

[http://www.shieldus.com/blog/\\_archives/2004/11/3/181509.html](http://www.shieldus.com/blog/_archives/2004/11/3/181509.html)

# EMFs & Schools & Playgrounds

by Shieldus at 07:32AM (PST) on November 3, 2004 | Permanent Link

**Compiled by: Richard W. Woodley**

"Schools may become the next battleground in the EMF (electromagnetic fields) conflict. As parents learn more about EMF health effects, they are demanding measurements and, when necessary, reductions of EMF levels in classrooms and schoolyards." As Microwave News reported in April 1990, "Conflicts over EMFs in schools are not new".

Certainly this is not a new issue in Kanata as the Bridlewood community has been fighting this issue since 1984 over high voltage transmission lines located beside the Bridlewood Community Elementary School.

## **Texas - Houston (1985)**

One of the most famous and earliest cases occurred in Houston, Texas in late 1985. After parents brought suit, a Texas court ordered Houston Lighting & Power to pay more than \$25 million to a local school district for "callous disregard" of their children's health for siting a 345,000 volt line within 200 feet of a school and playground. The court also ordered the utility to relocate the line, at an additional cost that may exceed \$40 million.

## **California (1989)**

Also in the summer of 1989, the California State Department of Education adopted a policy for siting schools near power lines, noting that a "conservative approach" should be taken when evaluating sites near power line easements. The department's School Facilities Planning Division limits for schools are: 100 feet from the edge of easement for 100-110 kV lines, 150 feet for 220-230 kV lines and 250 feet for 345 kV lines.

## **Florida - Boca Raton (1989)**

Another significant case was in Florida in the summer of 1989. A Florida judge ruled that children may not play in a Boca Raton school yard which borders on high voltage power lines. The suit was brought by three local parents who sought to close the Sandpiper Shores school because of health hazards. The judge noted that children have "no choice" about going to school and therefore EMF exposure at school is an involuntary risk: "A 1% chance that there is substantial danger is unacceptable".

As well the school board agreed to allow the parents of children attending the school to request transfers to another school if they had concerns about the school being located next to the power lines.

## **Ireland - County Wicklow (1989)**

In 1989 in County Wicklow, Ireland, a citizens group called SPARKS (Stop Powerlines Across Residences Kindergartens and Schools) began fighting a 220 kV power line

located near two schools and many homes. The group called a Ministry of Energy report claiming there is no health risk a whitewash stating that it is biased and contains flaws and omissions.

### **California - Santa Barbara (1990)**

On February 28, 1990 New Yorker writer Paul Brodeur and the Electric Power Research Institute's Dr. Leonard Sagan went head-to-head in Santa Barbara before the California Municipal Utilities Association. The EMF issue is hot in Santa Barbara because of an unexplained childhood cancer cluster at Montecito Union School. Between 1981 and 1988, there were six cases of leukemia and lymphoma among the students - five times the expected rate. Of particular concern is the fact that two 66 kV power lines are on the perimeter of the school property. In addition there is an electrical substation close by.

The day after the Brodeur-Sagan face-off, Jack Sahl of Southern California Edison told the Santa Barbara News-Press that, based on his EMF survey, "Montecito looks like just a normal school in terms of [EMFs]." On March 16, 1990, the News-Press reported that the school board had decided to rope off sections of the school that have strong magnetic fields.

The school board voted unanimously to limit the exposure of students at the Montecito Union School to EMF exposures below 2 mG. The school relocated playgrounds and desks and roped off sections of the school with high magnetic fields.

The controversy continues in 1993 with parents demanding that the power lines and substation be removed.

### **Connecticut (1990)**

A reporter with the Manchester Journal Inquirer reported that he and some colleague had measured power-line magnetic fields near a number of schools and found levels above 4 mG in front of a daycare centre in Windsor Locks; up to 7 mG on a playground at Maple Street School in Vernon; and nearly 8 mG at St. Joseph's Elementary School in Vernon. A spokesman for Northeast Utilities stated that such levels fell within a normal range.

### **New Jersey (1990)**

Also in 1990 the New Jersey Commission on Radiation Protection proposed that the siting of new playgrounds under power lines be prohibited and that warnings be posted at playgrounds that are already located under power lines.

### **Rhode Island - East Greenwich (1990)**

In 1990, Rhode Islanders for Safe Power were successful in closing the East Greenwich High School's soccer field where magnetic fields above four mG were measured from a nearby 115 kV line.

### **Sweden (1990)**

Early in 1990 The Swedish National Energy Administration (NEA) advised that new schools, day-care centres and playgrounds not be located near power lines, "pending further research." Jack Nou, the head of the NEA's department of electrical safety, recommended that magnetic fields in those areas not exceed 2-3 mG, the threshold for increased childhood cancer risks indicated by the Wertheimer-Leeper and Savitz studies.

### **Illinois - Aurora (1991)**

In Aurora, Illinois, in 1991, members of a group called Parents Against High Voltage Education persuaded school district officials to move the site of a new school away from the vicinity of high-voltage transmission lines.

### **Illinois - Bolingbrook (1991)**

At the Independence Elementary School in Bolingbrook, Illinois, which is situated with a hundred feet of a right-of-way containing two high-voltage transmission lines, magnetic field levels over 20 mG were measured in some classrooms. Illinois Department of Health officials said that they could offer no advice because the data on power-line hazards were inconclusive. Students in one classroom were temporarily relocated as a prudent avoidance measure but the classroom was put back into use with the same high readings.

### **New York - New York City (1991)**

In January of 1991 magnetic field levels of about ten mG were measured in the kindergarten of the Town School in Manhattan. During the spring school officials moved the kindergarten to another part of the building. Between 1990 and 1992 three students at the school have developed leukemia.

### **Arizona - Mesa (1992)**

Parents concerned with an unusually high incidence of brain cancer among children at Frost Elementary School identified a 50 mG magnetic field hot spot in the basement. The problem was rectified by correcting an improperly wired lighting system.

