



Donald D. Neumann Jr
Superintendent
York Water District
86 Woodbridge Road
York, ME 03909

March 30, 2021

Dear Mr Neumann and members of the selection subcommittee,

Isotrope is pleased to respond to the York Water District (YWD) Request for Proposals for “a community related study to assess the impact and risk-benefit ratio of installing a proposed wireless facility installation on the District’s York Heights Water Tank (5 Roots Rock Road).” David Maxson, WCP of Isotrope has been consulting to municipal entities on the matter of wireless communications facility siting since 1988. He works as a telecommunications engineer, designing, building and maintaining communications systems for a variety of users (e.g. municipal public safety, railroad, and radio broadcast). In the field of personal wireless communications, his work is primarily for municipalities. He is aware of no conflicts in the present matter. Mr. Maxson’s CV is attached.

Isotrope has engaged the services of Professor Kenneth Foster to advise the YWD on matters relating to the science behind the current safety standards and the positions of authoritative bodies on radio frequency energy safety. His CV is attached. Prof. Foster is granted full control of the content of his contribution to the effort, as Isotrope is acting only as a conduit to employ a single contract for the project. Isotrope and Prof. Foster will coordinate on what aspects of the scope of services each will work on.

Below we respond to how we would address each task in the Request for Proposals:

Task 1: Review proposed plan submitted by Smartlink

➤ See attachments 1-11

Mr. Maxson has reviewed about a thousand wireless facility siting designs since 1988, mostly for municipalities. We are familiar with the materials frequently provided regarding RF safety compliance, coverage analysis, structural analysis, visual impact analysis, NEPA and NHPA



checklist reviews, ordinance compliance and site engineering. We can comment on the quality of the submissions. With respect to radio emissions levels and signal propagation, we can verify the calculations used to derive the analysis provided.

Task 2: Provide a peer review on all information prepared by Smartlink's based on equipment proposed by Smartlink.

To clarify, Smartlink is acting in the role of site acquisition agent for AT&T. The proposal in question is for AT&T. In Task 1, Mr. Maxson will review each document for veracity and consistency with applicable norms, regulations and guidelines. He has done this for municipalities in numerous wireless facility siting initiatives over the past three decades.

Task 3: Provide any additional pertinent scientific RF exposure information and interpretation of potential negative health effects as it applies to the proposed 4G installation as well as the possibility of 5G equipment expansion on the tower.

This is a broad and open-ended task as written. The possible biological effects of RF energy is the subject of several thousand scientific papers that vary greatly in quality, methods, and relevance to health. To adequately review the primary scientific literature may take a panel of experts ten person-years or more to complete. Such an effort would be required to form a well-considered opinion based on the scientific data.

However, health agencies around the world have tracked this field for generations, and numerous reports have been compiled by expert groups under sponsorship of health agencies. It is proposed for this Task to review for the Water District the major conclusions of recent major health agency reviews rather than carry out an expert review of the primary scientific evidence itself. See proposed combined scope for Tasks 3, 6 and 7, below.

Tasks presented out of order for convenience:

Task 6: Explain FCC standards, how these standards are applied and how they are updated for new technologies or new information about current technologies.

An explanation of the basis for, and application of, the FCC standards and for widely accepted standards will be included in the combined response to Tasks 3, 6 and 7, outlined below. The relationship between radio frequency energy safety standards and communications technologies will be explained.

Task 7: Are there known standards regarding distances between a cellular installation and residences within a certain area surrounding a wireless communication site on a tower with regard to radiation exposure. Explain the risks, biological and medical, associated with exposure.

Exposure standards are expressed in terms of the maximum intensity of RF waves that would be allowed to impinge on the body. We interpret Task 7 as referring to "compliance distance", which is the minimum distance from a transmitting antenna, beyond which RF safety limits are



unequivocally satisfied. The compliance distance from proposed transmitting antennas on the water tank will be described. Known health and safety risks from RF overexposure will be described to the Water District. All the engineering data is available to calculate the required compliance distances from the proposed facility and apply the results to the geometry of the facility and the residences in this case. In the combined response to Tasks 3, 6 and 7, we will provide an explanation of how the RF exposure from the proposed facility to people in the surrounding community are evaluated with respect to the applicable standards.

As for the “risks, biological and medical, associated with exposure” at the levels that would be received in the neighborhood, an explanation of the established health effects of radio frequency energy and the thresholds at which such effects are demonstrated to occur will be included in the combined response to Tasks 3, 6 and 7. It is not proposed to carry out a full scientific review of health effects of radiofrequency energy, but to provide a fair and balanced review of the summary of well-conducted reviews on this topic by health agencies.

Combined response to Tasks 3, 6, and 7

To debate the details of individual scientific studies would require multiple experts, depending on the topics. This is potentially an open-ended process that could become very expensive and politically very divisive for the Water District. We propose to educate YWD and the community about how public health authorities have arrived at their current standards and recommendations, and summarize their recommendations.

In other words, it is appropriate to review what major health agencies conclude while not debating the significance of primary scientific data. The presentation for this task will be prepared primarily by Prof. Foster. The following is a notional format:

- Explanation of what RF exposure is and how it is quantified. Layman's terms.
- Explanation of why it is important to quantify exposure, or more specifically, "dose," when doing studies.
- Explanation of how scientific studies on RF bioeffects have been reviewed by health agencies to obtain reliable assessments of potential health and safety risks.
- Summarize conclusions of major expert panels operating under the auspices of health agencies or other official groups around the world.
- Compare current FCC exposure limits and other major international limits relative to exposures anticipated from the proposed AT&T facility.
- Assuming the question about "5G" technology is that new mm-wave (millimeter-wave) frequency bands are opening up for wireless services, an explanation of what we know about mm-wave exposures at the levels anticipated from the cell site, if it were to use mm-waves.
- Explain conclusions of health agencies about EM hypersensitivity and possible non-thermal effects of RF fields.



