

► BUILDING CAPACITY



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Building Capacity Using Voice-to-Text

Editor's Note: A need exists within environmental health agencies to increase their capacity to perform in an environment of diminishing resources. With limited resources and increasing demands, we need to seek new approaches to the practice of environmental health. Acutely aware of these challenges, the *Journal* publishes the Building Capacity column to educate, reinforce, and build on successes within the profession using technology to improve efficiency and extend the impact of environmental health agencies.

Column contributors are guest authors. The conclusions of this column are those of the author(s) and do not necessarily represent the views or policies of NEHA.

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“Computer,” says Mr. Spock. Immediately, the Enterprise’s omnipresent ship computer responds, never misunderstanding and never wasting words.

I type quickly, but there is nothing more tedious than watching somebody else type, especially when they struggle (as we all struggle sometimes).

And so, when I give a presentation about artificial intelligence (AI) for environmental health regulators or field inspection software, I either copy and paste prepared prompts or use voice-to-text. Invariably, the voice-to-text captures the imagination of my audience.

While voice-to-text improves all the time, it is still imperfect. For this audience, background noise chips away at the value. A busy office or a loud kitchen really makes voice-

to-text unusable. Because, as we all know, it is extremely frustrating and time-consuming to fix (or worse, accidentally overlook) voice-to-text errors. I suppose there is a reason that keyboards reign supreme.

Do not give up, though. We have techniques to maximize the benefits and capabilities.

How Does It Work?

Under the hood, there is a lot of technology—mostly AI—doing the heavy lifting. When you speak, your device captures the audio, breaking your voice down into digital sound waves. That audio file is transmitted to the cloud, which feeds into AI models trained on millions of voices and accents. These models slice, dice, and interpret what you said, translating sound into words and even trying to

guess the context and punctuation, not just the literal sounds.

How Do I Try It?

Most modern devices have voice-to-text. You just have to know how to activate it.

On iPhones and Android phones, any place you can type in words and you will see a microphone icon (Photo 1). Tap the microphone and then start talking. Tap the microphone again to stop listening.



Photo 1. Example of a smartphone keyboard with the microphone icon in the top right corner for voice-to-text. Photo courtesy of Kristen Ruby-Cisneros, NEHA.

On Windows, you might have to enable the capability through the Accessibility Settings option (Photo 2). Here are the steps to enable and use this feature on your Windows 10 or 11 computers:

1. Open Accessibility Settings
2. Enable speech recognition

Once speech recognition is enabled, you can use voice-to-text in any application where you can type, such as Notepad, Word, email, or even your inspection software.

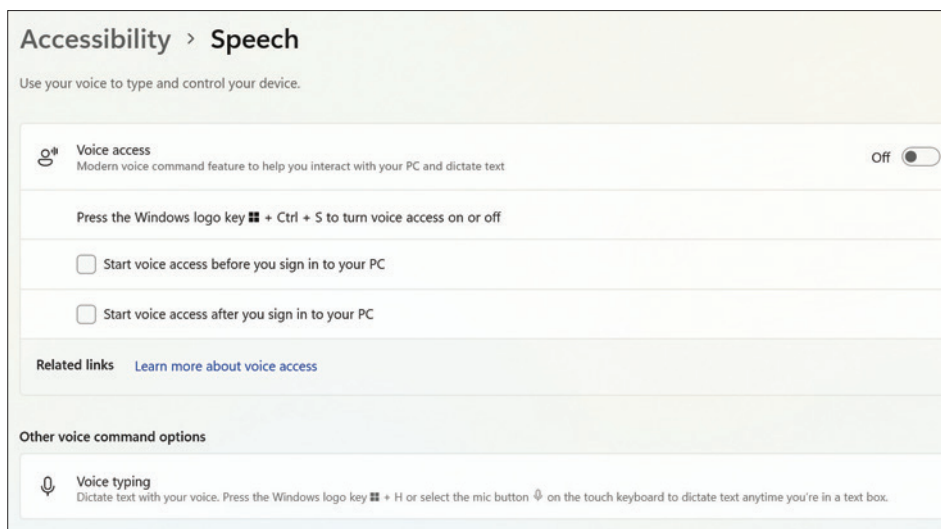


Photo 2. Accessibility settings on a Windows computer screen to enable voice-to-text. Image courtesy of Darryl Booth, Hedgerow Software.

To start using voice-to-text, press the Windows key along with the h key (or look for that same microphone icon on tablet computers). This shortcut activates the voice-to-text functionality, and you can begin speaking. Press the same shortcut to stop or pause transcribing.

What About Pressing Buttons and Opening Menus?

You probably realize that visually or physically disabled users can do just about anything on their computers using their voices and other assistive devices. These techniques might have steep learning curves and specialized configuration and tuning.

How to Get Best Results?

If you have a wired or wireless microphone or headset, that is always better than the built-in microphone in your computer. For one, you can bring the microphone close to your face and often minimize background noises, even cupping your hand to isolate your voice.

It is also worth learning a few voice commands for punctuation and formatting. You can say things like comma, period, question mark, new paragraph, or next line to force

the punctuation or formatting. The AI does a pretty good job on punctuation, but I like new paragraphs in certain places.

Once transcription is complete and the microphone is disabled, you can return and make edits in the same fashion as if you had typed your paragraph on a keyboard.

Best Case Examples

When I am fatigued and my hands and eyes are tired, I will sometimes turn on voice-to-text for first drafts. It is akin to stream-of-consciousness writing. In my case, I have to be prepared to rewrite most or all of it.

Just about any time I am using my mobile phone to write a sentence or two, I will turn on voice-to-text.

Did I transcribe this article by voice? No, but that is only because I am at a desk and a keyboard designed for writing. At the soccer game or walking between meetings, I always ask for help.

For inspectors, the ability to quickly dictate notes during a walk-through, capture observations hands-free, or record reminders while on the move can lead to more accurate reports and reduce the risk of missing impor-

tant details. Voice-to-text is not just for long reports. It is perfect for capturing names, addresses, and quick observations that you might otherwise jot on paper or forget altogether. As these features continue to improve, you will likely find new ways to work more efficiently and stay focused on what matters: Protecting public health.

Pro tip for the readers: Most smartphone recorder apps will transcribe the voice recording within a few minutes, making a useful reference of your inspection notes.

In Closing Consideration

Voice-to-text will not replace well-written comments in all cases, but it is one more way we can work with more flexibility. Take some time to experiment with these features in a safe space. Small changes in how we use our tools can add up to nice boosts in our daily work. 🌸

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CALL FOR SUBMISSIONS

The *Journal* seeks guest authors for the Building Capacity column. Our goal is to provide a platform to share capacity building successes occurring across the country and within different sectors of the environmental health profession, including academia, private industry, and state, local, tribal, and territorial health agencies. Submissions will be reviewed by the NEHA technical advisors for data and technology and *Journal* staff for appropriate content, relevance, and adherence to submission guidelines. To learn more about the submission process and guidelines, please visit www.neha.org/contributors.

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