### **California - Mill Valley (1992)**

In 1992, at the Tamalpais Valley Elementary School in Mill Valley, California, school officials decided to vacate some classrooms that are located close to a high-voltage transmission line. They have been negotiating with the utility company about raising, moving, or re-phasing the line in order to reduce the magnetic field exposure of children and teachers at the school. Similar negotiations are being undertaken to reduce magnetic field levels of up to four mG at the Park Elementary School in Mill Valley.

### **California - San Francisco (1992)**

Teachers at the Alvarado Elementary School have refused to work in the front half of the school that is beside electrical transformers and distribution lines. Twenty-two cases of cancer have been identified in staff that worked in that half of the school while none were reported amongst staff who worked in the other half of the school. The San Francisco Board of Education is looking into the problem.

### **California - Santa Monica (1992)**

The Kenter Canyon Elementary School in Brentwood, a wealthy suburb of Santa Monica, California is located beside a 230 kV and two 138 kV transmission lines. When magnetic field levels of nearly 12 mG were measured in the schoolyard in the spring of 1992, school authorities and parents pressured the utility to do something about the problem. Since then the utility has re-phased the lines, reducing the magnetic fields by fifty per

cent, and has announced that it is planning to take measures to further reduce the magnetic field levels.

### **Oregon (1992)**

The Bonneville Power Administration has passed a moratorium on siting playgrounds in transmission line right-of-ways.

### **Washington - Clark County (1992)**

The mother of a teenager who died of leukemia has filed a wrongful death suit against the Public Utilities District alleging that electromagnetic fields from a 115 kV transmission line next to her daughter's school and a substation near their home caused her daughter's cancer.

### **California - Fresno (1992-1993)**

In an article in the December 7, 1992 issue of the New Yorker, Paul Brodeur reports on a cluster of cancer cases among teachers and teachers aides at the Louis N. Slater Elementary School in Fresno, California. A high voltage transmission line is within a hundred feet or so from the school and the cancer cases were concentrated amongst people working on the side of the school closest to the power lines. New schools in California are now required to be at least 150 feet from such lines.

The Fresno Unified School District responded to parents' demands for action by closing ten classrooms, placing the children in portables on the other side of the schoolyard and closing off an area of the playground that was nearest to the power lines.

In February of 1994 school officials announced that they would make the classroom closures permanent and use the rooms for storage only. This would bring the school in line with California Department of Education requirements that new schools be at least 150 feet from high-voltage transmission lines.

### **California - Santa Clara (1992-1993)**

During the autumn of 1992 the mother of a fifth grade student at the Montague Elementary School in Santa Clara, California, which is located beside a 115 kV transmission, requested that magnetic field measurements be taken at the school. At the request of the school board Pacific Gas and Electric measured fields in the school that ranged from between 3.7 and 5.3 mG in the centres of the four classrooms nearest the lines in December of 1992. In January of 1993, prompted by demands from teachers who cited a high incidence of cancer during the past ten years, the school board moved students from the four classrooms to the school library.

### **British Columbia - Vancouver (1993)**

Measurements taken at the Montessori Daycare in the Kitsilano community of Vancouver indicated EMF readings as high as 430 mG from heating cables embedded in the concrete floor. The levels were 5-10 mG with the heating cables turned off. It was agreed that the heating cables would only be used during off-hours and the owners of the property agreed to test out a ceiling-mounted heater that was reputed to have low fields.

### **California - Mark West (1993)**

Mark West school officials worried about health risks from power lines will spend more than \$20,000 to reconfigure lines near two local schools., The district, where six cancer cases among students have been reported since 1982, is also considering rewiring the two schools at great cost and plans to petition the Public Utilities Commission to remove all power lines from the community north of Santa Rosa.

### **New Jersey (1993)**

In April of 1993, the New Jersey Board of Regulatory Commissioners instructed the four electric utilities serving the state to conduct a survey of power lines near schools similar to one announced the previous month in New York. The survey would measure the electromagnetic field levels at schools situated within a hundred feet of any transmission line carrying 69 kV or more.

### **New York (1993)**

On March 23, 1993, New York State Attorney General Robert Abrams announced that he had obtained the voluntary agreement of all eight of New York's electric utilities to undertake a comprehensive survey of power lines near schools, as well as to measure the strength of the magnetic fields these lines were emitting. A study by Niagara Mohawk Power Corporation has identified 35 schools in upstate New York which are in close proximity to high-voltage power lines.

The study found that in New York City nearly 200 schools were near underground cables but only two, in Brooklyn, had potentially dangerous EMF levels. Outside New York City 115 schools were found to be located near high voltage power lines, of which 24 had potentially high EMF levels, as high as 35.5 mG.

### **New York (1993)**

New York has established rules regarding EMF emissions from computers in schools. New York public schools require a level of less than 2 mG at 30 cm. from computer monitors. The current Swedish standard, known as MPRII, sets maximum EMF emissions from video display terminals at 2.5 mG at 50 cm from the front of the monitor.

### **New York - Albany County (1993)**

In March of 1993 Niagara Mohawk announced that it had taken significant steps to reduce electromagnetic fields at the Voorheesville School in Albany County, New York. The utility reduced the fields emanating from a power line that runs within ten feet of the school by decreasing its current load, and has promised to take the line out of service by September 1st. The utility also said it would reconfigure the wires of another power line located within seventy feet of the school to reduce the magnetic fields from it.

### **Ontario - Toronto (1993)**

In Toronto, Ontario, parents were successful in a campaign to relocate a kindergarten classroom and library at a Bennington Heights elementary school. Concerns raised over a proposed new kindergarten play area at the south end of the school led parents to request magnetic field measurements of the area. The school building is on a cliff less than 100 feet from a 115-kV transmission line at the same height. Measurements taken at the south end of the school indicated levels about twice the average in the rest of the school. After a series of public meetings and additional consultant reviews, the school board decided to

relocate classes and a library to portable units at the north end of the school, reserving the rooms at the south end for occasional use for meetings.

### **Pennsylvania - Beaver Falls (1993)**

After spending a month researching the issue students at St. Mary Catholic School in Beaver Falls, Pennsylvania are opposing a planned 500 kV transmission line through their community. The students project is being featured at the National EMR Alliance conference in Pittsburgh this month (November 1993).

