consideration. Surveys conducted as part of the closure process identified 80 historic buildings and 29 historic archeological sites that will be preserved throughout the redevelopment.

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### For More Information

The Technical Appendix to this fact sheet provides detailed information on the economic impacts associated with this site, including the specific calculations used, sources of information, and possible limitations associated with the calculations. To obtain copies of the Technical Appendix for this fact sheet, or to learn more about economic analyses performed for this site or other Superfund sites, please contact:

John Harris, Senior Advisor for Economics,  
Office of Emergency and Remedial Response  
U.S. Environmental Protection Agency  
Mail Code 5204G  
401 M Street, SW



Washington, DC 20460  
(703) 603-9075  
[harris.john@epamail.epa.gov](mailto:harris.john@epamail.epa.gov)

For further information about the cleanup and redevelopment of the Fort Devens site, please contact the site manager:

James P. Byrne, Remedial Project Manager  
U.S. EPA Region 1  
JFK Federal Building (HAN-CAN1)  
Boston, MA 02203  
(617) 573-5799  
[byrne.james@epamail.epa.gov](mailto:byrne.james@epamail.epa.gov)

Jim Chambers, BRAC Environmental Coordinator  
Department of the Army  
Devens Reserve Force Training Area  
33 Quebec Street  
Box 100  
Devens, MA 01432  
(978) 769-3114  
(978) 769-3133 (fax)

Jim DeLorenzo, Beneficial Uses Coordinator  
U.S. EPA Region 1  
90 Canal Street  
Boston, Massachusetts 02114  
(617) 565-3420  
[delorenzo.jim@epamail.epa.gov](mailto:delorenzo.jim@epamail.epa.gov)

Economic impacts presented in this fact sheet represent positive local impacts occurring at and around the site. Available information does not allow a determination of whether or how many of the jobs associated with the cleanup and redevelopment are new. Consequently, the economic impacts presented in this fact sheet are not "net" impacts. Although the redevelopment of the site also may generate other positive impacts throughout the rest of the economy, this analysis does not quantify these indirect effects or estimate any offsetting negative effects or costs.

Whenever information specific to the site was available, it was used. However, certain numerical estimates are, of necessity, based on general formulas rather than site-specific information and are, therefore, approximations. Although there may be uncertainty associated with many of these estimates, point estimates are used throughout the fact sheet. The economic impacts reflect the information available at the time of fact sheet development and may change over time. Monetary estimates are expressed in July 1997 dollars. Estimates of jobs associated with cleanup and redevelopment are presented as annualized values, reflecting the average number of jobs per year.

## Technical Appendix

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