

FCC's Legal Duties to Inform and Protect the Public

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This paper is designed to provide an overview of some of the key legal principles that affect the authorization of wireless services and the construction of the networks needed to provide these services.

The legal principles discussed are at the heart of the debate happening right now as telecom companies are seeking to expand their networks across the country. What is the extent of local control over siting new cell towers and other wireless infrastructure? Who is responsible for assessing the health and other environmental impacts of these towers and the wireless services they make possible?

In the United States, it is the Federal Communications Commission (FCC) that authorizes the use of the electromagnetic spectrum for the provision of wireless services.

The management of the spectrum involves four basic steps:

- Allocation – the designation of a specific segment of the spectrum for a specific purpose
- Service rules – rules that spell out how companies can use a particular segment of the spectrum
- Auction – which determines which company gets to use a specific segment
- Deployment – the construction of a network to use a specific segment of the spectrum

With FCC's control over the spectrum comes responsibility – a responsibility that includes the duty to inform and protect the public from the health impacts of radiofrequency radiation. The FCC's duty to inform and protect flows from two different federal laws – the National Environmental Policy Act (known as NEPA) and the Telecommunications Act.

NEPA – source of Information (1970)

Signed into law in 1970 by President Nixon, NEPA is intended to “prevent or eliminate damage to the environment . . . by focusing government and public attention on the environmental effects of proposed agency action.” *Marsh v. Or. Nat. Res. Council*, 490 U.S. 360, 371 (1989).

NEPA requires federal agencies to analyze the environmental impacts of its proposed action and share these impacts with the public. The White House Council on Environmental Quality has issued regulations implementing NEPA. These regulations require that “environmental information is available to public officials and citizens before decisions are made and before actions are taken.” 40 C.F.R. §1500.1(b). *See Oglala Sioux Tribe v. Nuclear Regulatory Comm'n*, 896 F.3d 520 (D.C. Cir. 2018).

In addition to these CEQ regulations issued by the White House, each federal agency issues its own NEPA procedures. If the proposed federal action may have a significant impact on the environment, the agency must prepare an Environmental Impact Statement or EIS. NEPA requires the agency to share a draft of its EIS with the public and respond to any comments the public makes. If the agency does not think the impacts are significant it can issue a Finding of No Significant Impact or use a Categorical Exclusion to comply with NEPA.

NEPA defines environmental effects broadly. When analyzing environmental impacts, NEPA requires an agency to consider the natural and physical environment and the relationship of people with the environment. “Environment” includes ecological impacts, health impacts, social and economic impacts. 40 CFR §1508.1(g)(1) & (m)

FCC established its first Radiofrequency exposure guidelines in response to its obligations under NEPA. The Commission recognized that it could not meet its obligations under NEPA to analyze the environmental impacts of its action authorizing use of the spectrum without understanding the potential biological effects of radiofrequency radiation. 1985 (100 FCC 2d 543)

Telecommunications Act – source of protection (1996)

As wireless communication expanded, Congress fundamentally changed the legal framework governing telecommunications when it enacted the Telecommunications Act of 1996. This was the first major revision to federal telecommunications law since 1934.

A main purpose of the Act was to accelerate wireless communication. One way of doing so was by concentrating regulatory authority over the environmental effects of RF radiation in the FCC. The Act prohibits state and local regulation of wireless facilities based on “environmental effects” of radiofrequency emissions so long as the facilities comply with FCC regulations concerning such emissions. 47 U.S.C. § 332(c)(7)(B)(iv)

People across the country are asking what counts as “environmental effects”? What can local governments regulate and what can they not?

As with NEPA, courts have interpreted the definition of “environmental effects” broadly under the Telecommunications Act. Local governments have been able to regulate certain aesthetic effects of cell towers and other wireless infrastructure, but run into challenges when trying to limit health or other environmental effects from wireless network construction.

Given the limitations local governments have faced in regulating cell towers and other wireless infrastructure, what the FCC does and does not do to address “environmental effects” becomes critically important.

This is not just an issue of federal v. local authority. While there are many federal agencies that could address the health and environmental effects of EMF, Congress has concentrated power and responsibility in the FCC. The same year it passed the Telecommunications Act of 1996, Congress limited the role of the Environmental Protection Agency by eliminating EPA’s funding

for activities related to RF radiation. In passing EPA's appropriations bill that year, Congress specified that "EPA shall not engage in EMF activities." Senate Report 104-140 to accompany Independent Agencies Appropriations Bill.

