



## THE TOP ENVIRONMENTAL FIRMS

While Web-based upstart outfits are moving at light speed, environmental engineering firms steadily ease into the next stage of their development

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# The 'Other' E-biz Continues to Grow

**T**he environmental market could be called the *other* E-business. ENR's 1999 Top 200 Environmental Firms bear little resemblance to Amazon.com, *ebay* and other high-flying, Internet-driven, high-tech ventures. The ENR 200 are not rewriting conventional economic theory, spinning out lucrative IPOs almost weekly or creating an expanding class of 20-something millionaires.

No, this realm is a bit more staid: plain as dirt, elemental as air and water and about as sexy as hauling out the trash. Its business still is judged in conventional terms. Clients expect tangible results. Big government clients like the Dept. of Defense and the Dept. of Energy are pushing harder than ever before to see quantifiable progress in cleaning up their contaminated sites. Industrial clients who want to concentrate on their own core businesses are trying to outsource to outside specialists, as much as possible, the management of waste-stream byproducts. For the service provider, keeping the client in compliance with state and federal regulations is more than a goal—it is a prerequisite to getting the deal.

Likewise, municipalities face the twin challenges of expanding populations and ever-stricter state and federal standards for water and wastewater treatment. These owners expect their design engineers and contractors to provide infrastructure that will surpass established benchmarks for quality, durability and costs.

The older E-business has grown steadily since 1970, the year marking the first Earth Day observance, the establishment of the U.S. Environmental Protection Agency and the enactment of the Clean Air Act. Public support for a cleaner environment, aided by a regulatory jump start, created a robust new service sector that enjoyed a period in the late 1970s and 1980s as a Wall Street darling. Those golden days of green may be gone forever, but what remains is a legitimate, steadily expanding global economic sector.

In 1998, the Top 200 market totaled \$26.7 billion in revenue, adding \$2.6 billion to the previous year's total, an increase of nearly 11%. Once again, hazardous waste, water and wastewater treatment dominated this year's list, account-

## THE 1999 TOP 200 AT A GLANCE\*

VOLUME			
	DOMESTIC \$ BIL.	INT'L \$ BIL.	TOTAL \$ BIL.
REVENUE	20.6	5.7	26.3
PROFITABILITY			
	NUMBER OF FIRMS REPORTING*	AVERAGE % OF PROFIT/LOSS	
PROFIT	106	6.3	
LOSS	8	10.1	
CORPORATE STRUCTURE			
	NUMBER OF FIRMS		
MADE ACQUISITIONS	32		
ADDED STAFF	101		
REDUCED STAFF	12		
OWNERSHIP			
	NUMBER OF FIRMS REPORTING	TOTAL %	
PUBLIC	37	19.0	
PRIVATE	158	81.0	

MARKET ANALYSIS			
TYPE OF WORK	REVENUE \$ MIL.	% OF TOTAL	
HAZARDOUS WASTE	7,802.8	29.2	
NUCLEAR WASTE	2,661.9	10.0	
WATER	5,883.8	22.0	
WASTEWATER	5,515.2	20.6	
SOLID WASTE	1,304.4	4.9	
AIR	1,389.1	5.2	
COMPLIANCE	1,468.0	5.5	
OTHER	711.3	2.7	
PRIVATE	13,327.0	49.9	
FEDERAL	7,799.9	29.2	
STATE/LOCAL	5,595.5	20.9	
INTERNATIONAL REGIONS			
	NUMBER OF FIRMS	REVENUE \$ MIL.	% OF TOTAL
CANADA	24	254.1	4.4
LATIN AMERICA	52	950.9	16.4
EUROPE	47	2,905.7	50.2
ASIA/AUSTRALIA	53	853.1	14.7
MIDDLE EAST	20	737.3	12.7
AFRICA	10	82.8	1.4

\*Among firms that provide information. Numbers have been rounded.

ing for 70% of the total market.