### **California - San Diego (1990-1994)**

As early as 1990 physicist and parent Stellan Knoos measured EMF levels at the Brooklyn Elementary School in San Diego. He found levels in classrooms ranging from 6 to 18 mG, among the highest that had been measured in the nation. He filed a written report with the school district recommending classrooms with levels between 2 to 4 mG receive limited use and those above 6 mG be closed immediately.

In 1992 magnetic fields of between 6 and 18 mG were measured in kindergarten classrooms at the Brooklyn Elementary School. Dr. Richard Neutra of the California Department of Health Services told school officials that there was no scientific basis for regulating power- frequency fields.

As recently as August 5, 1994 school district safety officer Doug Adams was quoted in the San Diego Union as saying "there are too many unknowns to begin moving classrooms...". The school district has failed to close classrooms, has located temporary classrooms almost directly under the power lines and children still play in areas almost directly underneath the power lines

### **United States (1993-1994)**

On March 25, 1993, California Democratic Congressman George E. Miller introduced the "Children's Electromagnetic Field Risk Reduction Act of 1993" - "A Bill to establish a national policy prohibiting the location of new public schools and child care centres on real property where the electromagnetic field exceeds an average of 2 milligauss per day, and for other purposes." The bill was referred to the Committee on Education and Labour and was before the committee in April of 1994.

### **British Columbia - Vancouver (1994)**

Parents of students at the Boundary Community School in North Vancouver have petitioned BC Hydro to reconfigure two 230 kV transmission lines adjacent to the school. EMF readings of 12 mG were recorded at a public meeting held on June 8, 1994, in a building bordering the power line corridor. At an October 27, 1994 meeting 75% of the parents supported BC Hydro spending an estimated \$50,000 to \$80,000 to reconfigure the lines.

### **California - Sherman Oaks (1994)**

Pressured by parents and a kindergarten teacher worried about potential health risks, school district officials will move an electrical transformer away from a portable classroom at Dixie Canyon Elementary school. Readings in the classroom were above 100 mG. Level in all other rooms in the school were below 1 mG. A week earlier the

students were moved out of the portable classroom and into the school library for It will cost about \$100,000 to move the transformer.

### **Connecticut (1994)**

Connecticut has not followed the lead of other states. The Connecticut Interagency EMF Task Force is not recommending a school EMF survey because "there is no consensus as to how the numerical results would be interpreted", according to its January 1994 report.

### **Maine (1994)**

The State Committee on Education in Maine has asked the utilities to offer schools free EMF surveys upon request and to provide them with background information. Three utilities agreed and at least 37 schools have taken them up on their offer.

### **New Jersey (1994)**

Several New Jersey schools have shut down classrooms near high- voltage power lines over concerns about possible health risks to students, following the release of a state-wide survey of EMF levels in schools earlier this year.

At Clifton School 14, officials decided to move three classrooms from a wing close to power lines and an electrical substation. Officials in Washington Township closed a classroom at Grenlock Terrace School, adjacent to a power line, due to high EMF readings associated with old lighting fixtures in the room. At the Gould-Mountain School in North Caldwell officials now only permit special classes in the classroom closest to a nearby transmission line.

Similar steps were taken four years ago at the Burnet High School in Livingston which is next to a high-voltage line. Parts of the playground were closed off and classroom closest to the line is only used for special classes which only meet for short periods.

An utility official is quoted as saying: "Based on our understanding of the readings and EMFs in general, I don't think there has been any demonstrated reason for schools to take any action... but we cannot tell them not to move classrooms; that's an individual decision by the school districts."

### **New Jersey (1994)**

Niagara Mohawk Power Corp. has agreed to pay the costs of reconfiguring or burying power lines adjacent to five different schools in their territory.

### **New York - Brooklyn (1994)**

In the community of Sunset Park, in Brooklyn New York a new elementary school has been proposed for a site adjacent to a New York Transit Authority electrical substation. This raised the concerns of Stanley Nelson, editor-in chief of Oncology News, a cancer journal, and his wife Betty, who live near the site. They purchased a gaussmeter and measured EMF levels as high as 168 mG at the site.

At their urging the New York State Attorney General has written to the Chancellor for the New York City Board of Education requesting that the Board "take immediate steps to assess the electromagnetic field levels at the proposed site...and to take prudent

avoidance actions to mitigate or avoid potential exposure of school children and staff to electromagnetic fields".

While the School Construction Authority has bowed to the demands that EMF testing be performed they continue to prepare the site for construction of a new school in spite of the uproar over the EMF levels at the site by local residents, parents and elected officials.

#### **New York - Long Island (1994)**

The Long Island Lighting Company has agreed to reconfigure a 69 kV power line adjacent to the Hewlett-Woodmere Middle School in order to reduce the average EMFs to 0.5 mG.

Also at the Franklin Early Childhood Centre in Hewlett a kindergarten classroom was closed following the discovery of magnetic fields as high as 90 mG.

#### **Tennessee (1994)**

The Tennessee Valley Authority in its March 8, 1994 newsletter stated that "Whenever possible, The Tennessee Valley Authority (TVA) will not site transmission lines near schools and densely populated areas. This is according to the TVAs EMF guidelines which they have been following for some time. The TVA supplies power to Tennessee and six other southern states.

#### **United Kingdom - London, England (1994)**

A seven year old boy and his twin five year old sisters paraded outside the High Court in London on July 26, 1994 at the launch of an attempt to obtain a judicial review of the activation of a 275 kV electricity cable which might expose them to a greater risk of cancer. The case was launched on behalf of three children, Lloyd Duddridge, age seven, Danielle Bye, age five, and Naomi Holliday, age three. The families of the children from Woodford Green, Essex, are seeking a judicial review of what they claim is the failure to properly regulate the installation of the cables under the Electricity Act 1989, to protect the public from dangers to health arising from the supply of electricity. Before the case began, the judge hearing the case barred the children from the court.

#### **United States (1994)**

In 1994, the National EMR Alliance, a public interest group devoted to reducing public EMF exposure identified the elimination of EMFs in schools as its top priority. While Alliance members have a strong interest in EMF bioeffects and epidemiological research, the lack of clarity in assessing potential health risks offers little comfort to those who believe that EMF exposure may endanger their children. As a result the Alliance has undertaken a "Hazard Free School Zone" campaign.

