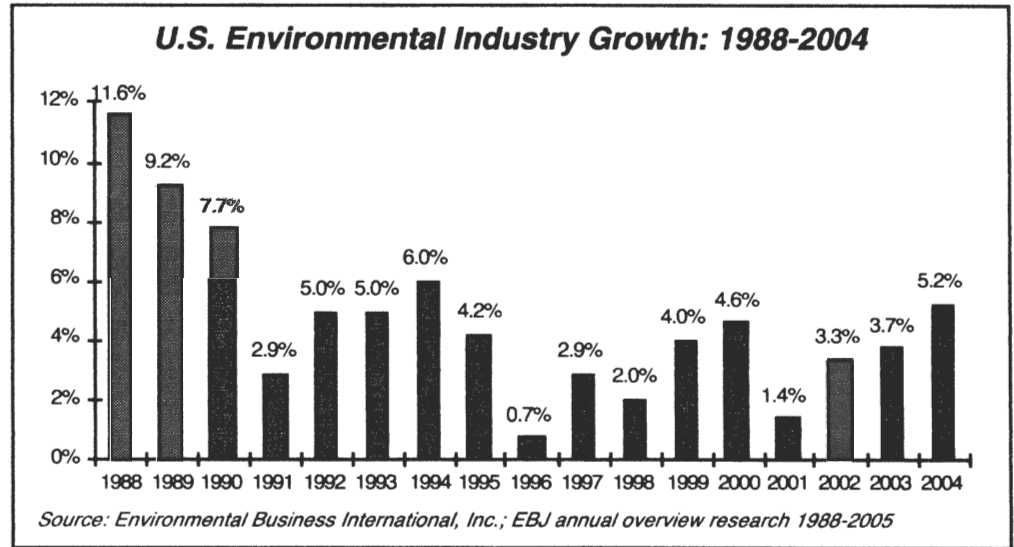


## ENVIRONMENTAL INDUSTRY: WHAT'S DRIVING THE CYCLE

Since EBJ started tracking the U.S. environmental industry in considerable detail in the year 1988, the industry appears to have gone through similar cycles. After the alarming revenue drop of what at the time we called the wake-up call year of 1991, growth picked up for a few years before a considerable drop five years later in 1996. The cycle repeated itself in 1997-2001. With the last three years showing moderate improvement and mid-year early returns for 2005 also fairly positive, perhaps the cycle is repeating itself yet again. That means, of course, that we better watch out for 2006.

But does an industry, and especially a somewhat disparate one of sometimes marginally connected set of segments like the environmental industry, really follow such cycles? The first place to look is at the segments themselves. The waste and water infrastructure segments, which represented well over half of the industry in the pre-EBJ early days and still 46% in 2004, have followed a fairly level trajectory of 3-6% annual growth since 1991. Conversely the resource recovery segment, a composite of secondary material sales each year, has been the most volatile (see chart on p.15), mostly due to wildly fluctuating prices. But even removing the segment leaves an industry chart with valleys on the same years. Core environmental service segments, and to a lesser extent the equipment segments, drive the cycle.

No doubt the economy has become a more prevalent factor—previous EBJ overviews and segment reports have concluded so—and indeed the two slowest years of U.S. GDP growth in the past 20 years were 1991 and 2001. The environmental industry has leveled at 2.2-2.3% of GDP the past 10 years, further establishing the more direct link, but there are other factors to consider. Political and policy changes contribute to up and down cycles, but not to be underestimated is the response of commercial service providers. This final consideration must go to the abilities of environmental service pro-



viders, consulting & engineering firms in particular, for responding to down years in the cycle with initiatives to change their business model. EBJ's tag line has long referred to 'a changing industry' and over the years we have seen C&E firms change from media-centric to customer-centric, from technical-driven to business-relationship-driven; we have seen service, client and geographic diversifications; and whole new ownership, compensation and incentive structures and even outright metamorphoses.

In short change occurs in the market, but also in the industry. And maybe its that change that effects the industry performance curves. So maybe as the environmental industry nears the end of its third five-year cycle since the onset of maturity, companies will not wait and respond to a downturn, but initiate internal change before broad market signals. Following are perhaps some companies doing just that.

### C&E EXECUTIVES TELL ALL

For perspectives from the front lines, EBJ asked selected executives from the consulting & engineering sector to share their thoughts on the current state of the industry, the key ways in which their sector has evolved over the past five to ten years, which business sectors today present the most promising opportunities, and which trends give them most cause for concern or hope.

