

Cloaking the Danger: Evidence of Deception in the St Paul Regional Water District's Communications Regarding Water Meter Safety

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This document, being submitted on October 25, 2011 to the St Paul City Council, is a summary of the disturbing evidence that the St Paul Regional Water District is using its letters and web site to cloak the likely dangers of the default-choice of new water meters, a meter that pulses microwave meter readings every 14 seconds. While I was able to testify regarding some of this alleged deception, it is necessary to provide this detailed discussion in writing in order to provide, in convincing detail, the gravity of the evidence and the depth of the evidence of a consistent effort on the part of the water district to cloak the dangers of the default-choice new water meter. It is not pleasant to call to attention to deceptive communications and possible deliberate wrong doing; a citizen should heed the call of duty to serve his government and the greater good.

Our grass roots group, variously called Citizens Against Mandatory Water Meter Radiation, and by other names, opposes the proposed \$12 per fee that has been approved by the water district and that is being forwarded to the St Paul City Council for its approval. We stand in unified opposition to such a fee because:

- a) Such a fee unfairly discriminates against the access to a safe meter alternative by lower income families. A fee is more likely to deter families with children, the elderly, and people with illnesses and disabilities. Such families and residents are especially likely to be deterred from having a safe meter option because of a fee.
- b) The imposition of a fee implies that choosing a safe meter option is a "frill" or a "luxury." Health is not a frill or a luxury, but is a basic right of the customer. Existing science strongly indicates an increased risk or hazard from the microwave pulsing meter option. If the council were to question a panel of *independent* (not working for the wireless industry) EMF scientific experts, a strong majority of them would indicate agreement with us. **The imposition of a fee is actually part of a pattern of mis-information and cover-up that is seen in this scientific controversy.**

Examination of evidence that the water district's communications are seriously biased, deceptive and misleading.

The SPRWS ("water district") knows, or should know, that its communication letter (see attached two page "Dear Customer" letter) to the water district's customers is biased, deceptive and contains misleading statements in crucial areas. It proclaims that "SPRWS wants to provide you with the information you need to make the best possible personal decision regarding the water meter reading system in your home."

It then goes on to say "Our research indicates that the preponderance of current scientific evidence does not link radio frequency technology like that used in our radio-read metering systems to any adverse health effects."

1) Calling it a "radio-read" system implies, for the average reader, that the device is as safe as the radios that we have in our homes. But an ordinary radio **does not transmit microwave energy pulses**; whereas the Neptune R900i (the default meter) sends out powerful microwave pulses every 14 seconds, pulses that are strong enough to be read by a collector vehicle a block or two away! This is like having a microwave oven that is designed to leak day and night leaking pulses from within the home that are strong enough to be read a block or two away from the home. The phrase "radio read" is deceptive as used in this sentence.

2) Magda Havas, PhD, Henry Lai, PhD and others have noted that of *industry-funded* studies, only about 25% find adverse health effects from RF radiation, while of *government-funded* and *independently-funded* studies, 75% of them find adverse health effects on humans and other

living things. Our water district should share the conclusions drawn by non-industry funded studies only because those are the studies that are more likely free from bias.

Under the water district's section on **What You Should Know of the Radio Metering System**, it displays the most serious omission and distortion. Under the sub-heading **How the Meter Works**, it says **The radio is powered by a single D cell battery. It transmits a 140 milliwatt signal four times a minute each transmission lasts .007 seconds. The battery warranty lasts for up to 20 years.**

- a) While this statement is superficially true, it is, again, a gross distortion to call the device a "radio" when we are really talking about a microwave-pulsing transmitter – far from doing what a radio does!
- b) The power consumption of an electronic device is *not* an indicator of its safety regarding the microwave radiation. There is no regulatory agency in the world that expresses radiation intensity limits and guidelines in terms of milliwatts or any other unit of power.
- c) The naïve customer is likely to conclude that this device is as safe as other familiar devices that are operated by D cell or other batteries, such as a flashlight or a battery operated radio or alarm clock. The power consumption by a battery, even during the time that the meter is pulsing, does *not* express the intensity of the microwave pulses being emitted by the default meter. Below, we explain how to properly evaluate safety in terms of radiation intensity and we reveal the measured intensities of the default meter at various distances from that meter in an actual St Paul home.