Consolidation and acquisition, trends that marked previous years, again were catch phrases in 1998. At the top of the heap for the second year is U.S. Filter, reporting nearly \$5 billion in revenue, up from \$2.9 billion in 1997. The master consolidators devoured enough small fry to position itself for a \$6.2-billion buyout by Vivendi, the French utility and media conglomerate (ENR 4/5 p. 16).

Palm Desert, Calif.-based U.S. Filter is "now in the process of integrating GDE (Générale des Eaux)," Vivendi's global water and wastewater treatment arm, says U.S. Filter President Richard J. Heckman. "We'll have one big company at the end of the summer...a \$13-billion company," he says, approaching the size of Coca Cola, with 80,000 employees in 120 countries. Heckman says the world market for water is \$900 billion a year and

"that's low. If Walmart sells \$100 billion worth of goods, I have a hard time believing all the water in the world is only three times that."

It can be perilous being near the top of the Top 200, however. Consider Philip Environmental Services Group, a Canadian consolidator whose two-year buying spree pushed it into third place last year. Dropping off the ENR Top 200 is the least of the firm's woes. Accounting and inventory irregularities triggered a spate of lawsuits and a stock swoon that landed Philip in Chapter 11 bankruptcy proceedings. The company received permission to extend its reorganization plan filing to June 30. Another part of the workout involved a \$70-million May sale of Philip's utility management arm to Azurix, Houston-based Enron's entry into the water business.

Having just completed its own initial public stock offering, Azurix is concentrating on building the same credibility in water that Enron claims in oil and gas.

## JOIN THE CLUB

There were four firms in the billionaires' club in 1997. Beside U.S. Filter and Philip were the Bechtel Group Inc. and Foster Wheeler Corp.; both reported revenue gains in 1998. Runner-up Bechtel added more than 18%, reaching \$2.6 billion, and Foster Wheeler moved up a notch to third place by boosting revenue 21%, to \$1.4 billion.

Bechtel is gaining momentum in capturing large government contracts. DOE, under pressure to cut cleanup costs at its large sites, seems to be placing more emphasis on quantifiable results. San Francisco-based Bechtel, which built its reputation on heavy civil engineering expertise, is well positioned to benefit from the transition from site characterization to cleanup. The firm won the Oak Ridge, Tenn., operations and management contract in 1998 and added DOE's \$3.5-billion, five-year Idaho lab O&M agreement this spring. "This is not high-tech," says John Wallace, Bechtel vice president and manager of finance. "Dirt can be cleaned up cheaply these days." Wallace expects to see "more pressure on costs and competitiveness at DOE."

The three newcomers to the billionaires' club in 1998, are The IT Group, URS Corp. and CH2M Hill Inc., respectively in slots four, five and six. IT and URS added revenue through large well publicized, large acquisitions. CH2M Hill reported \$900 million in revenue in 1996 and 1997. The Denver-based firm crossed the threshold by integrating several small additions from the past few years and capturing more business from



**HOLDING ON** Federal work slows growth, with agencies under budget pressure.



## TOP 20 IN ALL-ENVIRONMENTAL FIRMS\*

TOTAL REVENUE OF \$9.0 BILLION

1 U.S. Filter Corp.	4,608.0	11 Ogden Env. & Energy Svcs. Co. Inc.	115.6
2 Montgomery Watson Inc.	473.7	12 Denis Industries Corp.	115.0
3 Camp Dresser & McKee Inc.	394.9	13 Brown and Caldwell	111.0
4 Roy F. Weston Inc.	241.2	14 LVI Services Inc.	102.6
5 ENSR	240.0	15 NSC Corp.	99.7
6 Waterlink Inc.	172.5	16 Western Summit Constructors Inc.	97.0
7 Malcolm Pirnie Inc.	166.7	17 BNFL Inc.	95.9
8 MACTEC Inc.	160.3	18 Severson Environ. Svcs. Inc.	84.7
9 Heritage Environtl. Svcs. LLC	154.0	19 Ecology and Environment Inc.	75.1
10 ThermoRetic Corp.	138.4	20 Handex Environmental Inc.	71.1

\*Environmental revenue is 100% of total company revenue.

design-build delivery and outsourcing. "Utilities are changing what they expect from their consultants," says Mark Laswell, director of business development and planning for the company's water group. "Most utilities are looking at alternate methods" of project delivery, he says. "They are outsourcing services from meter reading to operations of facilities."