#### ET Environmental, William Higginbotham, President & CEO

*State of the industry:* Because of our Design Build Services, we are more of a buyer of consulting & engineering services than a purveyor. I'm seeing the larger engineering service providers as interested in infrastructure—transportation, power, etc.—more than in providing the boutique environmental services, and I see them growing larger and larger to provide those infrastructure services. There's a growing separation be-

## Inside EBJ

**EBJ 2004 Overview:** EBJ presents revenue statistics for the environmental industry's 14 segments and C&E firms share key trends for 2005 ..... 1-3

**Business Features:** Segment profiles highlight developments and opportunities in: Cultural resources (4-5); Hazardous waste (5-7); Reverse auctions (8-9); Testing services (10-13); and Resource recovery (14-17) ..... 4-17

**Generator Profiles:** EH&S leaders HP, Xerox, Baxter, Exelon and GM discuss management, strategy and use of contractors ..... 18-23

**Opportunities:** Homeland security market evolving as DHS gets some traction; China emerges as the world's largest growth opportunity; and BRAC V is shaping up as the ultimate high-stakes brownfield market ..... 24-31

## BRAC V: SOLVING THE "DISPOSITION DILEMMA"

By Rebecca R. Rubin, Harry H. Zimmerman, Richard A. Engel and H. Lee Halterman

Across four prior rounds of Base Realignment and Closure (BRAC), the Defense Department (DOD) has sought to divest itself of unneeded military assets and place its investments into undercapitalized active bases. Defense Secretary Donald Rumsfeld has issued recommendations for a fifth BRAC round of closures at 33 major military facilities, the realignment of 29 more major facilities, and action at another 775 smaller ones. Depending on how the BRAC Commission responds to those recommendations, this round may be the largest one yet, offering substantial opportunity for developers and environmental contractors.

The process of divestiture, however, has traditionally been hamstrung by a spate of issues that we refer to collectively as the "disposition dilemma": the need to balance rapid turnaround of the entire property, thus ensuring the greatest benefit to the community, with the need to encourage maximum private-sector involvement. This dilemma is compounded by the need to balance competing benefits for the community—that is, the conservation and ecological imperatives versus the commercial development essential to community revitalization—and to do so at a reasonable cost.

The military departments began to address these issues in the late 1990s, by executing "early transfers" of contaminated BRAC sites to help communities expedite their reuse plans and to integrate cleanup actions with them. The increased use of environmental insurance helped consummate these deals and facilitated guaranteed fixed-price remediation contracts for BRAC sites. While both of these strategies helped dispose of sites with commercial value, they did little by themselves to help dispose of military land whose primary asset was its conservation value.

By 2000, both the Army and the Navy recognized that there was no explicit authority (or economic incentive) to dispose of this type of property, and they hired Marstel-Day to help develop a new "conservation conveyance authority" specifically for this purpose. This new authority was passed by Congress in 2003, providing a means to dispose of an estimated 200,000 acres of unneeded military land whose "highest and best use" was conservation. BRAC V will give DOD

the opportunity to apply innovative tools like this to "whole base" disposals that concurrently address economic development, environmental cleanup and ecological goals.

This review offers some thoughts about how cleanup contractors, master planners, land developers, and receiving entities such as federal, state, local and non-profit organizations can align their skills with DOD's fundamental objective under BRAC, which is to close and dispose of whole bases, from "fence to fence" wherever possible. As noted above, many closed BRAC bases have in the past, and will likely in the future, be transferred for conservation or recreational use.

First, a bit of recent history: The desire of receiving entities to achieve productive reuse of closed bases has clearly been at odds with the need to wait for DOD to complete environmental cleanups at those sites. In 1997, applying the same smart business practices that were emerging in the private sector at "brownfields" sites, DOD sought and received enabling legislation (a change to the CERCLA statute) in 1997 to allow privatization of the cleanups and conveyance of the property before the cleanup was completed. The theory was that early deed transfers coupled with private-sector takeover of the cleanups would unleash major advantages in cleanup decision-making, redevelopment timelines, and availability of investor capital and would bring the sophistication and business acumen of world-class master developers, progressive cleanup contractors, and insurance providers to the forefront in accelerating conversion and redevelopment.