What intensity is, how it is expressed, what levels are safe, and what levels are actually produced by an actual default water meter installed in a St Paul home.

What the customer *does* need to know is that microwave radiation intensity is expressed as a fraction, with a unit of power, such as microwatts, in the numerator, and a unit of area, such as square meters, in the denominator. We will use "microwatts per square meters," and abbreviate this as (uW/m²). Next, we will give you the best, health-protecting guidelines for microwave intensity readings for pulsed microwave exposures such as come from cell phones, cordless phones, Wi-Fi and microwave emitting utility meters of all kinds. The **International Institute of Building Biology** has adopted exposure guidelines for such radiation exposures in indoor environments (e.g. homes); these guidelines are also in line with the recommendations of the **Bioinitiative Report of 2007**, a world-wide collaborative efforts of hundreds of independent scientists, which reviewed the more than 2000 studies performed prior to 2007 (www.BioInitiative.org). (The water district knows, or should know, a least the summary of the contents and conclusions of this report – full text of the report is 610 pages - detailing the toxic effects of RF radiation, including microwave pulsed radiation).

These **protective guidelines** are as follows, expressed in the units of uW/m²:

Below 0.1 **Ideal** - found in the least-exposed dwelling, such as in basements

Between 0.1 and 5 **Weak** - Has some biological activity, but poses no risk for health people with intact immune systems, and without chronic diseases or special sensitivities.

Between 5 and 100 **Strong** - Unacceptable biological risk for all people, especially if multiple stress factors are acting together. Remediation is recommended as soon as possible.

Greater than 100 **Extreme** - A critical biological risk to all people. Remediation should be done quickly.

Radiation levels due to a Neptune R900i, the default meter, as measured by a certified building biologist are described as follows: The microwave pulses occurred every 14 seconds; the peak

pulse intensity varied from pulse to pulse so the readings are expressed as falling within a range of values. The distance from the meter must always be specified and, as you will see, the closer the test meter was to the source, the stronger was the measured pulse intensity.

On the **main floor in the center of the house, 30 feet** from the water meter below in the basement, pulse intensities ranged from **50 (strong) to 175 (extreme)**.

In the basement measurements were taken both at 10 feet and at 3 feet from the pulsing meter.

At 10 feet from the water meter, the pulse ranged from **500 to 1200 (high extreme)**.

At 3 feet from the R900i water meter, the pulse ranged from **1500 to 3800 (very high extreme)**.

The radiation intensity levels to be found immediately at the antenna sticking up from the R900i were not recorded (the building biologist was probably unwilling to get that close!), but they would be even higher, even more extreme. These are the kinds of radiation intensities, and their meaning, that the water district is failing to disclose to its customers and that the water district is failing to highlight as requiring **restricted access to that part of the home where the radiation is most unacceptable** (a 10 foot or 20 foot radius, whatever “off-limits” range the informed home owner would decide upon).

Council member and Water Board President Pat Harris and top officials of the water district were shown this measurement data in a private meeting on June 8th 2011; it was left with them in a written document. Later this past summer, a different group of citizen critics again met with Harris and his aides and those critics were accompanied by the building biologist professional who made these measurements. The leadership of the water district thus was fully appraised of what a protective radiation standard would be, how radiation intensity is expressed (what units) and what the actual reading were found to be; and yet the water district continued to show a callous disregard for its customers by failing to accurately convey radiation intensity data to its customer. Instead, it cloaked the radiation safety issue in deception.

Further we explained to Harris and his aides that the pulsation of the carrier wave and its modulation (in order to put the meter’s information onto the microwave carrier wave) add to the biological adverse effects of the microwave emissions. **The modulation introduces frequencies into the radiated signal in the several hundred Hertz (cycles per second) range and these are biologically active frequencies. The pulsation and the modulation add to the biological hazard.**

The water district’s letter goes on to say:

Regulations Microwave pulsing meters are regulated by the Federal Communications Commission (FCC) and the Food and Drug Administration (FDA).

