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MORE THAN \$70 IN COUPON SAVINGS INSIDE TODAY

Wisconsin State Journal APRIL 22, 2007 MADISON, WISCONSIN

Buried hazardous materials from factories of bygone years are haunting Madison and causing problems for the sinking of drinking wells, especially on the Isthmus.



Demetral Field Landfill on Packers Avenue is now the site of athletic fields, but the garbage buried beneath the ground between 1953 and 1967 still produces contaminants that have flowed into groundwater. City of Madison

Madison underground: Contamination Central



Today pet owners, such as Vicki Alling, play with their dogs at Sycamore Park on Madison's East Side. But many may not realize that beneath them is a buried landfill that was once one of six licensed dumpsites operated by the city of Madison over the years.

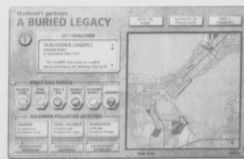
By RON SEELY • rseely@madison.com • 608-252-6131

As Madison grows and seeks places to do everything from building Downtown condominiums to sinking new drinking wells, a buried past is coming back to haunt us. Methane gas and groundwater pollutants still leak from old city landfills, industrial carcinogens from long-gone factories are showing up in our wells, and all manner of buried hazardous materials await developers when they seek to build on city lots. This buried history affects everyone, from taxpayers to businesses and builders. Here are some key aspects of the problem: • Industrial pollutants beneath the East Isthmus have been blamed for the contamination of the city's Well No. 3, which the Madison Water Utility plans to abandon. Now, a consultant hired by the

utility to site a new well has warned that the history of contamination on the Isthmus will make finding a clean source of water in the area very difficult. • Getting rid of these contaminants is difficult, even with the most modern technologies, both because the pollutants are so pervasive and because the plumes of chemicals, especially old industrial chemicals, are hard to find. • About all the city can do with its closed landfills, for example, is monitor pollutants and wait for time to pass.

Please see CONTAMINATION, Page A8

WEB EXTRA



Interactive map: Learn about the types of waste and pollution levels in Madison's historic landfills and little-known dump sites. Go to: madison.com/wsj

INSIDE: MAPPING THE DUMPS, A9 || WELL WOES, A10 || DIGGING UP HISTORY, A11

Developers are thinking outside the lot

Acres of blacktop are no longer a necessity to accommodate the parking needs of Madison area shoppers. In Dane County, developers are increasingly using parking ramps and underground parking facilities for their customers. The structures allow valuable property to be used for other development, have less of an impact on storm-water runoff and shoppers can stay dry on their way to and from the store. Some shoppers, however, are resisting the change, preferring to drive around until they find a choice spot in the remaining conventional lots. BUSINESS, PAGE B1



Please see FDA, Page A4

UW has systems for depressed students

But for someone with severe mental problems there could be gaps, official says.

By HEATHER LaROI hlroi@madison.com 608-252-6143

Every year, there are one or two UW-Madison students whose behavior or psychological state raises serious concern among university officials.

"I don't want to alarm anybody, but it's not just a 'very rare' thing," said Elton Crim, UW-Madison's associate dean of students.

And, as the shocking events last week at Virginia Tech have shown, it only takes one. The shootings, the worst of the sporadic fits of violence to hit college campuses in recent years, are putting increasing pressure on universities to act to stop students with mental problems from harming themselves or others.

At the same time, tough federal privacy and anti-discrimination laws and threats of lawsuits seriously limit what action universities can take.

It presents a huge, and growing, dilemma.

Nationwide, the number of students on campus with mental health problems has grown in recent years.

Please see STUDENTS, Page A7

• How high schools deal with threats. A7

In Depth

Perhaps nothing could have stopped the rampage, but the Virginia Tech community ponders some agonizing what-ifs. A6



FDA vet pays price for speaking out

An agency employee battles her bosses and a drug company to get a dangerous drug off the market.

By JEFF DONN Associated Press

BETHESDA, Md. — The first hints of trouble came with vague warnings from the outer reaches of the bureaucracy where she worked.

She was "pushing too hard," being "alarmist."

But it was something else — a clumsy bid to call her off the scent of the dangerous drug she was tracking — that really galled her. "When enough dogs die, this product will take care of itself," a colleague said.

Veterinarian Victoria Hampshire's reply tumbled out like a boulder that, once rolling, will no longer stop: "I don't know what I'm doing here then."

