

Air Force Civil Engineer Center



Community Involvement Review

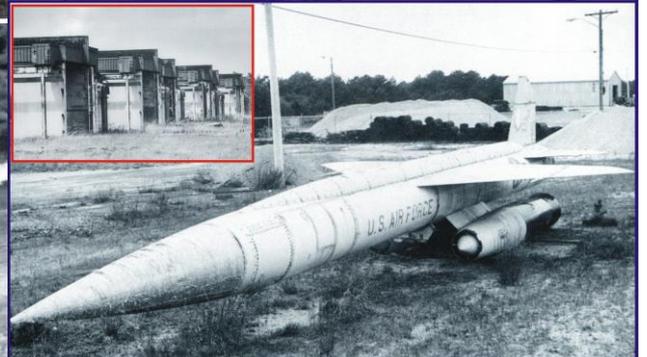
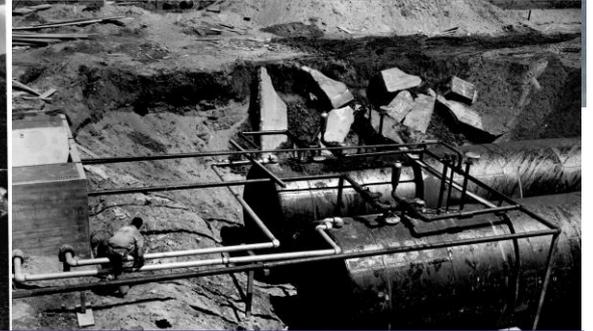
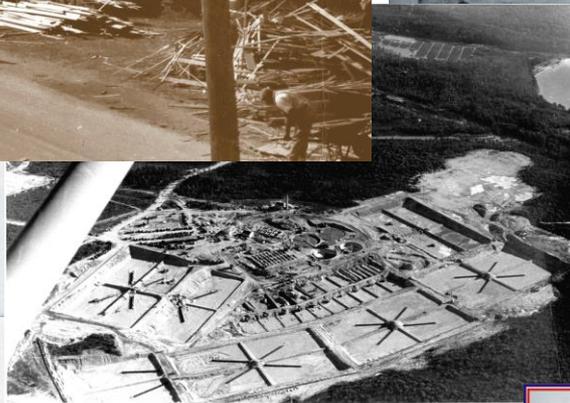
Joint Base Cape Cod, MA



JBCC Aerial View

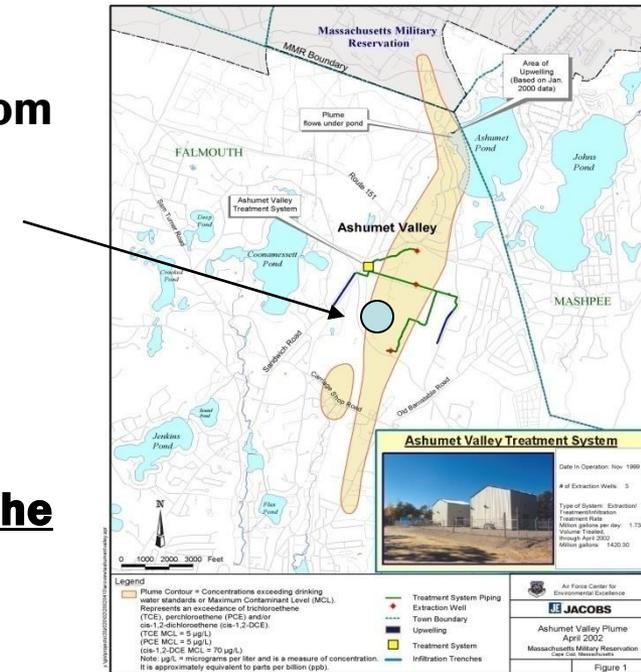


Where did the contamination come from?



Early State of Program and Community Relations (1978-1996)

- In 1978, contamination was detected in a town of Falmouth water supply well, located over 1.5 miles away from the base.
- There was mistrust and concern in the community, and virtually no opportunities for the public to be informed and involved in the process.
- The only advisory committee at the time was closed to the media and general public.



- Sampling of local private drinking water wells begins, with some having JBCC-related detections of contaminants in them.
- Otis Air National Guard Base/Camp Edwards was added to the National Priorities List (Superfund) in 1989.



Media Coverage in the 1990s

Boston Sunday Globe

SUNDAY, NOVEMBER 14, 1999

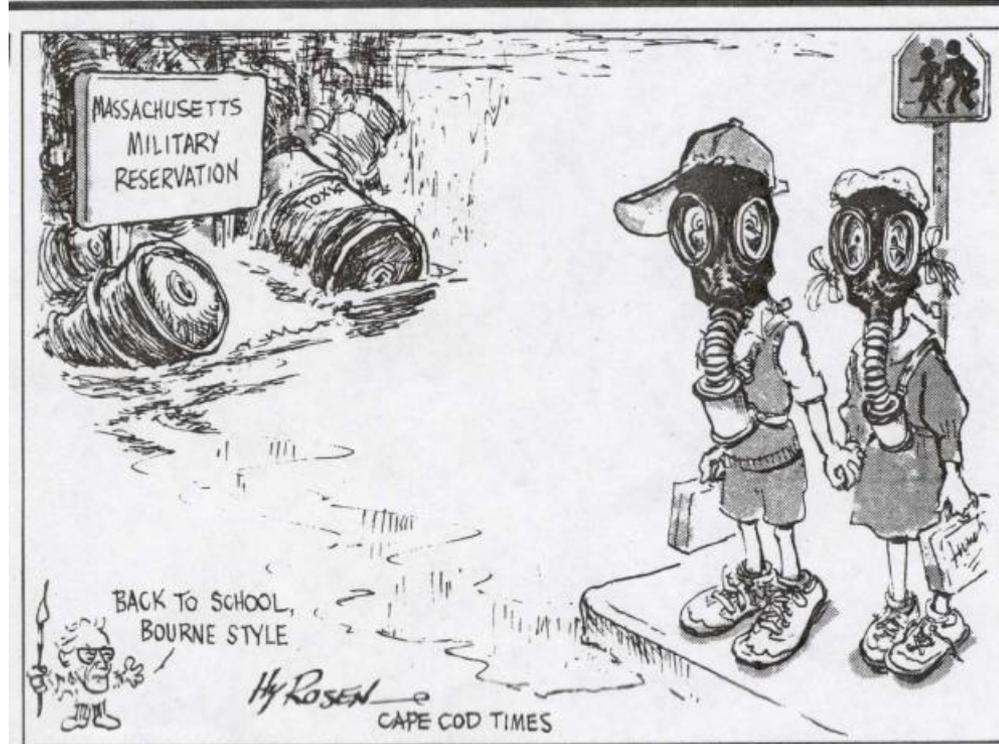
ENVIRONMENTAL INJUSTICE GOVERNMENT AS POLLUTER