## HERE IT COMES

The IT Group continues to evolve through acquisition. Formerly known as International Technology Corp., the Monroeville, Pa.-based firm ranked 15th

on the 1996 list, with \$362 million in revenue. Buying OHM Corp. moved the firm up to seventh in 1997, with \$874 million in revenue. Recent acquisitions helped push the firm into the upper echelon for 1998, with \$1.3 billion in revenue.

The purchases include GTI from Fluor Daniel and ICF Kaiser International's environmental engineering division. President-CEO Anthony DeLuca believes in improving "the bottom line by adding to the top line." The GTI acquisition will help IT provide integrated services to major clients such as PPG, a long-time

industrial customer. "We've worked with them for years. GTI had been doing [water-wastewater] work for them. We're able to integrate and expand our service, realizing economies of scale. It's good for them and good for us," he says.

Investors have rewarded IT, moving the stock from just above \$5 per share last fall to just under \$17 per share the last week in June. "We've beaten analysts' projections for 11 straight quarters. If anything, our stock is undervalued," says DeLuca. Although he professes to be pleased in general with integration of the purchased components, DeLuca says, "We haven't yet seen the market synergies: one plus one equals three. We'll see that in the year 2000."

URS Corp. also bought its way into the billionaires' club, taking on nearly \$700 million in debt to buy the Dames and Moore Group. URS, which had previously bought Greiner and Woodward Clyde, ranked 17th in 1997, with \$290 million in revenue. Dames & Moore was next on the list, with \$282 million. The consolidated companies recorded \$1.1 billion in revenue in 1998, but URS officials declined to comment on market prospects. The quarterly earnings report cautions investors that integrating Dames and Moore could be difficult. So far, investors have approved the move: The stock moved from a 52-week low near \$13 last October to \$28 last week, high for the year.

## GROW OR DIE

The consolidations aren't through, either, says Joan Berkowitz, a partner in the Washington, D.C.-based environmental consulting firm of Farkas Berkowitz & Co. "Can you survive and not grow?" she asks. "The answer is no."

The shopping sprees at the top of the listed depleted the ranks of the companies reporting at least \$100 million in revenue, from 42 in 1997 to 38 last year. A company has to change as market segments change, says Craig Goehring, CEO of Brown and Caldwell, a water-wastewater firm in Pleasant Hill, Calif. He believes changes in the hazardous waste field are a major influence on consolidation. The hazwaste sector continues to slip in terms of market share. Gross revenue for 1998 topped the 1997 total slightly, \$7.8 billion compared to \$7.775 billion. But market share continues to slide, dropping from 39% of the market in 1996 to 32% in 1997, to under 30%. As if to underscore the point, the Hazardous Waste Action Coalition recently changed its name to the Environmental Business Action Coalition. The group, a Washington, D.C.-based American Con-