#### **California (1995)**

In July 1995 the California Public Health Foundation, in association with the California Department of Health Services, announced a project to assess the results of exposure of California public school and day care center personnel and students to both external power line frequency electric and magnetic fields (EMFs), and to internal sources of EMFs such as building wiring, electrical equipment, and lighting.



The goal of this project is to provide information to assist decision makers in prioritizing school policy options if further research studies suggest that power line frequency EMF exposures are associated with increased health risk.

### **California (1995)**

The California Public Utilities Commission advised cellular telephone companies not to build antennas near schools or hospitals.

### **California - Laguna Beach (1995)**

Parents for the Elimination of the Schoolyard Tower (PEST) is fighting to have a cellular tower, erected by Air Touch Cellular, from their schoolyard. The Laguna Beach Unified School District filed court action on August 30, 1995 and the company has now agreed to meet with PEST representatives.

### **California - San Francisco (1996)**

Cellular towers have been banned on school property in San Francisco.

### **Nebraska (1995)**

In the spring of 1995 schools in Nebraska will be holding the Great Debate. Using the Internet, students will debate the health effects of electromagnetic fields. The organizer describes the reason for the debate: " NPPD is planning on building a high voltage transmission line across this SE Nebraska region. People are really up in arms and there has been a lot of press and informational meetings. Nebraska has just set up Internet access for teachers and they are looking for practical applications other than E-Mail. So I created the Great Debate to develop those skills".

### **Michigan - Royal Oak (1996)**

Parents and residents were recently successful in stopping the school district in Royal Oak, Michigan from renting out space at Lincoln Elementary School to Cellular One for a transmission tower. The plan called for placing the tower less than ten feet from the school building. With less than a month to organize, they collected over 200 signatures opposing the tower, and alerted the local print and broadcast media. Before the school board could vote on the issue, at a standing room only meeting, Cellular One withdrew the proposal.

### **Nebraska (1996)**

First Cellular Omaha withdrew its application to build a transmission tower near Sunset Hills Elementary School after community protests, which included a parade of yellow ribbons tied around the trees that bordered the school property.

### **New York - Greenburgh (1996)**

Greenburgh, N.Y., has passed an ordinance that implements a multi-tiered system for locating cellular phone antennas. Cellular companies must first consider commercial sites, then residential sites. By forcing cellular companies to go through separate hearings at each level officials hope to discourage them from building antennas on sites in the bottom tier, no less than 350 feet from schools, parks, playgrounds, daycare centres and health care facilities.

### **New Zealand (1996)**

New Zealand's Ministry of Education has issued a policy statement preventing cellular phone antennas from being built at public schools, the September/October 1996 issue of Microwave News reported. "Of paramount importance to the ministry is the provision of an environment where boards of trustees, parents, teachers, pupils and other occupants of the school site can feel comfortable. For this reason the ministry has decided cell phone transmitters will not be sited on Crown-owned school sites in the future," John Simpson, the ministry's national property manager, wrote in a one-page statement.

### **Australia (1997)**

The August 5th edition of The Australian reports in an article titled "Less talk, more action on mobile tower sites" that: The Australian Telecommunications Users Group (ATUG), calls for a "more balanced and consistent attitude towards mobile phone towers". . . given that mobile phones are likely to become more rather than less popular, we need to develop a proper policy on the siting of towers and antennae. ATUG believes that a little sensitivity would go a long way here. Locating mobile towers close to schools, hospitals and child-care centres, for instance, is dumb given community fears, even if those fears turn out to be groundless. There are plenty of other places to put the towers."

In a related move the Australian Democrats have called for a moratorium on the erection of mobile phone towers on SA school sites in the wake of a report which raises questions about the health implications of the towers. Australian Democrats SA Leader Mike Elliot says an Australian study, by biophysicist Dr. Michael Repacholi of the Royal Adelaide Hospital, recently found an increased incidence of lymphoma in mice after prolonged exposure to the type of radiofrequency electromagnetic fields emitted by digital mobile telephones.

### **British Columbia - Vancouver (1997)**

Parents in Vancouver, B.C. have been victorious in a number of battles against cellular towers on school sites. In one case the board of variance rescinded a permit it had issued and in another the proponent withdrew the application.

### **Costa Rica (1997)**

The government electric utility is proposing to construct a 230 Kv power line to service an Intel microchip plant. The line is being opposed by residents who are concerned about their children's health because the line will be routed right over top of houses and next to a school.

### **Florida - Palm Beach County (1997)**

EMR Alliance member FACTS (Families Against Cell Towers at Schools) are disturbed that the Federal Communication's Commission has turned a deaf ear to radiofrequency (RF) health and safety concerns surrounding the siting of wireless communication facilities. FACTS has doggedly led the opposition to the proposal of the siting of over a dozen wireless communications facilities on school yards in Palm Beach County, Florida.

FACTS has taken their opposition to the national media. Wireless communications publication RCR Magazine featured the FACTS story on page one of it's April 7th issue.

Jeffrey Silva's article "Florida Group Requests Towers Far From Schools" is as well researched and presented as his past excellent reports on this towering debate.

The Summer 1997 issue Network News reports that FACTS has been successful in obtaining a six month moratorium on the construction of cellular phone towers in Palm Beach county.

### **Illinois - Aurora (1997)**

Opponents of a proposal by PrimeCo Corporation to erect a cellular phone antenna near the Aurora Christian School were successful. The opponents provided the City Council and Planning Commission with information on the health hazards and 75 residents attended the hearing on the proposal.

### **New Zealand (1997)**

The Shirley Primary School in Christchurch, New Zealand has appealed to the Environment Court against the siting of a cellphone tower next to the school because of its concern about the effects on the health of its pupils. This appeal will be a test case for all schools in New Zealand and will probably be heard in September or early October 1997.

Staff and parents of children attending the Green Bay Primary School in Auckland, New Zealand are so concerned about the danger to the children if a cell phone tower is built 90 metres from the school that the board of trustees is planning to find other accommodation for the children or close the school if the tower is built. The school does not have the funds to appeal against Telecom.