The nation's dirty, big secret



RANGE OFFICER GLEN MOHR walking past unexploded ordnance at Massachusetts Military Reservation on Cape Cod, which was found to be significantly contaminated.

•November 1999



•September 1995



60% Design – A Critical Turning Point

- A roller coaster ride of emotion was felt by the community transitioning from 1995 to 1996 as a 60% design outlining plans to address all the plumes simultaneously was unveiled.



- The 60% design raised serious reservations about the ability to implement it without adversely affecting ponds, rivers and the aquifer in general.

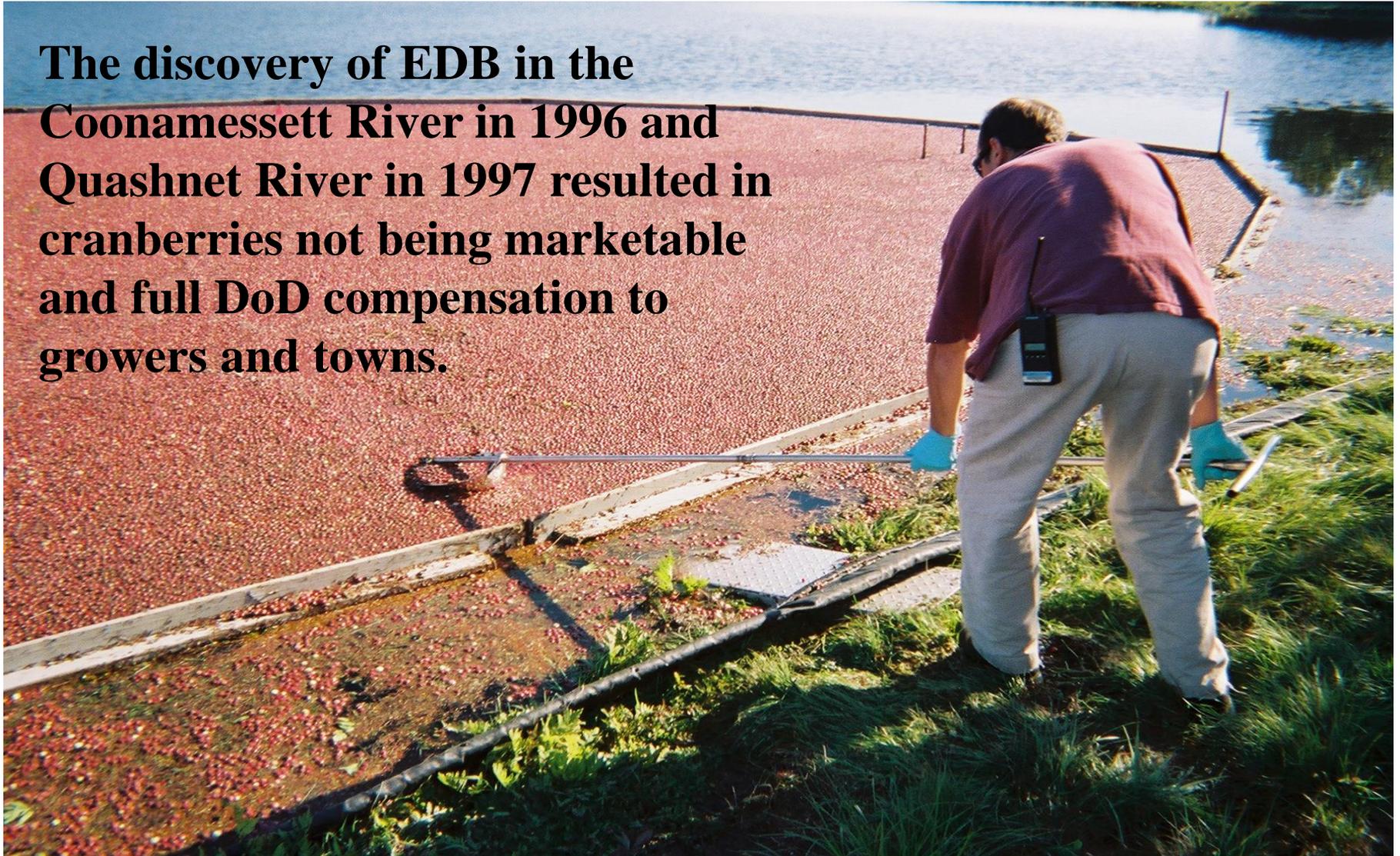
- This resulted in a big setback and necessitated a transfer of management control from the Air Guard to AFCEC.



Cranberries at JBCC



The discovery of EDB in the Coonamessett River in 1996 and Quashnet River in 1997 resulted in cranberries not being marketable and full DoD compensation to growers and towns.





Since 1985, many people – including some military leaders – have credited citizen advocates as being the catalyst for cleanup at Joint Base Cape Cod.





Residents were afraid and concerned about the safety of their drinking water and area ponds, elevated cancer rates, and property values.