## TOP 50 ENVIRONMENTAL FIRMS BY NEW CONTRACTS\*

1998 NEW CONTRACTS		1999 NEW CONTRACTS	
RANK	FIRM	RANK	FIRM
1	Bechtel Group Inc.	26	Environmental Quality Mgmt.
2	The IT Group	27	Roy F. Weston Inc.
3	CH2M Hill Inc.	28	Pizzagalli Construction Co.
4	Kellogg Brown & Root	29	ThermoRetic Corp.
5	URS Corp.	30	Golder Associates Corp.
6	Morrison Knudsen Corp.	31	ARCADIS Geraghty & Miller
7	EARTH TECH	32	Brown and Caldwell
8	Parsons Corp.	33	ATC Group Services Inc.
9	Stone & Webster	34	Severson Environ. Svcs. Inc.
10	Foster Wheeler Corp.	35	O'Brien & Gere Engineers Inc.
11	Jacobs Sverdrup	36	Cajun Contractors Inc.
12	Montgomery Watson Inc.	37	Western Summit Constructors Inc.
13	Fluor Daniel Inc.	38	MACTEC Inc.
14	Camp Dresser & McKee Inc.	39	Ogden Environtl. & Energy Svcs. Co. Inc.
15	Battelle Memorial Institute	40	Martin K. Eby Construction Co. Inc.
16	BNFL Inc.	41	Carollo Engineers
17	ERM	42	Bowen Engineering Corp.
18	Tetra Tech Inc.	43	Denis Industries Corp.
19	Science Applications Int'l Corp.	44	J.S. Alberici Construction Co. Inc.
20	The Louis Berger Group	45	Felix Equities Inc. & Affiliates
21	Malcolm Pirnie Inc.	46	Brasfield & Gorrie LLC
22	BE&K Inc.	47	Wharton-Smith Inc.
23	Metcalf & Eddy	48	LAWGIBB
24	Waterlink Inc.	49	Versar Inc.
25	HDR Inc.	50	RMT Inc.

\*Ranking firms are listed in descending order of new contract revenue.

## TOP 20 FIRMS BY CLIENTS

## PRIVATE TOTAL REVENUE OF \$10.2 BILLION

1 U.S. Filter Corp.	11 ENSR
2 Bechtel Group Inc.	12 Parsons Corp.
3 Foster Wheeler Corp.	13 Heritage Environmental Svcs. LLC
4 URS Greiner Inc.	14 Waterlink Inc.
5 The IT Group	15 ICF Kaiser International Inc.
6 EARTH TECH	16 Battelle Memorial Institute
7 ERM	17 Tetra Tech Inc.
8 Fluor Daniel Inc.	18 Thermofietec Corp.
9 Black & Veatch	19 ARCADIS Geraghty & Miller
10 CH2M Hill Inc.	20 Montgomery Watson Inc.

## STATE/LOCAL TOTAL REVENUE OF \$3.08 BILLION

1 CH2M Hill Inc.	11 URS Greiner Inc.
2 Black & Veatch	12 HDR Inc.
3 Camp Dresser & McKee Inc.	13 Parsons Corp.
4 Montgomery Watson Inc.	14 Western Summit Constructors Inc.
5 U.S. Filter Corp.	15 The IT Group
6 Bechtel Group Inc.	16 Metcalf & Eddy
7 EARTH TECH	17 Cajun Contractors Inc.
8 Foster Wheeler Corp.	18 Wharton-Smith Inc.
9 Dick Corp.	19 Brown and Caldwell
10 Malcolm Pirnie Inc.	20 Pizzagalli Construction Co.

## FEDERAL TOTAL REVENUE OF \$6.86 BILLION

1 Bechtel Group Inc.	11 EARTH TECH
2 The IT Group	12 Raytheon Engrs. & Constructors
3 ICF Kaiser International Inc.	13 Tetra Tech Inc.
4 Fluor Daniel Inc.	14 Science Applications Int'l Corp.
5 CH2M Hill Inc.	15 Roy F. Weston Inc.
6 Foster Wheeler Corp.	16 Parsons Corp.
7 URS Greiner Inc.	17 Montgomery Watson Inc.
8 Morrison Knudsen Corp.	18 MACTEC Inc.
9 Jacobs Sverdrup	19 BNFL Inc.
10 Battelle Memorial Institute	20 Stone & Webster



DEEP WATER Spending on water and wastewater treatment is up by 26%.

sulting Engineers Council affiliate, says it is responding to clients' demands that environmental consultants deliver economies of scale by combining remediation and redevelopment.

