Effects of 5G, Internet of Things, and Small Cells on Birds, Bees, Trees and Climate (Video)

Description

By B.N. Frank

Since 2017, doctors and scientists have been asking for 5G moratoriums on Earth and in space (see 1, 2). Since 2018 there have been reports of people and animals experiencing symptoms and illnesses after it was installed (see 1, 2, 3, 4).

American opposition to 5G and small cells (5G and 4G) continues to increase due to concerns about reduced property value (see 1, 2, 3, 4), public safety (see 1, 2, 3, 4, 5, 6, 7, 8), health (see 1, 2, 3, 4, 5, 6, 7, 8, 9. 10), cybersecurity (see 1, 2), privacy (see 1, 2), and environmental risks (see 1, 2, 3, 4). Some have described 5G deployment as a form of "environmental racism". Seems appropriate.

Thanks to Environmental Health Trust for the non-profit's new video and webpage devoted to the environmental consequences of small cell densification, 5G and IoT technology.

From Environmental Health Trust:

5G and Small Cell Environmental Effects: Birds, Bees Trees and Climate

Watch EHT Executive Director Theodora Scarato review the environmental effects of 5G and cell network proliferation with a focus on trees, bees and birds. In addition, she documents the increased energy consumption and climate impacts of 5g and the internet of things.

FCC limits were not developed to protect our flora or fauna. Wireless radiation "safety" limits for trees, plants, birds and bees simply do not exist. No US agency nor international authority with expertise in science, biology or safety has ever acted to review research and set safety limits for birds, bees, trees and wildlife.

References to Research Cited in the Webinar on Environmental Effects of 5G and Radiation

A 2021 research review by Levitt, Lai and Manville (2021) entitled "Effects of non-ionizing electromagnetic fields on flora and fauna, part 1. Rising ambient EMF levels in the environment" published in Reviews of Environmental Health found "exponential increases in nearly all environments. " The abstract states "biological effects have been seen broadly across all taxa and frequencies at vanishingly low intensities comparable to today's ambient exposures. Broad wildlife effects have been seen on orientation and migration, food finding, reproduction, mating, nest and den building, territorial maintenance and defense, and longevity and survivorship. Cyto- and geno-toxic effects have been observed… It is time to recognize ambient EMF as a novel form of pollution and develop rules at regulatory agencies that designate air as 'habitat' so EMF can be regulated like other pollutants. Wildlife loss is often unseen and undocumented until tipping points are reached. Long-term chronic low-level EMF exposure standards, which do not now exist, should be set accordingly for wildlife, and environmental laws should be strictly enforced."

This paper, which is one of a three part series that addresses wireless frequencies now in use as well as the complex signals that will be deployed for 5G stating "serious concerns regarding phasing because it interacts with living cells in extremely complex ways that have nothing to do with traditional thermal thresholds. The wave form itself is the biologically active component" and "The reason that phasing may have a unique biological impact is because very fast peak radiation pulses generate bursts of energy that can give rise to what are called Sommerfeld and Brillouin precursors in living cells that can in turn penetrate and disperse much deeper than traditional models predict. Sommerfeld/Brillouin precursors most notably form with ultra wideband exposures as proposed with 5G."

The Department of Interior wrote a letter in 2014 detailing several published studies showing impacts

of wireless radiofrequency radiation (RFR) to birds stated that, “There is a growing level of anecdotal evidence linking effects of non-thermal, non-ionizing electromagnetic radiation from communication towers on nesting and roosting wild birds and other wildlife…. And “However, the electromagnetic radiation standards used by the Federal Communications Commission (FCC) continue to be based on thermal heating, a criterion now nearly 30 years out of date and inapplicable today. “ and “third-party peer-reviewed studies need to be conducted in the U.S. to begin examining the effects from radiation on migratory birds and other trust species.”

Albert Manville, former senior biologist of the US Fish and Wildlife Service wrote “A BRIEFING MEMORANDUM: What We Know, Can Infer, and Don’t Yet Know about Impacts from Thermal and Non-thermal Non-ionizing Radiation to Birds and Other Wildlife” published in Wildlife and Habitat Conservation Solutions, 2014 on the impacts of RFR to birds and bees. India dropped their RF limits by 1/10th after a research review documented the majority of research studies found adverse effects to wildlife, birds and bees.

Regarding bees and pollinators, the study “Exposure of Insects to Radio-Frequency Electromagnetic Fields from 2 to 120 GHz” published in Scientific Reports found insects (including the Western honeybee) can absorb the higher frequencies that will be used in the 4G/5G rollout with absorbed power increases up to 370%. The researchers warn, “This could lead to changes in insect behaviour, physiology, and morphology over time….” Research also has found impacts to bees from wireless frequencies including inducing artificial worker piping (Favre, 2011), disrupting navigation abilities (Sainudeen, 2011; Kimmel et al., 2007) reducing colony strength (Harst et al., 2006) impacts to honey bee physiology (2011).