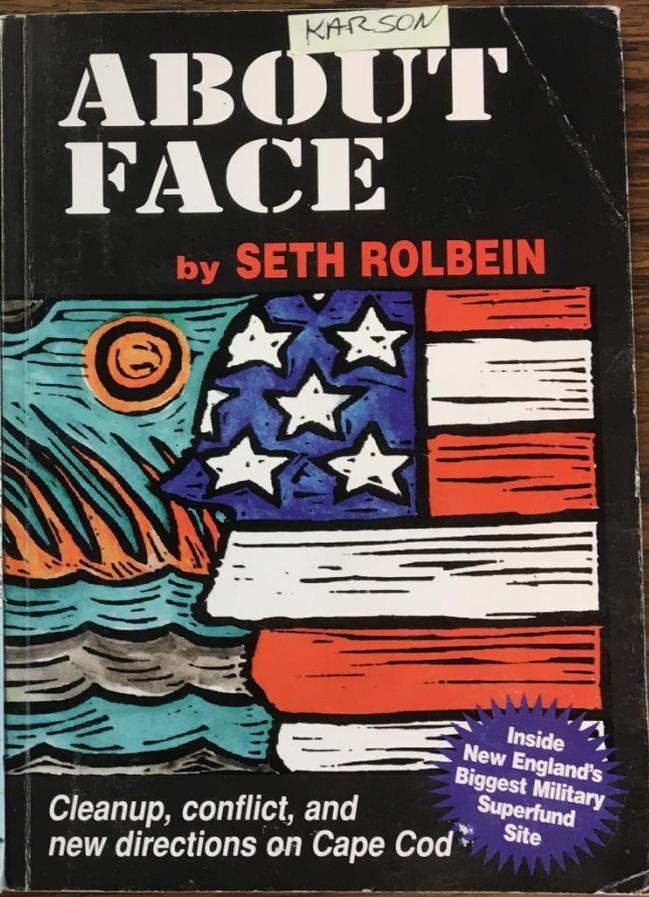
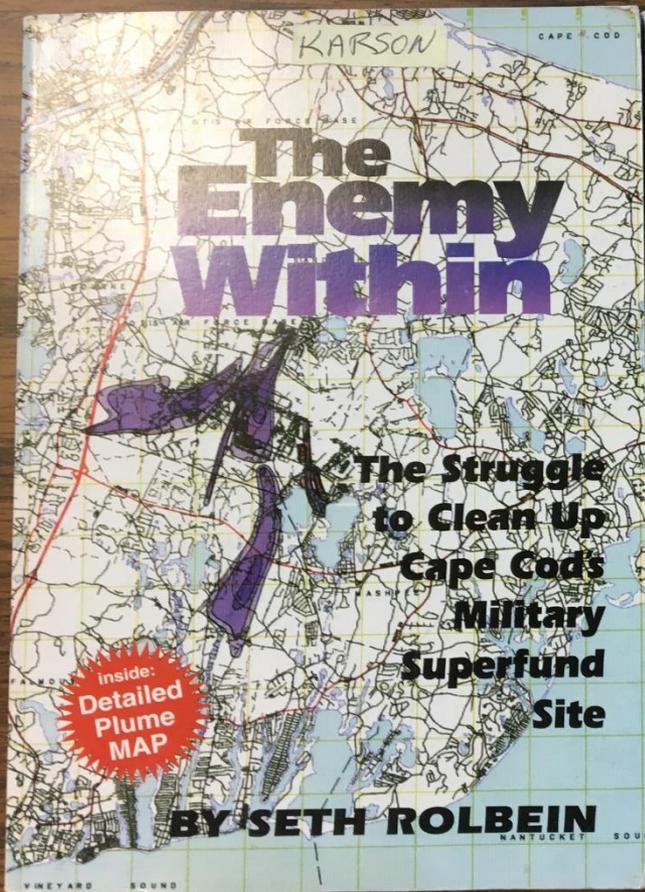
Homeowners in Falmouth receive a notice from the Air Force that their private wells may be contaminated, need to be tested, and bottled water is being delivered as a precaution.



Residents place a sign where contamination was in the Coonamessett River, Falmouth.



Published by Association to Preserve Cape Cod





JBCC Media Coverage



“A major six-part investigative series by the Cape Cod Times (Hyannis, MA) found the cleanup of the Massachusetts Military Reservation on Cape Cod has been a \$165 million failure as the base continues to pollute. Federal, state and military officials couldn't halt the flow of poison in the Upper Cape's ground water.”

- **Published Jan. 5-10, 1997**

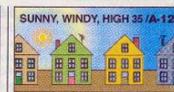


SPORTS

Niekro makes baseball /B-1
Parcells takes on friend
Friars top Villanova

BUMPER CROP

Nantucket scallopers enjoy a rebounding harvest /C-1



Who is responsible?

We did what the regulators told us to do. They sanctioned everything we did.

We wondered if the cleanup management was the best that it could be.

EPA's response to the environmental problems at the base was not nearly urgent enough.

Senators Warner and McCain were out to cut or eliminate base cleanup funding. We had to focus our energies on maintaining the flow of funds.

MIKE MINOR, Base cleanup manager under National Guard Base
PAUL MARCHESAULT, Environmental Protection Agency project manager at the base
TRUDY COXE, State executive secretary of environmental affairs
JOHN DEVILLARS, Environmental Protection Agency New England regional administrator
EDWARD KENNEDY, Senator (Democrat, Massachusetts)
JOHN KERRY, Senator (Democrat, Massachusetts)

It's a bureaucratic nightmare dealing with the federal government and the military.

They were poor managers, and the problem was bigger than they could handle.

It was the community that wanted the simultaneous phase-out containment plan. We were going along with what the community wanted.

I don't think this got on my radar screen until '95. We still know to be as huge an issue as it is now. In 1991? Well, maybe shame on everybody.

THOM CARSK, State representative (Democrat, Boston)
DAVID VAN GARGEN, Air National Guard, chief environmental director
DAN SANTOS, former base cleanup manager
JOHN WARNER, Senator (Republican, Virginia)
JOHN MCCAIN, Senator (Republican, Arizona)
WILLIAM WILD, Governor of Massachusetts

When the new National Guard Bureau management team started in 1994, management of the cleanup program went from fair to poor.