Utilities using such meter must “meet all regulations set by the agencies governing these devices.” While this is true in the narrow sense, it is a seriously incomplete statement and leaves the reader-customer with a false assurance of safety. Here are the facts that, once understood, strip away this cloak of deception:

The **FCC’s** guideline was adopted by FCC based on EPA’s recommendation in 1996. An EPA official, **Norbert Hankin**, explained that the guideline was based solely on preventing “thermal effects,” that is, preventing a person’s tissues and organs from being heated up or cooked. (That’s nice – we don’t want our livers to be cooked because we are standing too close to the water meter). But the FCC guidelines are **not intended to prevent non-thermal mechanisms of injury** such as cancer, birth defects, miscarriage, auto-immune diseases, cataracts, testicular and sperm abnormalities, etc. . Therefore, the FCC guideline, which is very lax, is not a standard that is protective of human health in a home!! It depends on frequency, but at 900 Megahertz, is it 30,000,000 uW/m2. As you can see from the previous page’s discussion, that level is

outrageously high and un-protective and it is viewed as such by the independent scientific experts. And yet the wireless industry has the gall to tout their compliance with the FCC's ridiculous guideline as indication of the safety of their devices. Unfortunately, the industry's deceptive claim of safety, based in part on compliance with the FCC guideline, is a tactic that is also being adopted by the water district. The water district appears to be following a script written by the dishonest spin doctors of the wireless industry.

The **claim of safety because of FDA regulation is also specious.** On the one hand, it is true that the **FDA is supposed to regulate the RF radiation** that is emitted by devices such as cell phones, cordless phones, Wi-Fi computers, microwave ovens, microwave baby monitors and utility meters that pulse their readings via microwaves. Yes, the FDA regulates wireless devices "both medical and non-medical." But, sadly and shockingly, the FDA has been seriously negligent in its duty to regulate. **Except for microwave ovens, which have been in commerce for about 40 years, the FDA has failed to regulate anything on that list of microwave pulsing devices.** And the FDA's regulation of microwave ovens is a scandal too, an enormous scandal: the FDA says that at a distance of 5 centimeters (about 2 inches) from the oven, the microwave radiation levels cannot exceed 50,000,000 uW/m². Beware!! Such a lax guideline may be good enough to keep a kitchen cook from getting cooked herself, but the radiation levels it allows are very, very extreme! So, when it comes to regulating most microwave emitting devices, the FDA is "out to lunch." And yet the water district implies the FDA is doing its job and has provided regulation of microwave emitting devices that is protective of our health. More of its cloak of deception.

Health Concerns. In this section of their letter, the water district repeats the assurance that this product is "governed by the FDA," a misleading statement as we have just seen above. Then it launches into a half of a page putting its spin on the WHO's statement that RF radiation is a possible carcinogen, downplaying any concern about the very serious issue of cancer. **"There is not enough scientific evidence to say with any certainty that the agent (pulsed microwave radiation) causes cancer"** says the letter. But that is industry's talk, and not what independent scientists would say. Independent scientists will point out that pulsing utility meters have only been around for a few years and the real surge of cancer due to them may not show up for 15 to 20 years. It is hard to predict what the effect of all those pulses of exposure, day and night, will do over the long haul. But there is an abundance of evidence that raises cause for concern. For example, in 1995 and again in 1996, Lai and Singh published reports of finding an increase in single strand and double strand DNA strand breaks in the brains of rats after exposure to RF radiation. DNA breaks can repair themselves, but Lai explains that "nerve cells have a low capability for repair and breaks may accumulateand may be the cause of slow onset diseases, such as cancer."

Do we want the families of St Paul to be the experimental animals in this experiment to find out if what the WHO calls a "possible carcinogen" is an actual carcinogen in our families? The independent scientists see evidence of risks for far more diseases than cancer: they fear devastating levels of dementia, Parkinson's, heart disease, or other degenerative diseases. We are already seeing clear evidence of early symptoms: fatigue, headaches, difficulty sleeping and memory problems. Children are more prone to harm than adults are, and they are our future.

The water district's letter also cites a list of "other agencies" that have not found a **"significant association" between cell phone use and health effects.** But, other than the FDA and the FCC, these are either not governmental agencies at all (e.g. American Cancer Society) or they do not have regulatory oversight over microwave emitting devices. Their mention is specious and irrelevant, even as they fail to mention reports such as the BioInitiative Report, a definitive 610 page report written in 2007 by the leading independent RF radiation scientists of the world.