Research on trees has found trees are harmed by RFR. A 9 year field study Waldmann-Selsam, C., et al 2016, found significant impacts to trees near cell antennas and an investigation of 700 trees found damage starts on the side of the tree with highest RF. A review on impacts to plants entitled “ Weak radiofrequency radiation exposure from mobile phone radiation on plants concluded, “a substantial amount of the studies on RF-EMFs from mobile phones show physiological and/or morphological effects.” A study on aspen seedings found ambient RF in a Colorado setting were high enough to cause necrotic lesions on the leaves, decrease leader length and leaf area, and suppress fall anthocyanin production (Haggarty 2010).

Small Cell Regulations That Attempt to Protect Trees

Washington DC: Small cells cannot be located within 15 feet of a tree and trees can’t be pruned for the benefit of small cell infrastructure.

Small Cell Guidelines (LINK page 14 on trees)

- standalone poles shall not be placed within fifteen feet (15?) of any open tree planting space, No street tree shall be removed, or have its protected root zone impacted, to accommodate installation of Small Cell infrastructure
- No tree shall be pruned related to the installation or functioning of small cell infrastructure.

Denver Colorado: (LINK)A minimum of 15-25 feet of separation to the tree trunk such that no proposed disturbance shall occur within 5 feet of the critical root zone (drip-line) of any tree…

Thornton Colorado: (LINK) Poles shall not be located…"less than 15 feet or within the drip line of an existing tree, whichever is greater in order to protect the health of the tree."

Reports and White Papers: 5G, Energy Consumption, and Climate

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Letter from the EPA to Environmental Health Trust

——— Forwarded message ———

From: **Veal, Lee**<>

Date: Wed, Jul 8, 2020 at 11:32 AM

Subject: RE: Letter with specific Questions Related to the FDA review and to the EPA, CDC, NIOSH and FDA Jurisdiction on EMFs

To: Theodora Scarato <>

Dear Director Scarato;

Thank you for sending us your questions and references regarding radiofrequency (RF) radiation. Up through the mid-1990s, EPA did study non-ionizing radiation. The Telecommunications Act of 1996

directs the Federal Communications Commission (FCC) to establish rules regarding RF exposure, while the U.S. Food and Drug Administration (FDA) sets standards for electronic devices that emit non-ionizing or ionizing radiation. EPA does not have a funded mandate for radiofrequency matters, nor do we have a dedicated subject matter expert in radiofrequency exposure. The EPA defers to other agencies possessing a defined role regarding RF. Although your questions are outside our current area of responsibilities, we have provided a response to each one as you requested.

What is your response to these scientists' statements regarding the FDA report and the call to retract it?

EPA Response: The EPA does not have a funded mandate for radiofrequency matters, has not conducted a review of the FDA report you cited or the scientists' statements, and therefore has no response to it.

To the FDA – What consultants were hired for the FDA review and report on cell phone radiation?

EPA Response: This is not an EPA matter. Please refer this question to the FDA.

What U.S. agency has reviewed the research on cell phone radiation and brain damage? I ask this because the FDA only has looked at selected studies on cancer. If your agency has not, please simply state you have not.

EPA Response: EPA's last review was in the 1984 document Biological Effects of Radiofrequency Radiation (EPA 600/8-83-026F). The EPA does not currently have a funded mandate for radiofrequency matters.

What U.S. agency has reviewed the research on damage to memory by cell phone radiation? If so, when and send a link to the review.

EPA Response: EPA's last review was in the 1984 document Biological Effects of Radiofrequency Radiation (EPA 600/8-83-026F). The EPA does not currently have a funded mandate for radiofrequency matters.

What U.S. agency has reviewed the research on damage to trees from cell phone radiation? If so, when was it issued and send a link to the review.Note this study showing damage from long term exposure to cell antennas.

EPA Response: The EPA does not have a funded mandate for radiofrequency matters, and we are not aware of any EPA reviews that have been conducted on this topic. We do not know if any other U.S. agencies have reviewed it.

What U.S. agency has reviewed the research on impacts to birds and bees? If so, when and send a link to the review. I will note the latest research showing possible impacts to bees from higher frequencies to be used in 5G.

EPA Response: The EPA does not have a funded mandate for radiofrequency matters, and we are not aware of any EPA reviews that have been conducted on this topic. We do not know if any other US agencies have reviewed it.

Opposition to 5G is worldwide. Cities and entire countries have taken action to ban, delay, halt, and limit installation AS WELL AS issue moratoriums. The majority of scientists oppose deployment. In May, scientists submitted a letter to President Biden asking him to protect the public from 5G and other unsafe technology. Americans opposed to 5G may click here to sign a letter asking the Biden administration to stop deployment immediately.

By B.N. Frank

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