In early pilot projects, CERCLA "early transfers" were coupled with funding grants to the recipients to perform the cleanups using a funding mechanism called an Environmental Services Cooperative Agreement (ESCA). This mechanism proved to be a powerful and flexible means to achieve the functional equivalent of private-sector brownfields solutions. As those first projects evolved, it became clear that the "fixed-price" all-inclusive ESCAs were achieving environmental regulatory closures without the chronic problems of incremental cost growth and time delays that were, and still are, characteristic of most DOD managed cleanups. While time delays and cost growth can be manageable for DOD at active military in-

stallations, they have proven to be almost universally incompatible with rapid and effective conversion of closed military installations. So effective were the fixed-price all-inclusive cleanups at BRAC bases that portions of DOD have now moved aggressively toward achieving similar results at active installations through the use of fixed-price and "guaranteed fixed-price" contracts (i.e., contracts with cost-cap and legal liability insurance coverage included in the agreement).

DOD and the receiving entities in the new BRAC round will most likely be soliciting the market for potential parties or teams of parties willing to acquire properties "as-is" and immediately. The vision is one of accelerated conveyance of the entire property at an installation, and full and complete privatization of the cleanups based on the brownfields model of integrating cleanups with redevelopment and long-term stewardship of the properties. Cleanup and developer teams that are able to step up to this new concept with cost-effective and timely acquisition proposals will be the victors in the competitive environment, but the real winners in this new approach will be the local communities where conversion and economic recovery, fueled by investor capital, market competition and innovative contractors, will be achieved 10 to 12 years sooner than has been the case at many installations under prior BRAC rounds.

We expect the military departments to make every possible effort this time around to reach agreements with property recipients to take the property right now and take it in its current environmental condition for a fixed price. The price might be positive or negative, meaning that if environmental cleanup costs are expected to exceed the market value of the property, DOD would expect to pay the difference as part of the transaction. The new BRAC legislation includes a provision that gives departments the ability to convey BRAC properties to recipients who are willing to absorb the cleanup costs. This authority was not available to DOD in prior BRAC rounds and opens whole new opportunities for direct property conveyances to businesses with the capabilities to finance and implement accelerated redevelopment and integrated cleanups.

Prior BRAC rounds were plagued by piecemeal property transactions, many of which have not yet been consummated even though it is now 10, 12, 14, or 17 years later. The concept of conveying discrete parcels

to different recipients on different timelines did nothing to accelerate the process and in many cases allowed for "cherry-picking" of the most desirable parcels while less desirable parcels languished for lack of incentives.

We would expect DOD to use the full suite of conveyance authorities available to it for BRAC disposals so that individual parcels can be conveyed to intended recipients, but it is also reasonable to expect DOD to insist that those transactions all occur "as-is and now." If property recipients are not willing or are unable to reach agreement with DOD for such transfers on those terms, we would expect DOD to find property recipients who are willing to take the property on those terms. If the overarching goal is fence-to-fence conveyance now, then it is also possible that the whole house of cards could collapse if one recipient declines and DOD could easily rationalize insisting on comprehensive transactions. The first team to agree to do that for reasonable price wins.

DOD has also had considerable success with fixed-price and guaranteed fixed-price contracts and may end up moving in that direction for those BRAC properties where accelerated as-is conveyances prove unworkable. It is hard to imagine DOD inflicting upon itself the pain and frustration of continuing with DOD-managed cost-plus cleanups at BRAC bases under this new round, but this may be a last resort if privatization cannot be achieved.

#### BRAC CONSERVATION TRANSFERS

The sublime forces of nature have presented themselves in all four prior BRAC rounds, with a surprising amount of the BRAC acreage targeted for conservation or recreational use. The Army, for example, transferred over 70% of its closed bases by acreage for such purposes. This acreage was sometimes a unified site, and at other times a smaller piece of a larger base designated for economic redevelopment. Federal land-managing entities such as the Department of Interior's U.S. Fish and Wildlife Service (FWS) and the National Park Service (NPS), their state-level counterparts, local communities and, more recently, private non-profit conservation organizations have all played a huge role in acquiring closed military bases. All have advanced the state of understanding that the economics of redevelopment may work better by allowing these natural attractions to exercise their intrinsic allure, attracting residents and businesses alike. As the head of the Fort McClellan Local Rede-

velopment Authority puts it: "Recently, one of our residents told me that living at McClellan was like living in a Norman Rockwell painting; what better comments could we have asked for?"

Those familiar with the prior BRAC rounds and their natural offerings tend to think in terms that are emblematic: the stands of old-growth long-leaf pine at Fort McClellan, Alabama; the bayous and Spanish moss overhangs of the Longhorn Army Ammunition Plant in Texas; the several hundred pairs of bald eagles and the great blue heron rookery at Savanna Army Depot in Illinois; the stands of maritime chaparral at Fort Ord, California; the scenic vistas of Camp Bonneville, Washington, the 60,000-acre lake embedded in the Sierra mountains of California's Sierra Army Depot; the least tern colony at Alameda Naval Air Station, California; the tall-grass prairie of Badger Army Ammunition Plant in Wisconsin; and one of the crown jewels of bay area wetlands, Skaggs Island Naval Security Group Activity overlooking California's San Pablo Bay.