### **Ohio (1997)**

In a move that has brought a smile to many activists opposing the unsafe siting of wireless communication facilities, Ann Shirreffs of Pepper Pike, Ohio, has resigned from her job as a cellular telephone saleswoman and has taken up the battle cry of "Just Say No" to cellular towers on the school grounds in her community.

Ann has gathered 950 signatures of residents in the community opposed to the proposed AT&T school yard cell towers and is leading a well organized opposition to the proposed facilities. In fact, one piece of evidence Ann presented to the Orange School District authorities is a letter from Kathleen M. Fagen, M.D., the Medical Director of the Division of Occupational and Environmental Medicine for Metro Health Medical Center in Cleveland who writes:

"I strongly urge you to consider the possible health effects of RF exposure in the plans for the construction of the towers...These towers should be located so as to minimize exposure to people in schools, homes, apartments, offices and factories. Other alternatives should be considered before advancing in the plans to construct towers near schools. For example, collocation with other existing towers, building on landfill property, and other nonresidential areas are a couple of choices to consider before putting children at risk."

Other opponents have cited the cases of lead in paint and asbestos in ceilings, both once thought harmless, and used in schools, later to be proven health hazards.

In other news from Ohio, at least a dozen communities neighboring Ann's Pepper Pike area are challenging wireless carriers who wish to erect similar towering facilities.

### **Ontario - Cumberland (1997)**

Residents of Cumberland Township, outside Ottawa, Ontario, have told the Carleton Board of Education (CBE) that they do not want a new elementary school planned to be built near overhead power lines. Residents are concerned about the health effects of the electromagnetic fields from the lines. One possible alternative is to move the school site or locate the school so the power lines are not causing concerns. The CBE is the school board responsible for the Bridlewood Elementary School, the focus of the Bridlewood hydro line struggle.

### **Washington - Laurelhurst (1997)**

Sprint Personal Communications Services is threatening to sue a small Catholic school for \$1.5 million because it changed its mind about placing a cellular phone antenna in the belltower of its building in Laurelhurst, Washington. Some parents at Villa Academy fear radio emissions from the antenna could be harmful and have threatened to withdraw their children if the antenna is installed.

President of the board of trustees Elizabeth Mrkvicka said the contract was negotiated by a business manager who signed the deal without the approval of the board - if the academy board had known, it would not have approved the contract. "We are not in the business of providing antenna sites for cellular companies - We are in the business of education", she said.

### **Florida - Palm Beach County (1996-1998)**

Parents in Palm Beach County, Florida are fighting the erection of eight cell towers in eight local schools that were installed during the 1996 summer vacation. The parents, working with FACTS (Families Against Cellular Towers), are fighting to have the towers removed because of health concerns.

In 1996 PrimeCo built a cell tower 156ft. tall adjacent to the structure of Calusa Elementary in Boca Raton. PrimeCo built the tower without going the proper process. BellSouth built a cell tower 125 ft. tall at Spanish River High again without seeking zoning approval from the city.

On February 1998 (after a lengthy struggle carried on by FACTS) Boca Raton Code Enforcement Board cited both towers. The board told them to either: go through the zoning process; take the tower down; or pay \$250 per day fine (the maximum possible under Florida law). This ruling is being appealed.

### **Florida - Boca Raton (1998)**

Two hundred and fifty students transferred out of an elementary school in Boca Raton, Florida that installed a cell tower in the middle of the school.

A magnet program designed to attract and encourage students to transfer has had an unexpected event occur. Calusa Elementary in Boca Raton lost 30% of its students due to transfers to the new magnet school in the area. While most other schools only lost 40-60

students, Calusa Elementary, which had had recently installed a cell tower smack in the middle of the school-directly over the kid, lost close to 250 children.

The school District of Palm Beach County Florida is still scratching their skull ? This school district has an indefinite moratorium on towers since 1987.

#### **Massachusetts - Charlton (1998)**

The footprint of a planned middle school in Charlton, Massachusetts has been changed on the site to move it farther from power lines. The nearest corner of the school will now be 525 feet from the power lines and the farthest part of the school will be 750 feet away. The main entrance will be 600 feet away.

Parents had expressed concern about electromagnetic fields generated by the power lines and possible effects from EMF on the health of the children.

EMF readings taken under the lines ranged from 97 to 116 milligauss while readings at the nearest corner of the school would now be 0.9 mG and readings at the main entrance 0.7 mG.

#### **Michigan - Lansing (1998)**

Parents in Lansing Michigan, through their PTAs have opposed the siting of cellular towers on schools. The original proposal was to put 100' towers at 9 elementary schools and 3 high schools. The parents convinced the school board to eliminate the elementary schools. The city then held a public hearing before the Planning Board and the Board of Zoning Appeals with 16 new proposed sites - they moved to the nearest city park or golf course from the schools. Parents now report that "Our cellular tower issue is now dead -- or at least on a long hold. After the information forums and public hearings, no providers responded to the bids". The parents are now taking the cell tower issue, in the form of a resolution to the national PTA.

#### **Washington - Bellevue (1998)**

Parents of students at the Skyline High School are opposing plans to install a cellular relay tower at the school. They are concerned that the proposed 120-foot pole - with wireless communications gear at the top - could fall and hit unsuspecting students, or expose them to harmful electromagnetic radiation.

The Issaquah School District is also negotiating with Western Wireless for a similar communications pole at Sunset Elementary. It would be situated on the hillside next to Interstate 90 and above the playground.

The school district would receive about \$1,000 a month for each site.

The Issaquah School District which plans to allow Western Wireless to install the pole, says that under federal law, "government agencies cannot deny construction of a cell tower for any environmental reason - including health". Other school districts, however, have turned down lucrative offers from cellular communication companies.

#### **Arkansas - Fayetteville (1999)**

In March of 1999 the City of Fayetteville, Arkansas put a six months moratorium on installation of cell phone towers because of "environmental concerns".

### **Massachusetts - Lexington (1999)**

A local Waldorf school is protesting the decision by the nearby Follen Community Church to allow Nextel Communications to install microwave antennas in its steeple in exchange for \$27,600 a year over a twenty year lease.