What she was doing — trying to do, at least — was her job: She kept count of side effects from animal drugs for the Food and Drug Administration. She



Warm, chance of a thunderstorm DETAILS ON BACK OF LOCAL

HIGH 78 LOW 55

Table with 2 columns: Category and Page Number. Includes A&E, Business, Daybreak, Explore, In Depth, Local, Movies, Nation@World, Obituaries, Opinion, Sports, Sports Extra.

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Madison underground is Contamination Central

Continued from Page A1



A pleasant park off Yellowstone Drive, right, belies the less pastoral history of the Mineral Point Landfill on which the park is built.



State Journal archives

• Cleanup and monitoring of closed city landfills has been expensive and the landfills are likely to need monitoring for years to come. The city has spent more than \$35 million since 1999 to clean up the six major landfills it has operated.

• As more urban sites are developed into condominiums and commercial property, developers are often faced with cleaning up extensive contamination from old factories that previously occupied the land.

Before McGrath Associates could proceed with development of its Union Corners project on East Washington Avenue, for example, a total of 60,368 tons of contaminated soil was removed from the former site of a Rayovac battery factory, according to records from the state Department of Natural Resources.

• Other sources of underground pollution include old buried gasoline and petroleum tanks and the former sites of dry cleaning businesses.

The extent of the threats from such contamination sources is extensive: the DNR in its database of contaminated sites lists 2,250 such sites in Madison, including 783 that are cited as being "open" or still being cleaned up.

It was a dump

Many cities are dealing with underground contamination but in Madison the problems left us by old landfills have been magnified because of the city's geography.

Much of the Isthmus was once low-lying marsh and it has been filled in piecemeal over the years with everything from foundry sand to coal ash and cinders to trash. In more recent years the trash has included plastics, solvents and other modern-day compounds that break down into cancer-causing chemicals.

Even such a glittering landmark as the Monona Terrace sits atop garbage. Between 1946 and 1951, the lakeshore from which Monona Terrace now rises, part of Law Park, was a dump where trash from Downtown was simply shoved into the lake.

The building rests on 1,750 steel pilings that were driven down through the compacted trash to the gravel and rock lake bed.

Throughout Madison's history, and especially before the onset of environmental awareness and laws in the 1970s, residents dumped waste in just about every corner of the city, from the mouth of Wingra Creek in Olin Park to the banks of the Yahara River, the river itself and lakeshores such as University Bay.

"The history of this," said city engineer and waste expert Dave Benschawel, "was that whatever it is, it goes in the closest hole."

The city has operated six licensed landfills over the years. The last, Greentree Landfill on the West Side, closed in the 1980s.

Larry Nelson, Madison's city engineer, said the belief then was that you could simply cover up the landfills and build parks on top of them.

That all changed in November 1983 when methane gas, generated by the compressed and decomposing garbage in the closed Greentree Landfill, leaked into the basement of an adjacent apartment building.

When one of the residents lit a pipe, the gas exploded, severely burning two people, destroying the building and rattling windows for blocks.

In the months and years after that explosion, according to Nelson, the city embarked on an effort to study and control not only the methane gas but also the groundwater pollutants being produced by the chemical reactions inside the buried landfills.

Vented into the air

In the late 1980s, studies showed the landfills were already generating pollutants that were showing up in the groundwater.

Levels of contaminants exceeded health standards in numerous instances, according to city documents from the time, meaning that the city was required by new state landfill laws to conduct a more complete cleanup of the landfills.

That cleanup continues today. Each of the six landfills is outfitted with gas extraction systems as well as leachate collection systems that capture polluted runoff.

Please see CONTAMINATION, A10

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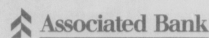
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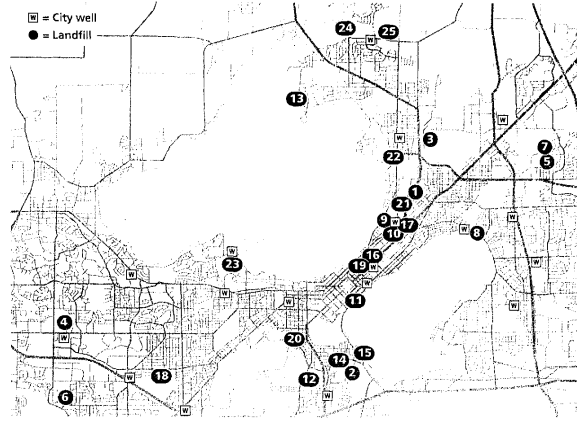
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Madison's garbage: A BURIED LEGACY

Over the years, Madison has dumped its garbage in just about every corner of the city. The city's six licensed landfills have been closed and are still being cleaned up and monitored for contaminants.