Many of these bases, prior to closure, became natural sanctuaries over time as urban encroachment moved in around them. It is difficult to predict the total acres of natural areas that will be included in the new BRAC, but if the past is prologue, then hundreds of thousands of acres may become available for natural use in BRAC 2005.

In prior BRAC rounds, these sites presented a special case for the receiving entities and their teams of developers and cleanup contractors. Conservation sites may not generate as much revenue as they cost to operate and maintain. This in turn creates an economic incentive for intended property recipients to delay the conveyance of the property for as long as possible, deferring costs by leaving the sites in the defense inventory and effectively stalling the transfers. The presence of contamination adds to delays, both by raising the specter of liability for receiving entities such as FWS and NPS, which do not have a cleanup mission, and by raising questions about the suitability of intrusive cleanups on sites with sensitive habitat.

Unlike previous BRAC rounds, DOD now has the conservation conveyance authority enacted by Congress in 2003 to specifically dispose of both "clean" and contaminated conservation parcels—and to perpetually preserve their conservation values. This law, codified as Title 10, U.S. Code

Section 2694a, was specifically designed to address the concerns of all the stakeholders involved. These concerns were typical of many BRAC environmental issues, and represent a lesson in consensus-building for BRAC 2005.

Working with the Army and Navy in 2001, Marstel-Day hosted meetings with the Department of Interior, the General Services Administration (GSA—the federal government's property disposal policy agency) and national conservation organizations to develop conservation conveyance criteria for BRAC sites. This process was invaluable in articulating the interests and concerns of all involved. For example, FWS leadership supported this concept as a means of allowing nonprofit conservators to acquire critical habitat that the agency could not afford to manage or that was too contaminated for agency standards. Nonprofit conservators requested a right to subsequently convey these parcels to other conservation agencies, but only to other private non-profits or state and local governments with a conservation mission—a common exit strategy in the conservation community.

The final version of the conservation conveyance legislation addressed all of these concerns. It is a pragmatic law, imposing perpetual conservation deed restrictions that "run with the land" and establishing the authority to subsequently convey the property only to eligible entities (states, their political subdivisions and non-profit conservators) and only for conservation purposes. The law also permits recipients to pursue incidental revenue-producing purposes to offset their property management costs, and it allows the military departments to provide funds to them to perform environmental remediation and cleanup monitoring—including the cost of environmental insurance.

The Army used this authority in 2003 to convey roughly 60,000 acres of land at Sierra Army Depot, California, to a consortium led by two nonprofit conservators, with a plan to ultimately re-convey this property to the State of California. Just as important, the law also extends to non-profit organizations an authority previously available only to states and their subdivisions by permitting the non-profits to perform cleanup of these sites. This, in turn, permits cleanups to be managed by non-profits and their associated private-sector cleanup partners in a manner that is tailored to the ecology of the individual site.

The value of this authority for BRAC 2005 is its ability to solve several potential problems for communities, cleanup contractors and developers and thereby optimize their BRAC 2005 solutions. For example, conservation parcels can provide wetlands mitigation sites, stormwater and flood buffers, critical habitat or passive recreation areas required in community comprehensive plans. The ecological sensitivity of these parcels can justify risk-based spot cleanups, often at a lower financial and ecological cost than traditional "dig and haul" methods. Likewise, the "incidental revenue-producing purposes" discussed above have gained new value for these conservation conveyance parcels with the growth of mitigation banking. In addition to existing wetlands mitigation banking programs, the FWS recently established policies for "conservation banking," and a commercial carbon sequestration market is emerging.

The point here is that surplus military conservation land that appeared to have no value in previous BRAC rounds could provide the basis for successful "whole base" redevelopment of BRAC 2005 sites. Cleanup contractors and developers need to understand this if they are to successfully integrate conservation parcels into their BRAC 2005 plans.

By enabling transfers of property directly from the DOD to private, non-profit conservation groups, this powerful new authority permits those conservators not only to acquire the property but also to work with environmental regulators to manage the cleanup in ways that make sense from a standpoint of sensitive site ecologies. As a result, new relationships are forming between these land trusts (both local and national organizations) and local redevelopment authorities, states, and federal entities under BRAC. The land trusts become a private repository for these conservation and recreation properties, working with regulators and cleanup contractors to ensure a reasonably non-intrusive cleanup solution from an ecological standpoint as well as attracting private investment capital to help manage the refuge or park, and to create visitors centers and educational facilities.