Task 4: Review written communications YWD has received from neighborhood stakeholders and prepare follow-up informational briefs to assist the joint subcommittee in responding to community concerns. See attachment 12.

Some of the questions in Attachment 12 (relating to standards and health effects) will be answered in Tasks 3, 6 and 7. Other questions (relating to neighborhood emissions levels from a cell site, effects of radio waves on water supply, optimal locations, alternative locations, local ordinances, real estate values, etc.) will be answered by Mr. Maxson based on his experience with hundreds of cell site permit hearings addressing these questions and on his expertise in designing communications facilities, reviewing cell site designs and developing site safety programs.

Task 5: Review and comment on the links forwarded to YWD that concerned neighborhood stakeholders believe to have evidence of potential harm from the proposed installation.

<http://www.gencourt.state.nh.us/statstudcomm/committees/1474/reports/5G%20final%20report.pdf>

<https://www.scribd.com/document/320935636/The-Health-Argument-against-Cell-Phones-andCell-Towers>

<https://cdnsiencepub.com/doi/full/10.1139/A10-018>

We will evaluate the above-cited reports in the light of scientifically accepted criteria for reliability and quality of scientific reviews, and compare their conclusions to those of expert reviews sponsored by health agencies. A detailed review of many individual scientific claims in these reports would become an open-ended project that would incur very high costs to the Water District.

Task 8: Explain why site selection is important and the reason Smartlink chose this tower location. Would there be other sites considered to provide similar wireless coverage?

The site was identified by Smartlink and chosen by AT&T. Our experience with cell siting processes in hundreds of municipalities in New England enables us to identify the connection between town preferences in zoning ordinances, and the proposal, and any alternatives that might be considered.

Task 9: Provide feedback regarding potential diminished property values from an installation like the proposed.

We have reviewed hundreds of studies by registered appraisers (pro and con) and heard the testimony of real estate agents on the subject. We will bring that experience to bear to explain the current general thinking on whether and how cell sites can affect property values.



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Task 10 Participate in two (approximately 1.5 hours each) joint subcommittee meetings (YWD and neighborhood stakeholders). First meeting is intended for kick off, the second meeting is to report findings.

Our proposal includes the requested total of 3 hours of meetings, but we caution participants that this may not be enough time, as the issues are complex and it can be time-consuming to field public comments and questions.

Task 11: Present findings and recommendations to YWD Board of Trustees so they can make an informed decision moving forward.

A written report will be provided by Isotrope, with the independent report of Professor Foster included as an attachment.

Task 12: Prepare a timeline to complete a final report.

We propose a kickoff meeting two weeks after notice to proceed, to give us and YWD time to plan the first meeting. Then we propose 60 days to research and compose a presentation (slides) for the second meeting. Then an additional 60 days to compose a draft report and work it to a final report with YWD staff. We are open to adjusting this plan to the needs of YWD.

Please provide us with a copy of your qualifications and a list of previously completed projects.

- Resumes of David Maxson, WCP and Professor Kenneth R. Foster are attached.

David Maxson, WCP:

- David Maxson includes his list of municipalities served (attached).
- Before the 1996 federal preemption, Mr. Maxson guided the zoning board of Candia, New Hampshire through a process to adopt a radio frequency safety guideline. They reviewed then-existing safety standards at state, federal and international levels to select a standard.
- In 1997, the Massachusetts Department of Public Health invited three RF safety experts to participate in a process of updating the Massachusetts RF safety regulations. Mr Maxson was one of the invited participants.
- Mr Maxson is a long-time wireless consultant to the Cape Cod Commission (since 1999), providing consultation not only on tower permit applications, but also on adopting and adapting regulations to align with the evolution of wireless technologies. He is currently peer-reviewing an application for a tower in Yarmouth, Massachusetts.
- Mr Maxson received an award from the Institute of Electrical and Electronics Engineers (IEEE) Standards Association in the fall of 2019 for his work on the Editorial Working Group of the International Committee on Electromagnetic Safety (ICES), editing the most recent revision of the IEEE Standard C95.1™-2019, *IEEE Standard for Safety Levels with Respect to Human Exposure to Electric, Magnetic, and Electromagnetic Fields, 0 Hz to 300 GHz*.



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Professor Foster:

- Please see Professor Foster's comprehensive CV (attached)

Cost proposal

Isotrope charges \$245/hr for the services of David Maxson, WCP and \$180/hr for radio propagation and geographic information system services. Total estimated Isotrope time is 30 hours, with most of the work by Mr Maxson.

Professor Foster's rate is \$400/hr. Isotrope will add 5% for overhead and processing. Estimated time to complete his parts of the project is 20 hours.

Any additions to the scope will be agreed upon in advance and will be priced based on the published rates.

Isotrope is grateful for the opportunity to respond to the YWD request for proposals. We welcome any questions or suggestions for adjustments to tailor the scope to the goals of the YWD.

David Maxson, WCP
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Medfield, MA 02052

Attachments: CVs of D Maxson and K Foster, Isotrope municipalities served, publications by David Maxson