MARK CORSETT, Aide to former U.S. representative Gerry Studds

THE COMMUNITY

Staff photos by JAMES WARD

Panel splits over benefits investment

Social Security advisers offer three plans, including 100% stock investment.

By MARTIN CRUTSINGER THE ASSOCIATED PRESS

WASHINGTON—Billions of dollars in Social Security money would be invested in the volatile stock market rather than in safe government bonds under proposals forwarded by a splintered government panel.

A year behind schedule, the Social Security Advisory Council released its final report yesterday on how to rescue the government's biggest benefit program from bankruptcy in the next century.

However, the panel produced not a single set of recommendations.

Please see SOCIAL/A-12

THREE PLANS

- Maintain Benefits:** Little change to current benefits and tax rates. Suggests further study aimed at investing up to 45 percent of Social Security funds in the stock market. All of trust funds are now invested in Treasury bonds.
- Individual Accounts:** Increase Social Security payroll taxes by 1.5 percent of payroll, with the new money invested in individual accounts on behalf of workers, who could choose from a limited number of options. The current payroll tax is 12.4 percent, payment split between workers and employers.
- Personal Security Accounts:** divert 5 percent of a worker's payments to the private sector and allow individuals to decide where to invest their money. Increase payroll tax by 1.5 percent.

Trail of excuses stretches to Washington

THE POLITICIANS
Cape Cod Times

Although a long-term assault would have been more effective, politicians repel instead for a striding strategy when dealing with the massive Massachusetts Military Reservation cleanup.

They chose their targets, few in knowledge of some danger, then flew off to get and temporarily regained some political advantage.

But their tactics did little to lessen along the \$165 million cleanup.

Every politician has an excuse for this: "We don't know how to clean up the thing," said former U.S. Rep. Gerry Studds, who held office from 1972 to 1996. "I gather we do know how to generally contain the plumes, from moving further than they are... If we had unlimited funds... we would not know how to spend them at this point given the level of our technological knowledge."

"I think the folks need to consummate the cleanup," said Gov. William Weld, who does not see it as a state problem. However, he said, "I do feel the obligation to tell the Air Force

THE REGULATORS
Cape Cod Times

I verybody remembers it as a bitterly cold day a year ago. Deputies from John DeVillars and Trudy Cox, the state's top environmental regulators, met in Galumet to flow the antiquation that had grown between them.

Standing next to "The Berril" on Scraggy Neck Road near the railroad bridge, huddled in their thick coats, the pair pledged to work together to clean the Massachusetts Military Reservation cleanup.

And they vowed to stop the Landfill solvent plume seeping under Cataumet before it reached the sea.

It was a kiss-and-make-up affair: Cox, state environmental affairs secretary and DeVillars, New England regional administrator for the U.S. Environmental Protection Agency, had exchanged a few heated letters during the previous month.

Cox is an environmental noble-rouser who cut her teeth as head of a grass-roots group formed to save Rhode Island's Narragansett Bay. She accused

Studds had overbroadened all other business in town.

The selection were supposed to vote yesterday on the renewal, but instead unanimously rejected Hinkley to address it writing by Thursday how he will improve certain areas of his work. The board will then meet to review his report Friday and vote again Jan. 13.

"I feel more hopeful now than I have in many, many weeks that we can work together to make this work," said Selectman Ira Wood, who has supported Hinkley.

Although the delay could be construed as the first step toward reuniting Hinkley, none of the three selectmen who disapproved of his performance showed any indication they would change their minds.

Please see HINKLEY/A-12

Town administrator gets second chance

Wellfleet board to recast contract vote

By MIKE IACUSSA CONTRIBUTING WRITER

WELFLEET — Selectmen decided yesterday to work closely with Town Administrator John Hinkley over the next week before voting again whether or not to rehire his contract.

The status of Hinkley's contract has caused havoc in town since the selectmen voted not to renew it Nov. 23. The vote was 3 to 2.

A week later, after receiving a petition signed by 231 residents, the selectmen decided to reconsider that vote. Since then, the de-

Needy Fund surpasses goal, sets record for contributions

CAPE COD TIMES

It's over the top!

Contributions received yesterday have pushed the Cape Cod Times Needy Fund over the campaign goal, with a little room to spare.

The total now stands at \$211,215, which not only exceeds the \$210,000 goal for this year, but also sets a new record for support.

And the drive is not over yet. The books will stay open, with the final total and listing of additional contributions to appear in the Sunday Times.

"The success of the drive this year indicates once again what a caring and supportive community this is," said fund president Scott Himmstead.

"Not one year in 25 that we have seen NEEDY/A-2

**Campaign goal: \$210,000
Total to date: \$211,215**

SPECIAL REPORT

SUNDAY Precious water: The Cape Cod's future water supply may dry up in 10 years if filled with toxic waste to clean up the spill.

YESTERDAY Mismanagement: The cleanup has been bungled from the start.

TODAY From Cape Cod to Washington, politicians and regulators failed to respond adequately to the crisis.

TOMORROW Center, critics: How do we get the state to pay for the cleanup and pay for the cleanup? Will the state pay for the cleanup? Will the state pay for the cleanup?

THURSDAY Violations: The military is violating key provisions of a federal cleanup order.

FRIDAY Still polluting: The military is still polluting the water.

The future: The future is uncertain.

INSIDE

A success elsewhere: In Capon, Utah, a base with problems sends the Massachusetts Military Reservation to a success story while the Upper Cape's military installation struggles. A-4

SPECIAL REPORT

SUNDAY Precious water: The Cape Cod's future water supply may dry up in 10 years if filled with toxic waste to clean up the spill.

YESTERDAY Mismanagement: The cleanup has been bungled from the start.

TODAY From Cape Cod to Washington, politicians and regulators failed to respond adequately to the crisis.

TOMORROW Center, critics: How do we get the state to pay for the cleanup and pay for the cleanup? Will the state pay for the cleanup? Will the state pay for the cleanup?

THURSDAY Violations: The military is violating key provisions of a federal cleanup order.