But dozens of other sites used for dumping waste have also been identified. They range from large dumps such as the one at Law Park, where Monona Terrace now stands, to numerous small neighborhood trash heaps.

For more than 20 years David Benzschawel, a civil engineer for the city, checked such sites and located them on a map so they can be properly managed and monitored. This map is not a complete listing of all abandoned or closed landfills.



What is buried

- Trash/appliances
- Food waste
- Wood/brush
- Coal/ash
- Building debris
- Unknown

Recorded pollution (2006 test data)

Name/location	Years of operation	Trash/appliances	Food waste	Wood/brush	Coal/ash	Building debris	Unknown	Contaminants	State enforcement standard	Comments
Closed landfills										
1 Demetral Field Landfill 200-500 Packers Ave.	1953-1967	☐	☐	☐	☐	☐	☐	Sulfate – as high as 1,420 parts per million Chloride – as high as 1,073 parts per million Manganese – as high as 3,260 parts per billion	250 ppm 250 ppm 50 ppb	Levels of contaminants remain high and the landfill may pose a problem as the Madison Water Utility seeks a site for a new well in the East Isthmus area.
2 Olin Avenue Landfill (Quann Park) 123 E. Olin Ave.	1945-1977	☐	☐	☐	☐	☐	☐	Benzene – as high as 12 parts per billion Vinyl chloride – as high as 4.4 parts per billion Manganese – detected at 2,770 parts per billion	5 ppb 0.2 ppb 50 ppb	Used as a solid waste and open air burning site until December 1960. DNR required remediation or cleanup, which was done in two phases, the first in 2002 and the second in 2003.
3 Truax Field Landfill 1500-2200 Pankratz St.	1950s-1972	☐	☐	☐	☐	☐	☐	Arsenic detected – at 21 parts per million Chloride – at 720 parts per million Manganese – at 120 parts per billion	50 ppm 250 ppm 50 ppb	Opened by the city at the site of an old military base in the 1950s and operated jointly by the city and Oscar Mayer beginning 1955 and 1961. City disposed of its own solvents here for years.
4 Mineral Point Landfill 128 Yellowstone Dr.	1967-1971	☐	☐	☐	☐	☐	☐	Methane gas Chloride – as high as 236 parts per million Manganese – as high as 54 parts per billion	250 ppm 50 ppb	Formerly a gravel pit, the site was used as an indiscriminate dumpsite for many types of waste before becoming a city operation. DNR ordered cleanup started in 1994.
5 Sycamore Landfill 4601 Sycamore Road	1967-1971	☐	☐	☐	☐	☐	☐	Tetrachloroethylene – at 16 parts per billion Trichloroethylene – at 22 parts per billion Manganese – at 1250 parts per billion	5 ppb 5 ppb 50 ppb	The most problematic city site for industrial chemical contaminants. Used for disposal of city-collected large items such as appliances but also by commercial waste haulers, private firms and individuals.
6 Greentree Landfill 660-6700 Hammesley Rd.	1973-1980	☐	☐	☐	☐	☐	☐	Methane gas Chloride – at 252 parts per million	250 ppm	A marsh that was used as an indiscriminate dump site before the city took it over in 1973. DNR-ordered cleanup took place in 1994 and 1995.
Historic dumps										
7 Sycamore Brush Site Across from Sycamore Landfill	1963-1975	☐	☐	☐	☐	☐	☐	Chloride – at 409 parts per million Manganese – at 503 parts per billion	250 ppm 50 ppb	Many of the elms killed by Dutch Elm Disease in the 1960s were hauled to this site. For a period of time in the 1960s, disposed chemicals from UW-Madison laboratories were burned with the trash and brush.
8 Olbrich Park Atwood Ave. on Lake Monona	1927-1930	☐	☐	☐	☐	☐	☐	Chloride – at 307.9 parts per million Manganese – at 542 parts per billion	250 ppm 50 ppb	A marsh that was mostly filled in with trash and with the dirt from basements of homes being built nearby.
9 E. Bank of Yahara River N. side of E. Johnson St.	1910-1940	☐	☐	☐	☐	☐	☐	Unknown		Among material disposed of at this site were many cedar paving blocks from a failed turn-of-the-century paving experiment Downtown.