URS and Dames and Moore were "titans of the hazardous waste industry," Goehring says. The buyout was "inevitable with the reduction in growth" in the sector, he says. Diversification is an option, he adds, "but Dames & Moore diversified and they lost their company." Goehring feels comfortable in the middle. The privately held firm, ranked 36th with \$111 million in revenue, bought Nashville-based Eckenfelder Inc. last year to bolster its industrial business. Goehring predicts \$135 million in revenue this year, with municipal contracts in Atlanta and Orange County, Calif., in place and growth in design-build and information technology work. Bigger isn't necessarily better, Goehring says: "We haven't had a customer yet ask us if we're a billion-dollar company."

## FROM NICHE TO RICHES

There are advantages to being a niche firm, says Robert P. Stearns, president and CEO of Long Beach, Calif.-based SCS Engineers, a solid waste and hazardous waste specialist. Big multidisciplinary firms are "so large and so diverse that they're going to lose focus on markets." SCS, ranked No. 43 with \$46.3 million in revenue, offers clients "more personalized service," says Stearns. One such client is New York City, where SCS prepared closure plans and a landfill gas management plan for the city's Fresh Kills landfill, scheduled to close in 2002.

American Ecology Corp. also is hoping to benefit from concentrating on a niche market—low-level nuclear waste. The firm turned in its best first quarter in a decade this year, says Joe Nagel, president of the Boise-based firm. Acquisitions on the chemical waste side did not perform as anticipated, he says, and the firm was forced to downsize, dump non-core subsidiaries and restructure more than \$45 million in long-term debt. The retrenchment dropped American Ecology three slots among the Top 20 Nuclear Waste companies, to No. 17, but positions them well for the future. Laws must change, Nagel says, to enable American Ecology to take nuke waste at permitted sites such as the one it has at Richland, Wash. At present, only waste from an 11-sate compact is allowed. Nuclear waste is "a major issue out there [that] we have not faced as a society," he says.

Nuclear business and consolidation have both been good for MACTEC, says President Scott E. State. The privately



## TOP 20 IN DESIGN/CONSULTING

TOTAL REVENUE OF \$5.66 BILLION

1 URS Corp.	11 Battelle Memorial Institute
2 Bechtel Group Inc.	12 Parsons Corp.
3 CH2M Hill Inc.	13 ENSR
4 Montgomery Watson Inc.	14 ERM
5 ICF Kaiser International Inc.	15 Earth Tech
6 Black & Veatch	16 Malcolm Pirnie Inc.
7 The IT Group	17 Metcalf & Eddy
8 Foster Wheeler Corp.	18 Roy F. Weston Inc.
9 Camp Dresser & McKee Inc.	19 HDR Inc.
10 Fluor Daniel Inc.	20 Tetra Tech Inc. Corp.Corp.

## TOP 20 IN CONSTRUCTION/REMEDIATION

TOTAL REVENUE OF \$6.88 BILLION

1 Bechtel Group Inc.	11 CH2M Hill Inc.
2 The IT Group	12 Danis Industries Corp.
3 Foster Wheeler Corp.	13 Raytheon Engineers & Constructors
4 Fluor Daniel Inc.	14 Camp Dresser & McKee Inc.
5 ICF Kaiser International Inc.	15 LVI Services Inc.
6 Morrison Knudsen Corp.	16 ERM
7 Black & Veatch	17 NSC Corp.
8 Jacobs Sverdrup	18 Western Summit Constructors Inc.
9 URS Corp.	19 MACTEC Inc.
10 EARTH TECH	20 Cajun Contractors Inc.

held, Golden, Colo.-based firm secured a cash infusion from Credit French Merchant Bank to fund acquisitions that doubled its size in 1998. The largest involved QST Environmental Inc., which ranked No. 63 on last year's Top 200 list, one slot ahead of MACTEC.