FRIDAY Still polluting: The military is still polluting the water.

The future: The future is uncertain.

INSIDE

A success elsewhere: In Capon, Utah, a base with problems sends the Massachusetts Military Reservation to a success story while the Upper Cape's military installation struggles. A-4

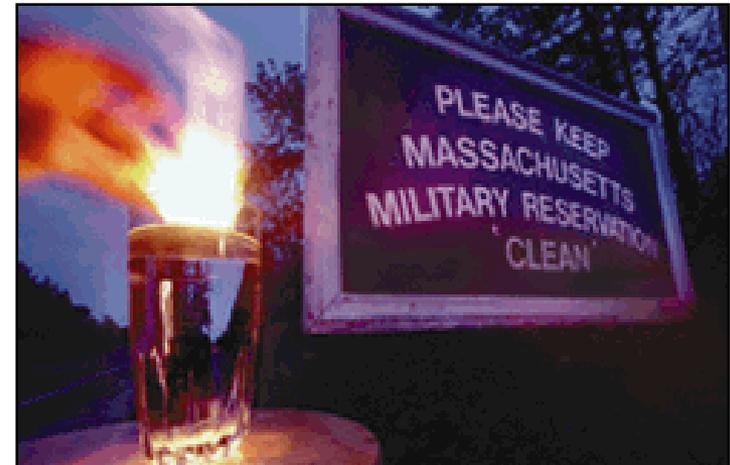


AFCEC's goals

- Conduct cleanup of sole-source aquifer quickly
- Establish community-based program
- Develop a collaborative process with the regulatory agencies
- Regain public trust **by obtaining THEIR approval of the process**

AFCEC challenges...

- Negative public perception
- Extensive media coverage
- Intense political/regulatory reaction
- Expectations for expedited investigation and remedy implementation





DEPARTMENTS OF THE ARMY AND AIR FORCE
WASHINGTON DC 20310



September 18, 2003

Honorable Mitt Romney
Governor of Massachusetts
State House, Room 360
Boston, Massachusetts 02133

Dear Governor Romney:

We write to respond to concerns raised in an August 6th meeting hosted by Senator Therese Murray regarding the Army's and Air Force's requests to the Commonwealth to extend our leases at the Massachusetts Military Reservation (MMR). Attendees sought assurances of our intentions with respect to the Upper Cape's water needs.

We are very aware of the critical importance of adequate drinking water supplies for the residents of the Upper Cape. The Air Force and the Army have demonstrated our firm commitment to restore needed drinking water supplies contaminated by military operations by devoting very substantial resources and efforts over many years. Over the past 18 years, the Air Force Installation Restoration Program, with the Army historically sharing approximately 40% of the costs, has invested \$485 million in environmental cleanup at MMR, including \$38.5 million in 2002 alone. This investment includes building eight groundwater treatment systems that are treating 11 million gallons of groundwater every day; designing treatment systems for three additional groundwater contamination plumes; and investigating the need for treatment systems for two more plumes. In 2002 alone, Air Force treated 4.3 billion gallons of contaminated groundwater, and excavated and disposed off-Cape 4,500 tons of contaminated soil. Likewise, the Army's Impact Area Groundwater Study Program has invested approximately \$180 million since 1997, including approximately \$54 million this year alone, to implement an environmental restoration program specific to the Camp Edwards portion of MMR.

We have worked closely with your state regulators and EPA Region I, as well as with the surrounding communities, to define the tasks and timelines associated with our investigation and cleanup. We reiterate that these lease extensions will not affect the pace of our investigation and cleanup efforts. Although our efforts will continue to be subject to availability of funds appropriated by Congress, we have programmed the resources and will continue to seek the funding necessary to execute these programs on the established timelines. Upon completion, we have every expectation that these resources will be remediated in accordance with applicable law and be available for use.

-2-

In the meantime, we recognize that past military operations have had an impact on the availability of some resources on the Upper Cape. Accordingly, the Army and the Air Force funded and constructed a regional water supply system that is designed to provide up to 6 million gallons of drinking water per day. This system is operational and is meeting the water needs of the Region. It will continue to be available to the Region even after previously contaminated wells are brought back on line, and we anticipate it will represent a net increase in water supply system capabilities over pre-contamination capacity.

The Air Force and Army consider water supply development, including any necessary associated infrastructure, to be a decision within the purview of state and local officials, who have the responsibility for decisions respecting growth, economic development, and resource management. When access to validated water requirements is impaired due to contamination from MMR that exceeds applicable and duly promulgated federal or state regulatory standards and for which the Air Force or Army is responsible, the Air Force or Army will reimburse the affected water district for the reasonable incremental costs to develop those water supplies that are directly attributable to that contamination, i.e., costs over and above those that the water district would have incurred in the absence of the contamination.

Finally, we take seriously our participation, together with the neighboring towns of Bourne, Falmouth, Mashpee, and Sandwich, in the Commonwealth's efforts to ensure a coordinated approach to regional water supply issues.

We appreciate your continued involvement in these important issues of mutual interest and look forward to working with you, members of the Cape delegation, and the surrounding communities to support our military training requirements while protecting human health and the environment.

Sincerely,

Raymond J. Fatz
Deputy Assistant Secretary of the Army
(Environment, Safety and Occupational Health)

Maureen Koetz
Deputy Assistant Secretary of the Air Force
(Environment, Safety and Occupational Health)



What did JBCC Team do to turn the tables around back then?



- Substantial increase in project funding and staff (over 300 contractors, 25 government staff. (6 full time CI)
- Quick remedy selection and massive construction effort.
- Established better working relationship with area news media and local residents.
- Conducted 75-100 team and neighborhood meetings/yr.
- Gave numerous tours, speaking engagements, etc.
- Distributed hundreds of fact sheets, news releases, and neighborhood notices.
- Created an IRP website and later an on-line Administrative Record.
- Provided all information possible to the public, libraries and news media quickly.