At least five people have left the church over the antenna issue and officials of the neighboring Waldorf School reported last week that students from as many as two dozen families would leave the school due to health concerns if the antennas are installed.

Reverend Lucinda Duncan, pastor of the church stated that even though a majority of the church's 320 members "are comfortable with the safety of this technology ... it is important to us to be good neighbors, so on that basis, we asked to be released from the contract".

Nextel Communications has refused to let the church out of its contract.

For further information click [here](#).

### **Rhode Island - East Providence (1999)**

On February 3, 1999 a cellular telephone service provider, Omnipoint Communications, withdrew a controversial application for permission to build a 150-foot wireless communications tower at the city-owned Grassy Plains Playground in Riverside.

City Manager Paul. E. Lemont said the application was withdrawn after it became apparent to the company that the neighborhood was up in arms and that the lack of grassroots support made the proposal politically untenable for the City Council. A 156 name petition opposing the application had been presented to City Council.

The controversy took on wider implications when state Representative Rose Larisa, R-Dist. 87, a Riverside resident, said she will sponsor legislation aimed at barring wireless communications towers from public parks and playgrounds.

### **United Kingdom (1999)**

According to an article in the Sunday Mirror United Kingdom Education chiefs are banning mobile phone masts from schools amid growing fears of a link between low-level radiation and cancer. A quarter of 400 schools approached recently have turned down offers of up to £10,000 to have the masts put up in their grounds

New research has shown a possible link between low-level radiation from masts and childhood leukaemia, cancer and brain disorders. Now some education authorities are adopting a safety-first approach.

Mast bans have been imposed in Oxfordshire, Bedfordshire, Warwickshire, Norfolk, Essex, West Sussex, Hampshire, Leicestershire and Northamptonshire. In Lincolnshire and Manchester schools are advised not to install them. Of the 400 school masts erected already, many may not have their leases renewed. A spokeswoman for the Local Government Association said: "This is an issue we are taking extremely seriously."

### **United Kingdom - Northern Ireland (1999)**

The Belfast Telegraph reported that over 1,000 pupils staged a mass walkout from a Belfast grammar school during October 1999 in a dispute over a telecommunications mast on their roof.

Students at St Mary's Grammar School on the Glen Road left just minutes after the start of lessons. Pupils from first form right up to sixth form headed out and onto the pavement, emitting a cheer of solidarity as they did so. The sheer size of the protest partially blocked the busy morning traffic and a number of cars showed support by blasting their horns.

"The school should take the mast down right now. It could have an effect on our health. "Sixteen-year-old David McLaughlin said he walked out because many pupils feared they could get cancer.

Andersonstown mother Nuala Laird, who was present at today's protest, has already withdrawn her 14-year-old son Eric from the school. "The school say that it is perfectly safe but I would prefer them to err on the side of caution and get rid of it. It does worry me," she said.

### **United Kingdom - Scotland (1999)**

The Sunday Times of October 3, 1999 reports that Scottish mothers believe mobile phone firms are endangering children.

Joan Donlon, from Gourdon in south Aberdeenshire, is one of a growing number of women from Thurso to Glasgow who are becoming increasingly concerned at the number of masts in residential areas and who are taking direct action to have them removed. There are fears that the radiation from the masts could lead to cancer and brain disorders.

Donlon, 38, first became concerned a year ago when the local community council sent around a notice informing residents that Vodafone was planning to site a mast almost 15-metres high in the grounds of the local primary school where her 11-year-old daughter Joy is a pupil.

With the help of Friends of the Earth, Donlon mobilised her community. Her local councillor became involved and a petition was signed by most of the local residents, including many of the parents of the 60 pupils at Gourdon Primary School. "I contacted Vodafone and initially they were not interested. I think they thought I would just disappear," she says. But once her local MP, Sir Robert Smith, joined her crusade and she received publicity in the local papers and on Grampian Television, the company backed down. At a press conference that she called on March 5, she heard that Vodafone was withdrawing its mast citing visual impact as the reason.

In Thurso, Jean Hannah and her daughter Jill are fighting a similar battle with Orange for the removal of a mast from the edge of an all-weather sports pitch used by local children and youth groups. The pitch is in a residential area and Orange successfully applied to Caithness council to remove one of the pitch floodlights and replace it with a mast.

Hannah says the decision to site the mast went ahead despite local opposition. "We had two petitions and gathered around 300 signatures calling for the mast's removal. Our attitude is that nobody knows what the long-term effect of living with these masts is. There may be nothing to worry about, but there could be a great deal to worry about and

until we know these masts should be kept away from residential areas. The people who live beside them have no choice. They are exposed to the radiation 24 hours a day." Hannah has met with Orange, which is looking at the possibility of moving the mast, but for now it remains close to the houses and the sports pitch.

#### United Kingdom - Scotland (1999)

Experts from Scotland's largest health board have warned local authorities against erecting mobile phone masts on schools as fears over links to cancer and child leukaemia grow according to a report in the Sunday Times of October 3, 1999.

Greater Glasgow Health Board is recommending a temporary ban on putting masts on council properties until further scientific research has been conducted. It also suggests toughening safety limits on radiation emissions from the masts.

For further information click [here](#).

#### **New York - Ossining, NY (1998-2000)**

Residents of Ossining, N.Y. are fighting attempts by Sprint to locate a cell phone tower on top of a local high school.

Residents have been told that Sprint first went to the local municipality and asked them to assist in finding an acceptable location for the facility. Sprint, it is alleged, was informed that a moratorium on cellular tower permits existed in both the Village and Town of Ossining and was directed to the school district because school district property is not subject to local zoning.

On September 9, 1998, the Ossining Union Free School District approved a proposal to lease the rooftop of Ossining High School to Sprint for the cell tower, at a price of \$30k/annum, plus roof repairs, and an escalator of the greater of 3% or CPI. n.

According to counsel for the school district, the lease was subject to the requirements of NYS Education Law Section 403-a, which requires either a referendum or the approval of the State Commissioner of Education for a lease of school property for a term in excess of 10 years. The Commissioner denied the lease as an illegal use of school property for private gain.

