

James Fortune

From: Nate Brimmer <nate.brimmer@connectwithaxiom.com>
Sent: Wednesday, August 16, 2017 10:41 PM
To: 'Mark Ouellette'; 'James Fortune'; 'Malcolm Fernald'
Subject: RE: Microwave on GCI

Earlier today Mark asked me to do some research on EMF emissions, so that we had some background to work from.

In summary, I'm seeing a broad consensus that:

- High frequency RF exposure likely has extremely limited negative impact on human biology
- RF energy delivered to tissues (dose, if you will) diminishes severely with distance. That is, if you are not right in front of a source, your exposure will be very small
- To the extent that science does have some concerns about RF exposure, it's been about cell phone handsets (NOT cell towers or WiFi systems), as the handset emissions are so close to the body
- When you double the distance from an RF source, you quarter the received power – this is just the nature of RF propagation
- To get anything like the exposure from a cell phone, you'd have to be very close to the tower – which would mean floating in the air somewhere over the ocean, as this beam is pointing up towards the tower on Islesford
- Coming in the other direction, not only is the beam small, it's going to intersect the ground near the tower, and it's going to be massively attenuated (very low power), since it is coming from almost 2 miles away

Some interesting, useful, and/or supporting documents:

Data sheet for the primary radio we are using:

<https://www.streakwave.com/mmSWAVE1/Video/Integra%20series%20DS%20v1.39.pdf>

Data sheet for the backup radio link: https://dl.ubnt.com/datasheets/airfiber/airFiber_DS.pdf

FCC consumer guide for RF exposure from cell sites – we will be radiating significantly less power than a cell tower (plus, our beam is highly directional): <http://transition.fcc.gov/cgb/consumerfacts/rfexposure.pdf>

** WHO guide for planners about having constituent conversations about siting EMF sources: http://www.who.int/peh-emf/publications/en/emf_final_300dpi_ALL.pdf?ua=1

Citations for a mess of EMF/Health scholarly articles that I have not read: http://www.who.int/peh-emf/publications/sci_journal/en/

WHO web page saying that there is no conclusive link to health impacts from cell phone or Wifi exposure. It also says that exposure from FM radio is likely higher, due to the saturation of these signals and the fact that the human body absorbs more energy from these lower frequencies than it does from higher frequency communication bands such as those in use for this project: http://www.who.int/peh-emf/publications/sci_journal/en/

An old and probably out of date document from California, but it includes as Table 1 a breakdown of how EMF/RF field strength fades with distance, showing very low exposures at just 3' from various sources: <http://www.ehib.org/ehib/www.ehib.org/emf/shortfactsheet.pdf>

WHO fact sheet on cell phone says cell phones are possible carcinogen (as coffee was classed for 25 years, until last year, BTW), and that one way to reduce exposure is to not hold them up to your head, as that significantly lowers RF

absorbed by the body. Overall, this fact sheet is balanced but comes down strongly on the side that exposure to RF fields is not a significant health risk. Again, don't rent a hot air balloon and park it in front of our tower (we'll ask you to move if you do) and you'll be fine. <http://www.who.int/mediacentre/factsheets/fs193/en/>

** An international commission on Non Ionizing Radiation says no clear evidence for cancer risk, increased population-wide cancer rates have not increased as they would if the studies finding increased risk where true, that thermal heating is the only negative impact of high-frequency RF exposure, and that not using RF sources in close proximity to the body (using hands-free devices rather than holding a phone to your head) are good risk-reduction practices: <http://www.icnirp.org/en/applications/wi-fi/index.html>

A good background factsheet from the WHO: <http://www.who.int/peh-emf/about/WhatisEMF/en/>

** Especially good resources

Sincerely,

Nate Brimmer

Project Manager
Axiom Technologies

p: 207.255.0679 x105

a: 3 Water Street Machias, Maine 04654

w. ConnectWithAxiom.com

e: Nate.Brimmer@ConnectWithAxiom.com

Axiom

From: Mark Ouellette [<mailto:mark@connectwithaxiom.com>]

Sent: Wednesday, August 16, 2017 1:45 PM

To: 'Nathan Brimmer' <nate.brimmer@connectwithaxiom.com>; James Fortune <james@cranberryisles-me.gov>; 'Malcolm Fernald' <malcolmfernald@hotmail.com>

Subject: Microwave on GCI

Jim and Nate,

As you are both aware, I have spoken with Rob St. Germaine of 61 Dog Point Road on GCI. He and a few of his neighbors are "concerned" about the effects of the microwave broadcast. As he indicated, the town had not yet completed the planning board process which would not be completed till the end of the month. He also indicated, among other things, that we should consider changing the location.

He also indicated that one of the neighbors had discussed getting a lawyer involved. He was surprised that property owners around the Boatyard had not been notified and was hoping for a meeting for those concerned to have their voice heard.

I have some and our office does, with this type of situation. We will need to discuss next steps with you guys tomorrow. Add it to the list☺

My general feeling about this issue is that it is a small problem, but at the end of the day, leadership at the town level will be required.

m

Mark Ouellette

President

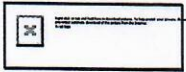
p: 207.255.0679

m: 207.272.5617

w: ConnectWithAxiom.com

e: Mark@ConnectWithAxiom.com

Axiom



This email has been checked for viruses by Avast antivirus software.

www.avast.com