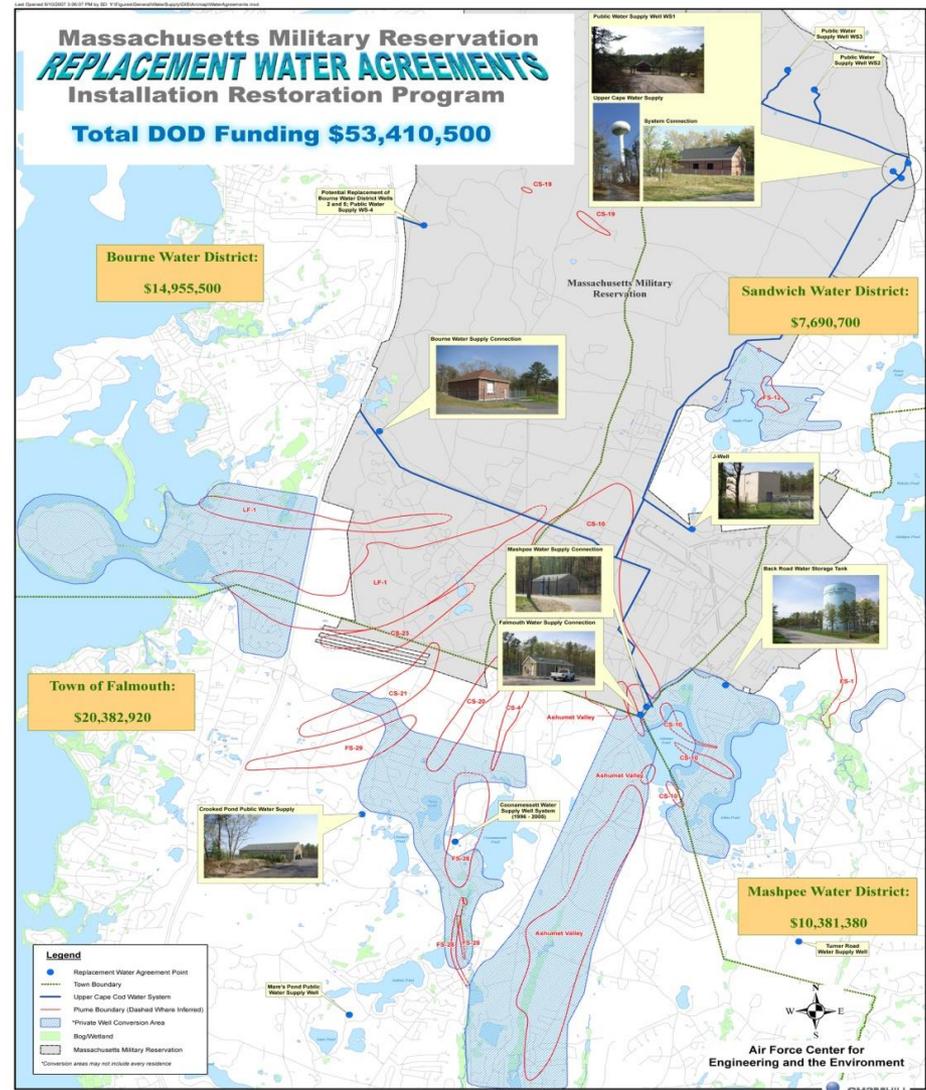


JBCC Restoration Program Review

Addressing Off-Base Exposure



- Bottled water
- Water hookups
- In-home water filtration units
- Private well sampling
- Wellhead treatment at municipal wells
- Replace impacted municipal wells
- Increase water supply with new wells





Media coverage late 1999 - 2010s



Triumph of cooperation:

Residents, military celebrate
plume treatment operation

Thursday, September 23, 1999

By JEFFREY BURT
STAFF WRITER

MASSACHUSETTS MILITARY RESERVATION – Thomas McCall recalled that time a year ago, when the debate was raging over how to clean up the plume of contaminated ground water known as Landfill-1.

The Air Force believed the natural processes in the ground would get rid of the pollution in the plume just as quickly as if a treatment system was built.

Residents and regulators vocally opposed the idea of letting nature take care of the plume, which stretches from the base west through Cataumet and into Buzzards Bay.

"We had a scientifically valid, lower-cost, longer-term solution with natural attenuation that the

public just didn't buy," McCall, assistant secretary of the Air Force, said yesterday.

Air Force officials and engineers regrouped and came up with a system that treated the most contaminated parts of the plume and let the rest go, a proposal more palatable to residents and regulators.

Yesterday, in a tent next to the treatment plant for LF-1, more than 50 residents and regulators, local politicians and military officials, celebrated what they called a triumph of cooperation.

"It's all about people," said Bourne Selectman Haydon Coggeshall, who was praised for his work. "It's people who got it done."

The \$10 million system – which includes treatment wells along the MMR border that remove polluted water, which is treated and then put

back into the aquifer – is designed to remove most of the contamination within 20 years.

While both natural attenuation and a treatment system would clean up the aquifer within 40 years, treatment would remove 25 percent of the contamination within the first 10.

"I think we ought to invest in that," McCall recalled telling Air Force officials.

He said before the ribbon-cutting ceremony that it was important not only to ensure that the ground water be cleaned, but to also restore people's trust in the federal government.

He also pointed out that the LF-1 system marked a significant point in the cleanup of the MMR Superfund site. Currently nine treatment systems are working, and six more

are scheduled to go on line within the next three to four years.

George Seaver, a member of the Cataumet Civic Association and one of several residents applauded for their work, said he saw the work that led to the LF-1 treatment system in two phases.

The first was from 1993 to 1998, when "the whole process was wandering in the woods." There was no clear idea of what should be done, Seaver said.

It wasn't until last year, as military engineers and local residents began discussing ideas beyond natural attenuation, that things began to jell. Natural attenuation may work, Seaver said, but people with the civic association – including many who were engineers – were concerned about "hot spots" of high levels of contamination in the

plume. This compromise system addresses both issues, he said.

"I think it happened because it became a very local process," Seaver said.