Sprint then sued the Commissioner of Education and two of his deputies both in their official capacities AND INDIVIDUALLY, in the US District Court, Southern District of New York in White Plains. The NYS Attorney General, defending the Commissioner and Deputy Commissioners, moved to have the action dismissed as to the individual defendants. Judge Barrington Parker, Jr. dismissed the action as to the Commissioner, individually, but let it stand against the individual Deputy Commissioners.

Community outrage began to swell. Parents and other concerned residents formed a group called "Safe Ossining Schools" (SOS) to fight the implementation of the lease. On Wednesday, 1/19/00, members of the group and other residents successfully organized a protest outside the School Superintendent's office while the Board and the Administration were in a special meeting with Sprint and, according to news reports, TEN (!) Sprint lawyers. Simultaneously, SOS held an informational meeting at Ossining's Trinity, where over 300 people heard medical experts present evidence on the health effects of cell towers. Both events got considerable press coverage in the Metro NY media.



The next week, a lawsuit was filed by Dr. Leslie Plachta, a local family doctor and Don DeBar, a concerned resident, under Article 78 of the NYS Civil Practice Laws and Rules, challenging the validity of the cell tower lease on procedural and environmental grounds.

Here is the situation that cell tower opponents now face: There is apparently an attempt underway to stall the process, which Sprint and/or the board may be doing in the hope that a pause in their activity will allow the opposition to dissipate. The district has thus far refused to take an aggressive public posture with Sprint. Calls by DeBar and others for the resignation of the board members who voted to approve the deal made the front page of at least one local weekly. Posters saying "Resign" and "Boycott Sprint" cover telephone poles all over town.

**Main Page » Information » EMF info**

**Previous:** EMFs & Schools & Playgrounds

**Next:** Evidence regarding EMF safety concerns

## **Power Line Siting And EMF -**

by [Shieldus](#) at 07:37AM (PST) on November 11, 2004 | [Permanent Link](#)

Newsletters & Magazines : Public Power Magazine

Public Power Magazine

September-October 2004

Tom Watson

By: Curt Renner

Attorney

Email: [tw@w-r.com](mailto:tw@w-r.com)

Electric and magnetic field health risks and property damage claims are being raised by opponents of proposed transmission lines and substations across the country, in locations from Connecticut to California, Texas to Vermont, and Rhode Island to Florida. Utilities seeking to avoid increased costs, potentially significant delays or transmission towersiting denials should consider the benefits of developing pro-active approaches to address EMF issues before they become the focus of contentious public debate.

Newsletters & Magazines : Public Power Magazine

Public Power Magazine

September-October 2004

:View Archived Issues:

By: Tom Watson

By: Curt Renner

Attorney

Email: [tw@w-r.com](mailto:tw@w-r.com)

Electric and magnetic field health risks and property damage claims are being raised by opponents of proposed transmission lines and substations across the country, in locations from Connecticut to California, Texas to Vermont, and Rhode Island to Florida. Utilities

seeking to avoid increased costs, potentially significant delays or transmission towersiting denials should consider the benefits of developing pro-active approaches to address EMF issues before they become the focus of contentious public debate.

A California Public Utilities Commission administrative law judge issued a proposed decision in a transmission line siting case that includes significant discussion of EMF issues. The proposed decision finds that “while there is no definitive proof [of EMF health effects] at this point, we must proceed with the knowledge that EMF exposure may increase the risk of certain health effects.” The proposed decision, which calls for mitigation measures to reduce public exposures to EMF, now will be considered for adoption or modification by the entire commission.

In Rhode Island, EMF health issues have been raised by a coalition seeking undergrounding of a one-mile stretch of transmission line proposed to run over three parks in Providence. The coalition includes the state’s attorney general, lieutenant governor, a U.S. congressman, Providence’s mayor and city manager, as well as state legislators, three university presidents, and 35 city and statewide organizations. The state’s attorney general vowed that “we won’t back down in our fight to protect our environment, the health of the children and families who use the park and the health of the generations yet to come.”

In Connecticut, new legislation has been enacted requiring the Connecticut Siting Council to address potential public health impacts of EMF exposures when considering applications for transmission line siting. The new law requires the Siting Council to determine that proposed overhead transmission lines are contained in a “buffer zone that protects public health and safety” with particular concern for residential areas, schools, day care facilities, youth camps and playgrounds. The council is also required to adopt “standards for best management practices” for EMF from transmission lines, which are to be based on the completed and ongoing scientific and medical research on EMF.

In Florida, 200 residents opposing 125-foot power poles constructed in their neighborhoods filed two lawsuits seeking to force the utility to remove the poles. In the face of public outcry over the construction, the utility initiated an extensive public consultation process, with local residents and businesses participating in roundtable discussions about the proposed power line. EMF health risks and impacts on property values were identified as leading concerns. The utility subsequently offered to dismantle a number of the poles, replace some with shorter structures and to reroute a portion of the proposed line. The residents rejected the offer and pursued their lawsuits against the utility.

EMF claims in siting cases involve a complex interplay of medical, scientific, engineering and public policy issues. Utilities facing these claims need to be knowledgeable about EMF and prepared to provide accurate, consistent, defensible and persuasive information to the public and regulators. Key issues to be addressed include:

Health: In recent years, EMF health claims have tended to focus on childhood leukemia, adult cancer, cancer clusters, miscarriage, birth defects and neurological disorders such as Alzheimer’s Disease. Risks for children, the elderly and individuals with immune disorders have been a particular focus of public concern. The public’s perception of EMF health risks often is fueled by media reports about the findings of science reviews, such

as the recent controversial report from the California Department of Health Services and the finding by the International Agency for Research on Cancer that EMF is a possible cause of childhood leukemia. Up-to-date knowledge of EMF research and the science panel reviews is an essential element of an effective response to these claims.

**Property Values:** Property owners may allege that public fear of potential EMF health effects will damage the value of homes and businesses near a proposed facility or limit future residential or commercial development. These claims typically involve properties zoned for residential use (at times they may also be raised for commercial developments and business facilities). Local residents and business owners may also claim that a proposed facility will degrade community character or reduce business traffic to hotels, restaurants and shops. Reliable data from studies about property values near power lines and information about EMF, persuasively presented, are needed to effectively respond to these claims.