What's more, the land trusts can also offer new options to traditional land-managing agencies, such as obtaining private environmental insurance (unavailable to the federal government, but critical to the private-sector land managers); permitting so-called "refuge overlays" on private land, in which

[www.ebiusa.com](http://www.ebiusa.com)

FWS effectively creates a refuge on lands acquired by a private party; and in some cases, serving as an intermediary to hold property and perform cleanup, ultimately conveying the site to a "takeout partner" at the federal, state or local level after cleanup.

### LONG-TERM STEWARDSHIP

The vast areas of military installations that have been and will continue to be valued for their natural or cultural resources may also be contaminated with ordnance or other chemicals. The perpetual dilemma for DOD and the environmental regulators is how to achieve remedies for these sites that are protective of human health and the environment without destroying the ecology in the process or spending exorbitant amounts of taxpayer funds on marginal gains in risk reduction.

At the same time there are concerns about assuring that land-use restrictions are enforced after the property is no longer owned or controlled by DOD. For many sensitive ecological areas, effective remedies might actually involve a combination of surface sweeps, spot removals, and long-term management of the site to assure control of human access as a means to manage risk. In these areas, it is within reason for DOD to provide financial support for long-term stewardship of land-use restriction in its calculus of total environmental cleanup costs, because such costs are actually just assuring the efficacy of the remedy that includes land-use restrictions. This is not likely to be a continuing DOD financial liability, but rather a fixed-price component—i.e., net present value of the funding stream to support that remedy oversight—that would be included in the overall property transaction. With the new authority for conveyance of property to eligible entities for conservation of natural resources and the companion authority for the military departments to pro-

vide those same entities with environmental funding through an ESCA, DOD now has the ability to move these properties into the hands of private sector conservators for long-term ownership and oversight.

All of these scenarios highlight the potential emerging market opportunities for environmental cleanup contracts in the next BRAC round—especially for those who are willing to work in a fixed-price mode and to do so based on existing site characterization information (it's all about financial risk and sophistication, as in brownfields redevelopment). The other aspect of these potential scenarios is that the clients for these contractors might be very different this time. Rather than DOD or local government agencies contracting for cleanups, BRAC V may be dominated by private-sector buyers and their teams of cleanup contractors making deals to acquire the properties directly.

In summary, the market should supply potential parties or teams of parties willing to acquire the properties "as-is" and immediately. Total fence-to-fence solutions should result in accelerated conveyance of the entire property at an installation and full and complete privatization of the cleanups. "Fence to fence" does not mean realizing just the economic redevelopment potential; it refers also to the need for property recipients to come to the table bearing knowledge, expertise and understanding about the natural resource components and the need for long-term stewardship of sites with sensitive ecologies. Cleanup and developer teams that are able to step up to this newer, more balanced concept of base conversion that embraces both economy and ecology, should bring with them cost-effective and timely acquisition proposals to help the defense department achieve disposal ten to twelve years sooner than has been the case at many installations under prior BRAC rounds. ■

*Rebecca R. Rubin is president and managing partner of Marstel-Day (Fredericksburg, Va.; [www.marstel-day.com](http://www.marstel-day.com)), a woman-owned, HUB Zone consulting firm that has undertaken several projects designed to assist federal agencies in improving their BRAC practices. >From 1998 to 2000, Ms. Rubin served as director of the U.S. Army Environmental Policy Institute, where she oversaw studies and collaborative research with universities, leading to the development of progressive environmental policies for the Army*

*Harry H. Zimmerman is a former director of the Navy BRAC program and is now Marstel-Day's operations manager. As the Navy's BRAC director, Mr. Zimmerman was responsible for the successful implementation of a \$6-billion investment program in base closure and redevelopment. He currently chairs the Private Sector Leadership Council of the National Association of Installation Developers, a forum dedicated to base closure and reuse issues.*

*Richard A. Engel, now a senior program manager at Marstel-Day, is the former head of the Navy Base Closure and Real Estate Support section, where he pioneered the Navy's conservation conveyance and encroachment partnering programs. Mr. Engel also implemented the Marine Corps' housing privatization program and its family housing and barracks modernization programs.*

*H. Lee Halterman, a partner at Marstel-Day, worked in several positions for former U.S. Representative Ronald Dellums, including policy director and general counsel. He was Rep. Dellums' principal spokesperson and was responsible for the oversight of national security policy, foreign policy, and export control policy, as well as the Department of Energy nuclear weapons, arms control and environmental restoration programs.*