Patricia Meaney, director of the Superfund program for the federal Environmental Protection Agency's Region 1, said the LF-1 system is an example of what can happen when local residents are given enough information to make informed decisions.

Meaney also said each treatment system is a step toward a better future with a cleaner environment.

"Twenty to 30 years from now, there will be a similar ceremony," she said. "Maybe some of you, or your children, or your children's children (will be there) and you'll be celebrating the closing down of these treatment plants."

CAPE COD TIMES



Rebuilding trust

Military making good progress restoring Upper Cape base

October 12, 2011 2:00 AM

Just before the start of World War II, the military planted a big footprint on the sands of Cape Cod.

Camp Edwards opened in 1939 and instantly became a training center for thousands of soldiers. Otis Air Force Base opened a short time later. And through the years, the Massachusetts Military Reservation has expanded and evolved, taking an ever-growing role with the Army National Guard, Air Guard, Air Force and Coast Guard.

Along the way, however, the environment took a beating. Buried munitions, fuel spills and seeping contaminants from decades of training exercises poisoned the groundwater under the MMR and flowed into the neighboring communities. As public drinking water was fouled, and concerns about elevated cancer levels surfaced, the tension grew between the military and the surrounding communities. The contamination became such a serious health concern that the Environmental Protection Agency ordered a cease-fire at the MMR in 1997 and there was an activist movement to wrest control of the state-owned land from the military.

If the story ended there, it would be an embarrassingly bad legacy for the military. Fortunately, the cease fire was not the final chapter. In fact, it's only the middle of the story, a turning point of sorts.

Today, more than three decades after the first plumes of contamination were discovered, the military has been cleaning up the base — and restoring the public's trust.

It hasn't been easy, or cheap. To date, more than \$1 billion in taxpayer money has gone toward the various cleanup efforts, regulated by both state and federal agencies. Currently, two cleanup programs are running at the MMR, one overseen by the Air Force, a federal Superfund program, and the other by the Army, which is regulated under the federal Clean Water Act.

The military now believes the contamination has been contained and most of the systems are in place to treat the polluted groundwater. It will take decades, perhaps up to 50 years, to know for sure, but it's undeniable that the number of new hot-spots being detected has been reduced to almost zero, and officials say environmental regulators on site have been sharply reduced, a sign that things are under control and proceeding as planned.

That's good news, of course. And the officials who have worked hard to repair the damage from decades of abuse deserve tremendous credit for impressive results.

From Pollution Source To Solution

Twenty years ago, the news about water pollution and the military base was all bad. The contaminants leaching from the base had recently been discovered, and they were poisonous and hidden in the groundwater that we were learning flowed under many of our homes.

Today, however, the big story about water pollution and the military base is much different. From the cause of such consternation, the base is now in the position to help keep nitrogen out of the groundwater and out of our bays.

It is the very definition of irony that the Massachusetts Military Reservation may now turn the table of history by helping to be part of the solution to the region's next bout with water quality problems.

With the help of consultants, MMR officials will over the next few months be considering what to do with the wastewater treatment plant in the far southeastern corner of the military base, near the Falmouth-Mashpee line. There are a variety of scenarios under review, but one possibility is to allow the base's neighboring towns to tie into the system.

Most importantly, it could result in treated wastewater from Mashpee, which still contains low levels of nitrogen, to be sent to the base's discharge site at the edge of the Cape Cod Canal. Though the nitrogen levels in treated wastewater are low, the volume of water is very high, so keeping it out of our bays would be a big plus. For Mashpee, this would mean fewer homes need to be sewerred. It could present a major cost savings on the larg-

est single public infrastructure project the town has yet faced.

Now this is not a panacea. The cost and energy involved in moving all that water to the base and then all the way over to the canal is enormous in its own right. Some sections of southeastern Mashpee are six or more miles from the base treatment plant. A more local approach, perhaps using alternative approaches to wastewater and nitrogen mitigation, has tremendous environmental benefits that should not be dismissed. The capacity of the base plant is nowhere near enough to handle all of Mashpee's wastewater.

But we agree with Mashpee sewer administrator Paul Gobell that it presents a significant opportunity. And this in a project that has recently seen more than its share of bad news and setbacks.

We would not go so far as to say that, given its problematic history, the base has a responsibility to help its neighboring towns. The base is one small piece of a much larger, national puzzle in determining how to cut costs in the government and the military in particular. Base officials have a lot to figure out that involves considerations far beyond the Upper Cape.

But nor should this past be ignored. The Upper Cape went through a wrenching, at times truly frightening experience as the old pollution from the base was revealed. For the base to now to come the aid of its neighbors would add a tremendous counterweight to its otherwise flawed environmental legacy.



Community Involvement Today



- ❑ **Conduct outreach** to potentially affected homeowners regarding testing of private wells, results, response actions, access for drilling test wells.
- ❑ Updates to local boards of health/selectmen.
- ❑ Conduct public meetings.
 - JBCC Cleanup Team (2-4 per year)
 - Neighborhood meetings (1-3 per year)
- ❑ Public comment periods for plumes and source areas (Traditional sites/plumes, MMRP sites, PFOS/PFOA).
- ❑ Review of area dig safes to identify potential water well installations in plume areas. Coordination with boards of health, well drillers, owners.