**Sensitive Use Facilities:** Project opponents often emphasize health claims when projects are routed close to schools, hospitals, day care centers, nursing homes, clinics, playgrounds, ball fields, public parks, and walking, running or biking trails. These “sensitive use” facilities have the potential to become a rallying point for community opposition and antipathy toward the utility.

**Electric Currents:** Project opponents may claim that stray voltage (or “stray currents”) from a proposed transmission line will have adverse effects on animals, including livestock breeding, dairy production, fertility and general health. While these types of claims are most common in rural areas, they also have been raised in suburban communities. Landowners may also claim risks of electric shocks on fences, flag poles, metal roofs, garage doors, animal kennels and swimming pools.

**Exposure Assessment:** The magnitude of EMF from the proposed project may become an issue of considerable debate. The utility will need to prepare accurate and defensible EMF exposure data. This is usually based on a combination of computer modeling and field measurements. Information about EMF exposures from existing facilities and other sources in daily environments will also be important to provide context for understanding the exposures from the proposed facility. A key here is the effective presentation of the exposure information and data.

**Policy Options:** Project opponents can be expected to argue that the public health policies of prudent avoidance or the precautionary principle require the relocation, redesign, shielding or undergrounding of a proposed facility. Utilities will need to understand these policy options and be prepared to address how they apply to EMF. This includes addressing existing EMF standards, exposure guidelines, and field mitigation techniques.

Utilities seeking to site new facilities must develop a plan for addressing EMF issues before they spark public antagonism and distrust. Crafting a plan in advance of a potential controversy provides an important opportunity to avoid problems and enhance the utility’s credibility and public trust.

The preparation of such a plan should include consideration of the following: 1) identifying key areas of anticipated public concern, 2) preparing outreach to local authorities, residents, public groups and the media, 3) planning for community meetings

and local hearings, 4) reviewing and updating EMF communications materials, 5) developing defensible EMF regulatory filings, and 6) if needed, preparing qualified medical and scientific experts for presentations and testimony on EMF health and exposure issues in public meetings, hearings before zoning and planning boards, public utility commissions and in court.

There are many potential avenues for effective communications with the public on EMF issues. The most appropriate route will depend on the particular project, the types of locations it will affect and the nature of the utility's relationship with local communities and regulators. Some options are discussed below. In each instance, in order to build public trust, it is crucial that the communications be accurate and defensible, and provide a credible and consistent discussion of the issues on the merits.

**Brochures:** Many utilities have developed their own EMF brochures, while others rely on brochures published by third parties. Some utilities prepare EMF materials that are specific to a proposed facility and include information about the EMF levels for the project. Some utilities send periodic newsletters to residents in the area of a proposed facility, explaining the need for the facility, the siting process, the status of the process, and including some EMF information.

**Web Sites:** Some utilities provide information about EMF on their Web sites and may include an option for e-mail requests for additional materials. Some utilities create project-specific Web sites that include information about EMF. These Web-based communications can provide a very efficient means for reaching a potentially large audience, but require some start-up time to prepare effective content. As with other communications, the information provided through the Internet should be accurate, up-to-date and consistent with other utility communications on EMF.

**Public Meetings/Workshops:** Some utilities address EMF in public meetings or workshops on the siting of proposed facilities. Two general types of formats tend to be used: 1) the presenter/audience format and 2) the open-house format.

The presenter/audience format typically involves a presentation by a utility representative, followed by a question and answer session. This format can be efficient in allowing a single communication to a large number of people. This format also can be effective in providing background information and addressing relatively low-level concerns about EMF. To the extent that members of the audience come to the meeting with significant concerns about EMF health issues, however, this format may not be the most effective approach to building trust. Members of the audience who have significant EMF concerns may become frustrated by having to sit through a formal presentation of the utility's view of the issue before they get a chance to speak, particularly if the utility's perspective differs significantly from their own. This may inject impatience and contention into the meeting atmosphere. The question and answer session may become an emotionally charged forum for project opponents to make inflammatory statements about EMF health risks and to rally opposition against the proposed project.

EMF claims in siting cases involve a complex interplay of medical, scientific, engineering and public policy issues.

The open-house format typically involves setting up a room with a series of tables or stations dedicated to addressing the various siting issues, including EMF. At each station a utility representative or outside expert is available to speak with members of the public and to provide written materials about a siting issue. The one-on-one nature of this format tends to be more time-consuming and therefore may result in EMF information reaching a smaller audience than a single presentation to a large group. The open house format provides for individual attention and interested persons to begin the discussion by voicing their own concerns. Given that opportunity in a one-on-one discussion, individuals may be more receptive to the utility's response to their specific concerns. In addition, the open-house format tends to promote less confrontational and emotional responses from the public. Utility personnel at the various stations need to be well trained, prepared and knowledgeable to be effective.

**Information Packages:** Some utilities prepare information packages for local government officials, media, or regulators before announcing proposed facilities. These packages typically address the need for the new facility, the utility's siting process and policies, and provide information about EMF and other siting issues. Accurate and fairly presented information can improve the utility's relationship with the local officials, media and regulators by recognizing the importance of their partnering in the siting process. This material will receive scrutiny by several audiences and must be carefully prepared.

**Briefings:** Some utilities hold briefings for local government officials, media, or regulators before announcing proposed facilities. The scope of the briefings is typically similar to the contents of the briefing packages discussed above, with additional information and talking points to address any specific concerns that have been identified. Briefings offer the same potential value as the information packages, with the added opportunity for the utility to receive immediate feedback about concerns local officials and regulators may have about the proposed project.

**Community Advisory Boards:** In some instances, utilities have worked with local officials, community organizations and other stakeholders to form community advisory boards to provide input about the siting of a particular project or portion of a project. This approach is designed to emphasize collaboration and inclusion in the siting process, but it is very time-consuming and requires an early start to avoid delays in siting.

It appears the public will continue to raise concerns about EMF health issues in opposition to siting new facilities. Advance planning to develop an effective approach for addressing EMF concerns with accurate, timely, credible and defensible information will help utilities build a foundation of trust with the public, as well as local officials and regulators.