Pumped up MACTEC is No. 25 this year and ranked ninth among the Top 20 Nuclear firms, up four places from 1997. MACTEC made the leap by patiently attracting private equity investors, then leveraging its position to attract lenders. "In a consolidating market," says State, "you have to have cash-flow financing. Public companies like IT can put that together, but you don't typically see privately held firms who are able to produce the kind of financing we have." Nagel says the firm is looking to make even more acquisitions and move further up the Top 200 list. "Our objective is to be a Top 10 firm in the next three years," he says.

Consolidation has been good for remediation contractor Severson Environmental Services Inc., as well. The Niagara Falls, N.Y.-based firm is doing better as the number of competitors shrinks, says Michael Elia, company president and CEO. Margins are improving, too, he

says. Severson is winning one job in four these days, compared to one in 10 previously, says Elia.

If corporate cannibalism makes some companies disappear, it also creates space for newcomers—one-fifth of the Top 200 weren't on the list last year. Many of them have developed expertise within a region or with a specific client base. Both characteristics hold true for the No. 200 firm, Locus Technologies. The Walnut Creek, Calif.-based company claims to be the largest groundwater consultant in Silicon Valley, boasting a client roster that includes Hewlett Packard and Fairchild Semiconductor.

High-tech clients are a good fit for a firm that is trying to leverage its own technology to bottom-line results, says President and CEO Neno Duplancic. "Most people are using the Internet to do research or buy something," he says. "We have carried the whole thing one step further, to physically control systems around the world." Locus develops Internet-based control platforms for pump-and-treat plants that enable an operator to work from a dedicated Website, an easy way to cut long-term O&M costs.

Federal expenditures inched forward for the Top 20 firms in that sector in

1998, showing a 4% growth rate above 1997. State and local municipalities picked up some of the slack, growing by 10%. At the federal level, Defense Dept. work is declining, several major contractors say. Remediation contracts actually fell 10%, according to her numbers, says Joan Berkowitz.

## PRIVATE PROFITS

By contrast, the Top 20 private business sector market a robust 45% gain in 1998, to \$10.2 billion. Industrial clients are embracing outsourcing and design-build, but there are pitfalls, warns Steve Hough, marketing director for Santa Ana, Calif.-based Carollo Engineers, a water-wastewater treatment specialist. "I don't think the industry has figured out how to do design-build and protect owners' interests," he says. "We have seen several [competitors'] projects recently where treatment plants have been completed, then were not able to comply with treatment requirements." Design-builders are often not in synch with equipment suppliers, he adds.

Design-build is catching on, says Ken Jacob, CEO of Cajun Contractors in Baton Rouge. "We're involved in several alliances, with engineering firms, equipment manufacturers and even other contractors to go after design-build work. We're getting calls all the time."

Outsourcing has been profitable for Quanterra Inc. The Englewood, Colo., firm has been working in Alaska as an outsource contractor for the Alyeska pipeline, doing environmental and operations work, says Vice President Brad Figley. Pharmaceutical firms also are providing work, he says.

Public sector outsourcing is "a big part of our growth across business lines," says Diane Creel, CEO of EARTH TECH, Long Beach, Calif. The firm is helping the Navy dispose of property at the shuttered Long Beach naval shipyard. "The government can't convey property back until they have a plan for asset distribution," she says. "We're getting paid to distribute assets and getting a percentage of assets that we sell. It's a good-margin business."

Creel has pushed EARTH TECH into the No. 9 spot on the Top 200 with several years of aggressive acquisitions that were funded by parent conglomerate, Tyco International, and says she isn't finished shopping. The IT Group's DeLuca says he's not done either, nor does he expect his competitors to quit. Cajun's Ken Jacob says a shake-out is inevitable, that he's seen these cycles before. Maybe that's the point: The environmental industry has reached adulthood. □