Since 1996, EPA has not had a funded mandate to work on radiofrequency matters. As EPA's website indicates, the agency's mission is to protect human health and the environment from ionizing radiation. EPA does not address "non-ionizing radiation that is emitted by electrical devices such as radio transmitters or cell phones." <https://www.epa.gov/radiation/radiation-basics>

Excluding EPA from working on these issues is a mistake. EPA is the agency with trained professionals with expertise in health and environmental protection. The FCC does not have such expertise. The concentration of authority in the FCC was a Congressional choice based on politics. Telecomm companies had the ear of Members of Congress and wanted a federal agency that they knew well and could influence in control of assessing and addressing the environmental effects of EMF. Changing this requires marshaling the political power to do so.

But in the meantime, the FCC cannot ignore the responsibility that it was given. With passage of the Telecommunications Act, the FCC has the duty *to protect* the public from environmental effects of RF radiation in addition to inform the public about such effects. In other words, NEPA requires the FCC to *understand* the environmental impacts of its actions. The Telecommunications Act requires the Commission to *limit* these impacts.

What has the FCC Done to Protect the Public?

What has FCC done to comply with these requirements under the Telecommunications Act and NEPA? Not much.

The FCC revised its RF exposure guidelines in 1996. But despite growing scientific evidence of harm beyond thermal effects, the FCC failed to address such non-thermal impacts in its guidelines. The FCC also failed to address environmental effects on living beings beyond humans.

Pressure continued to mount regarding the potential health and other environmental effects of EMF. Scientists participating in a federal Interagency Radiofrequency Work Group repeatedly raised concerns with the adequacy of the standards. Congressional hearings were held in 2008 and 2009.¹

Following a request from Members of Congress (Waxman, Eshoo, Markey), the General Accountability Office issued a report in 2012 concluding that exposure and testing requirements for mobile phones should be reassessed. In 2013, the FCC initiated a notice of inquiry into the adequacy of its exposure standards. For six years, the FCC failed to take action in response to this inquiry.

¹ See <https://ehtrust.org/policy/congressional-hearings/>
<https://ehtrust.org/policy/us-government-reports-on-cell-phones-radiofrequency-electromagnetic-fields/>

In December 2019, the FCC terminated its inquiry into adequacy of 1996 guidelines. The Commission made no changes to the exposure limits that had been set over 20 years ago.

The Environmental Health Trust and others challenged this termination order in federal court in Washington DC. NRDC has filed a brief in the case. The main issue before the court is whether the FCC's decision was reasonable in light of the scientific evidence in the record. The FCC failed to respond to significant evidence in the record regarding the non-thermal impacts electromagnetic frequency radiation from wireless technologies have on humans. Moreover, the FCC failed to address impacts on non-human elements of the environment. The Court agreed holding that the FCC's decision to terminate the inquiry was unlawful.

Increasing evidence is showing that EMF causes harmful effects to birds, bees and trees. Given the inter-connected web of all life, we cannot afford to ignore these impacts. This is what Congress recognized when it passed NEPA. The FCC has a legal obligation to look at these impacts. The role of bees as pollinators in the US has an estimated economic value of over \$15 billion.² Globally, it is estimated that 35% of all crops are dependent on pollinators.³ However, the increased proliferation of wireless services and the increased radiation that comes with it may be contributing to the collapse of honeybee colonies.

RF fields have had similar troubling effects on migratory bird species. Research suggests that RF-EMF disrupts birds' orientation by disabling the avian compass through interference with the primary process of magnetoreception.⁴ The Department of the Interior has criticized the FCC's RF exposure standards for failing to fulfill the responsibilities that all federal agencies have to protect migratory birds. While research into the effects of EMF on plant life is limited, evidence exists for concern.⁵ One study indicates that mobile phone radiation can cause various abnormalities in plant cells.⁶ Yet, the FCC has plowed full steam ahead in paving the way for construction of new networks all across the country without looking at all at the effects of EMF on the non-human biological world.

Two years ago – in 2018 – NRDC challenged a previous FCC order. In this previous order, the FCC sought to eliminate review of impacts of EMF radiation on the environment as well as on cultural and historic resources. Sixteen Indian nations joined NRDC in this lawsuit. The federal court of appeals in DC found that the FCC had acted in an arbitrary and capricious manner and

² Ulrich Warnke, Bees, Birds, and Mankind: Destroying Nature by 'Electrosmog', COMPETENCE INITIATIVE FOR THE PROTECTION OF HUMANITY, ENVIRONMENT AND DEMOCRACY, (Mar. 11, 2009), <https://ecfsapi.fcc.gov/file/7521097894.pdf>.