10 E. Bank of Yahara River S. side of E. Johnson St.	1940-1950	☐	☐	☐	☐	☐	☐	Unknown		This was a site used by the city and MG&E to dispose of coal ash in addition to the slag cleaned from the bottom of boilers and fly ash from smokestacks.
11 Law Park John Nolen Drive	1946-1951	☐	☐	☐	☐	☐	☐	Tests in 1990s showed minimal contamination.		Now the site of the Monona Terrace. Waste was dumped into lake and snow fences fastened to poles to keep debris from drifting away.
12 Bowman Field Fish Hattheyry Rd.	1956-1970	☐	☐	☐	☐	☐	☐	Tests showed no contamination.		City studied this site because of parks and construction of Wright Middle School.
13 Mendota State Hospital Troy Dr.	Unknown	☐	☐	☐	☐	☐	☐	Unknown		The waste material was mostly foundry sand.
14 Franklin Field E. Olin Ave.	1933-1939	☐	☐	☐	☐	☐	☐	Unknown		Some of the waste came from shredded automobiles.
15 Olin Park John Nolen Dr.	1933-1949	☐	☐	☐	☐	☐	☐	Unknown		A long-time dump site, especially for the resorts that used to operate nearby on the shores of Lake Monona. Trash, including bottles and dishes, and from the resorts and from nearby residences was dumped near the mouth of Wingra Creek. Now a popular city park.
16 Reynolds Field N. Livingston St.	1933-1939	☐	☐	☐	☐	☐	☐	Unknown		
17 Burr Jones Field East Washington Ave.	1927-1930	☐	☐	☐	☐	☐	☐	Testing in the 1980s showed existence of some contaminants such as chromium, lead and arsenic at levels below the state enforcement standard.		A popular dumping ground for dairies to dispose of chipped and broken milk bottles. Now a park with baseball diamonds.
18 Odana Hills Golf Course Odana Road	1957-1963	☐	☐	☐	☐	☐	☐	Unknown		
19 Old Market Square N. Blount St.	1910-1930	☐	☐	☐	☐	☐	☐	Unknown		
20 St. Mary's Parking Lot Wingra Dr. and Mills St.	1910-1950	☐	☐	☐	☐	☐	☐	Unknown		
21 C&N Railroad Yards Forde Ave.	1941-1944	☐	☐	☐	☐	☐	☐	Unknown		
22 Maple Wood Apts. N. Sherman and Aberg avenues	Unknown	☐	☐	☐	☐	☐	☐	Unknown		This was a dump site used for a number of years by Maple Bluff.
23 University Bay University Bay Dr.	1950-1971	☐	☐	☐	☐	☐	☐	Unknown		A low, marshy area that was filled extensively over the years.
24 Cherokee Marsh Northport Dr.	1970-1980	☐	☐	☐	☐	☐	☐	Unknown		
25 Doc West Hog Farm Wheeler Road	1945-1953	☐	☐	☐	☐	☐	☐	Unknown		City arranged to haul garbage to this farm where food wastes were eaten by the pigs. Now the site of Cherokee Condominiums and golf course.

Pollutant glossary

- Benzene:** An industrial chemical that can cause nervous system disorders and anemia when ingested at high levels.
- Chloride:** An element in salt that can cause health problems if ingested at high levels. Source is often road salt or salt used in water softeners.
- Manganese:** A naturally occurring mineral that can cause health problems, especially for people with liver problems, when ingested at high levels.
- Methane gas:** A gas produced by decomposition of waste in landfills and the primary component of natural gas. The gas is a concern because it can seep into nearby structures and cause explosions if ignited.
- Sulfate:** A substance that occurs naturally in drinking water but when ingested in excessive amounts can cause diarrhea.
- Tetrachloroethylene:** A substance used in dry cleaning. Potential health risks include increased risk of cancer and liver problems.
- Trichloroethylene:** Used in factories for metal degreasing. Can increase risk of cancer and liver problems.
- Vinyl chloride:** Used in manufacturing, especially in rubber, paper and glass industries. Can cause cancer and liver damage at high levels.

SOURCE: City of Madison; Environmental Protection Agency; Wisconsin Department of Natural Resources; State Journal research by Ron Seely

State Journal graphic

WEB EXTRA Interactive map: Learn about types of waste and pollution levels in Madison's historic landfills and little-known dump sites.
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