Key Lessons Learned

- **The community *is* knowledgeable *and* interested in what happens.**
- **Involve all stakeholders as early as possible.**
- **Provide the bad information with the good as soon as possible.**
- **Be open-minded and respond timely.**
- **The implementation of many cleanup actions will not be possible without stakeholder involvement and support. This applies to more than environmental work at JBCC.**
- **Bottom Line: acceptance and honesty with everyone including those vehemently opposed to the action/project at hand is critical.**
 - **Acceptance that the public has a right to be involved and have their concerns addressed in a timely manner. Not wanting to answer questions, delaying, or not fully addressing issues will lead to less, not more credibility, and reduces success.**
 - **Honesty with the public. If the public feels you are hiding, dodging, or just don't care then success will be difficult or impossible to attain.**



Current Observations

- **Much positive work has been accomplished by the IRP and IAGWSP in the past 20+ years.**
- **However, the credibility of these and other JBCC organizations can be compromised by the actions the military takes in dealing with the public. Many people see it as one base, one entity: “THE MILITARY”.**
- **All contamination, noise and other concerns should be addressed to the full satisfaction of the public as possible.**
- **AFCEC is currently involved with several per- and polyfluroalkyl substances (PFAS) investigations and remedy implementation. The process includes public participation activities (public comment period on proposed plans; updates to the JBCC Cleanup Team and stakeholder emails lists, etc.)**



Available Resources

**LESSONS LEARNED
by the
PUBLIC INFORMATION
TEAM**

at the

**MASSACHUSETTS MILITARY
RESERVATION'S
INSTALLATION RESTORATION
PROGRAM**

Lessons Learned (above), Installation Restoration Program groundwater plume book (right) and other program documents such as the letter from Governor Mitt Romney (below) committing to base cleanup for a lease extension for the base can be found on our webpage (top middle), at: <https://www.massnationalguard.org/JBCC/afcec.html>

The Installation Restoration Program (IRP) began in the early 1980's investigating and then cleaning up source areas and groundwater contamination at Joint Base Cape Cod (JBCC). The base was listed on the Superfund National Priorities List in 1989. The Air Force Civil Engineer Center (AFCEC) assumed managerial control from the Air National Guard in 1996.

Interim treatment systems were used to begin addressing many of the groundwater plumes while final decisions on how to address the contamination were ongoing. There are over 100 locations on JBCC that have been reevaluated as part of the Air Force cleanup efforts. Many of those locations were confirmed as source areas that contributed to soil and/or groundwater contamination at some point in the past and over 70 have been cleaned up. Sixty-one source areas have been identified as Superfund sites. Several potential source areas are being investigated under the Military Munitions Response Program and for emerging contaminants which were recently added to the AFCEC program.



AFCEC is addressing 18 groundwater plumes, four of which have been cleaned up as the contamination is now below applicable standards. There are nine IRP treatment systems currently treating a approximately nine million gallons of groundwater per day and those systems and the groundwater in the area of each plume are regularly monitored to verify that cleanup goals are being achieved. AFCEC owns and operates three 1.5 megawatt wind turbines that offset 100% of the power used by the treatment systems. The program continually looks at ways to optimize system operations and cleanup actions, and will be working with state and federal regulators to determine when cleanup efforts are complete and systems can be shut down.



As part of its cleanup efforts, the IRP has replaced impacted drinking water supplies located off base and connected over 1,300 homes in the area of groundwater plumes to municipal water. In addition, the IRP conducts extensive reviews to identify and test private wells in the vicinity of the plumes.

Questions may be addressed to:

Douglas Karson
Community Involvement Lead
322 East Inner Road
Off AFB Base, MA 02542-5028
Phone: (508) 968-4678, x2 Fax: (508) 968-4673
douglas.karson@us.af.mil

Public Notice

Public Comment Period on Document with Alternatives:
Engineering Evaluation and Cost Analysis, Non-Time Critical Residential Water Supply Wells, Tanker Truck Overflow

Joint Base Cape Cod Cleanup Team Meeting July 2

- 28 July 2021 JBCC Cleanup Team Meeting Agenda
- Draft 24 March 2021 Meeting Minutes
- MMRIR presentation
- A/GWS/P Update
- Emerging Contaminants Update (PFAS/1,4-dioxane)
- MMRP update

**Installation Restoration Program
at Joint Base Cape Cod**

Groundwater Plume Maps
and Information Included

2021

DEPARTMENTS OF THE ARMY AND AIR FORCE
WASHINGTON DC 20310

September 18, 2003

Honorable Mitt Romney
Governor of Massachusetts
State House, Room 360
Boston, Massachusetts 02133

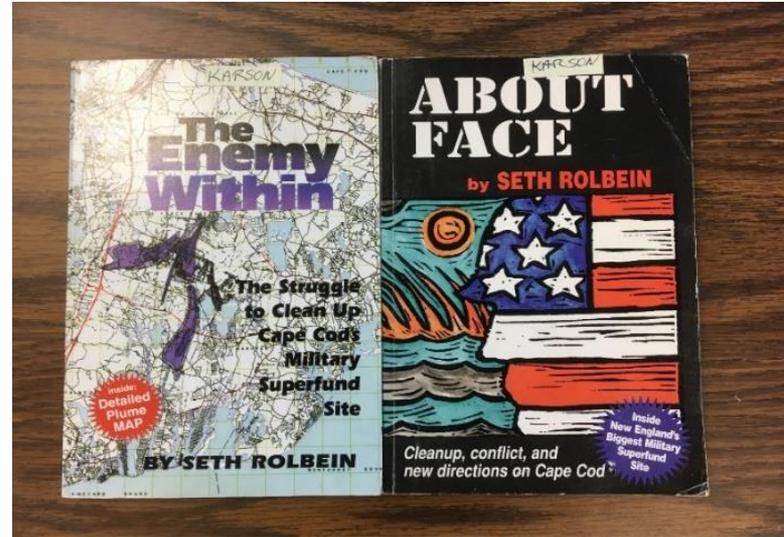
Dear Governor Romney:

We write to respond to concerns raised in an August 6th meeting hosted by Senator Therese Murray regarding the Army's and Air Force's requests to the Commonwealth to extend our leases at the Massachusetts Military Reservation (MMR). Attendees sought assurances of our intentions with respect to the Upper Cape's water needs.



Available Resources Continued

IAGWSP Website
<http://jbcc-iagwsp.org>



Two books were written about the cleanup efforts in the mid to late 1990s. Local libraries may have copies. They are for sale on several websites. The author or the Association to Preserve Cape Cod might be additional resources for obtaining copies.

AFCEC online administrative record.
<https://ar.afcec-cloud.af.mil>



AFCEC and IAGWSP Staff:
Doug Karson, 508.524.9206
Pam Richardson, 339.202.9360

Main Libraries of: Falmouth,
Mashpee, Sandwich and
Bourne