³ Klein AM, Vaissière B, Cane JH, Steffan-Dewenter I, Cunningham SA, Kremen C, et al., Importance of crop pollinators in changing landscapes for world crops, *PROC BIOL SCI*, 303 – 313, (Feb. 7, 2007), doi:10.1098/rspb.2006.3721.

⁴ Peter Thalau, Dennis Gehring, Christine Nießner, Thorsten Ritz & Wolfgang Wiltschko, Magnetoreception in birds: the effect of radio-frequency fields, *J. R. SOC. INTERFACE*, (Dec. 2, 2014), <https://royalsocietypublishing.org/doi/10.1098/rsif.2014.1103>.

⁵ Levitt, B. Blake, Lai, Henry C. and Manville, Albert M.. "Effects of non-ionizing electromagnetic fields on flora and fauna, Part 3. Exposure standards, public policy, laws, and future directions" *Reviews on Environmental Health*, vol. , no. , 2021, pp. 000010151520210083. <https://doi.org/10.1515/reveh-2021-0083>

⁶ Dmitry S. Pesnya & Anton V. Romanovsky, Comparison of cytotoxic and genotoxic effects of plutonium-239 alpha particles and mobile phone GSM 900 radiation in the *Allium cepa* test, *750 MUTATION RESEARCH*, 27 – 33, (2013), <http://dx.doi.org/10.1016/j.mrgentox.2012.08.010>

invalidated the FCC's action. As a result, the FCC must still conduct environmental review under the National Environmental Policy Act.

What does this mean in practice?

First, the FCC cannot issue a license to use the electro-magnetic spectrum without evaluating the environmental impacts of such use. The Commission will argue that it completed such assessment when it evaluated the adequacy of its RF exposure standards. The problem is the Commission didn't do its job in looking at the evidence before it. It is now for the courts to decide whether the Commission did or did not consider the evidence.

After a company has a license to use the spectrum for wireless services, it must then construct a network to provide them. The FCC has a responsibility here as well.

Second, the FCC cannot authorize the construction of cell towers or other infrastructure to provide wireless services without evaluating the environmental impacts of such services. The FCC has turned over the evaluation of environmental impacts to the companies constructing wireless networks. FCC regulations require companies like Verizon or T-Mobile to submit environmental analysis of the networks they propose to construct. If the proposed networks will affect historic properties, endangered species or special natural areas, the company must submit an Environmental Assessment to the FCC. Local government officials can request such analysis from the company and the FCC before approving proposed cell towers or other wireless construction. Citizens can also request from the FCC copies of the environmental analysis required by NEPA.

Again, the adequacy of the FCC's RF exposure standards comes into play. If historic properties, endangered species or special natural areas are not involved, the company can simply certify that the construction and services it proposes meet the FCC's RF exposure limits. This is a problem, of course, if the FCC's limits are not strong enough to protect human health and the environment. Unfortunately, evidence suggests that they are not. It is also a problem because no independent verification is required to ensure that what the company says is true. FCC rules do not require any independent testing of the RF exposure that the proposed construction and the cell phones and other wireless services such construction supports cause.

The question often comes up – is a full EIS or Environmental Impact Statement required every time a company wishes to construct a new cell tower or other wireless infrastructure? It is important to remember that there are three different basic types of analysis under NEPA. The most extensive is an Environmental Impact Statement or EIS. An agency must complete an EIS when an action it is considering might have a significant impact on the environment. Construction of a new bridge, highway or transit system typically requires an EIS. So does a proposal to drill thousands of new oil and gas wells on public lands. If an agency thinks that an action probably doesn't have significant impacts on the environment, it can prepare a shorter Environmental Assessment and Finding of No Significant Impact. For actions which the agency has determined by their nature do not significantly impact the environment, the agency might be able to apply a categorical exclusion where no new environmental analysis is done.

In many cases a single new tower or addition of equipment onto an existing tower might not require a full EIS. If a company is proposing a whole new network, however, the facts may support an argument that an EIS is necessary. It is important to understand that NEPA requires an analysis of indirect and cumulative impacts of a proposed action. The FCC cannot simply determine that each individual tower lacks significant environmental impacts. Instead, the Commission must evaluate the impacts of a proposed action when combined with previous actions as well as reasonably foreseeable future ones.

RESOURCES

U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-04-666 SPECTRUM MANAGEMENT (2004)

RADIO SPECTRUM ALLOCATION, FEDERAL COMMUNICATIONS COMMISSION,
<https://www.fcc.gov/engineering-technology/policy-and-rules-division/general/radio-spectrum-allocation>

FCC, Environmental Compliance for Communication Towers – NEPA
https://www.fcc.gov/sites/default/files/NEPA_Factsheet_111816.pdf

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