Finally, the letter concludes that “More information on the water meters and reports from peer-reviewed, science based research can be found at www.SaintPaulWater.com.” But the web site contains the same type of misinformation and distortions that the “Dear Customer” letter does. The web site appears to be more industry-written spin. Why couldn’t it also provide one web site representing the views of the independent scientists? The web site www.SmartMeterDangers.org, contains statements of concern by credible, well-credentialed scientists and provides references from over 5,000 scientific articles. Any reader of that web site quickly gets a more reality-based view of the microwave utility meter controversy. Then, anyone who surfs the net further may find the stories of hundreds of people who have become extremely ill from the RF pulsing utilities, with some of them being driven out of their homes. Many have developed the disability of EHS.

EHS (ElectroMagnetically Hypersensitive) are unable to travel and work in the normal city environment because of the barrage of radiation that surrounds us— radiation that the FDA does not bother to regulate. **They become ill if they are in the same room**, same bus, or same train, as someone who starts using a cell phone. They become ill just being in the same house as a microwave pulsing utility meter. Right now, **St Paul has an estimated 6,000 people who are EHS**; they were not *born* that way, they *developed* that disability, they developed that disability because of the negligence of the FDA, congress, and of local officials who have not tried to curb that RF radiation problem to the fullest extent possible.

Conclusion. The City of St Paul should not rubber stamp an “alternative meter program” that is dishonest and deceptive in its communications and that discourages customers (the \$12 per read fee and requirement to maintain the meter’s wire) from choosing the one meter option that is long-term safe for people in their homes. The presence of other unwise devices, such as the neighborhood cell towers, Wi-Fi or cordless phones in some homes, does not provide assurances of safety regarding yet another microwave-emitting device installed by the water district.

We critics of what the water district has done in the way of deception and cover-up are merely informed people who want to save the city and its people – not just our little group – from suffering and harm. We believe that our local units of government should speak with honesty and integrity even when federal agencies fail to do so. The St Paul City Council should seize this historic moment to stand up for truth and health and safety. Such a path may require an unusual act of courage on the part of our mayor and our council members. But such a path of integrity and truth is exactly what is needed to serve and protect all the citizens of our city.

Exhibits and Attachments

A Letter from the SPRWS entitled *Information on the 2010 – 2013 SPRWS meter replacement project*. This two page letter is the “Dear Customer” analyzed in the *Cloaking the Danger* document.

B *Reported Biological Effects of RF Radiation*, by Sage Associates of Santa Barbara, California. This graph shows levels of microwave radiation exposure in the vertical direction, spaced in a logarithmic proportion and, to the left of that vertical axis, shows: the FCC limit (which is too

high), what a typical microwave over emits at 4 feet (too high), what a typical cell phone emits at 30 feet (not very safe), what an office with Wi-Fi or a cordless phone may typically produce, the BB (building biology) threshold above which the risk is “extreme,” and the BB “ideal” point. To the right of the vertical axis, health impacts that are reported in the scientific literature are shown.

C *Research Studies on the EFM (electro-magnetic field) Connection with Human Testicular Cancer, Damaged Sperm, and Reduced Fertility*, compiled by Powerwatch (United Kingdom). This exhibit lists the abstracts and references for sixteen studies.

D *Scientific Panel on Electromagnetic Field Health Risks: Consensus Points, Recommendations, and Rationales*. This report co-authored by seven internationally-recognized EMF researchers summarizes the work product of a scientific panel that met in November 2009 for three days in Seletun, Norway. This panel engaged in “intensive discussion on existing scientific evidence and public health implications of the unprecedented global exposures to artificial electromagnetic fields (EMFs)”.

E *Smart Meter Injury from Exposure, over three months, to a smart meter seven feet below my bed*. By Maya Cain. This one-page personal story describes the harm done to Maya Cain by just four months of exposure to a microwave pulsing utility meter that had been placed in her home. The exposure from pulsed microwave radiation transformed Maya Cain into an EMF hypersensitive person, leaving her with a severe disability, with symptoms that she describes in her story.