

How to make your own Virtual Field Trip Video Using Commonly Available/Free Windows Software

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This tutorial will teach you how to make a virtual field trip video of your field site using freely available Windows software. With these videos you can share an annotated trip of your field sites by posting the video to social media and personal research pages.



Software Used for this Tutorial

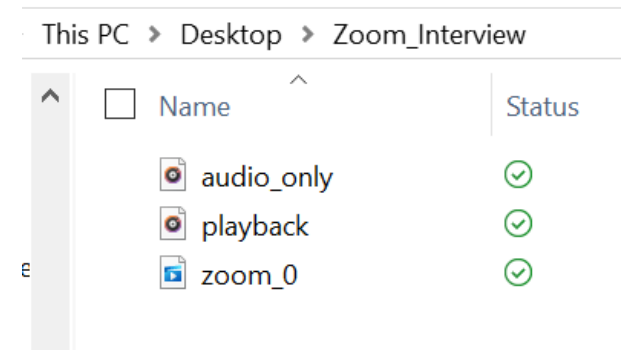
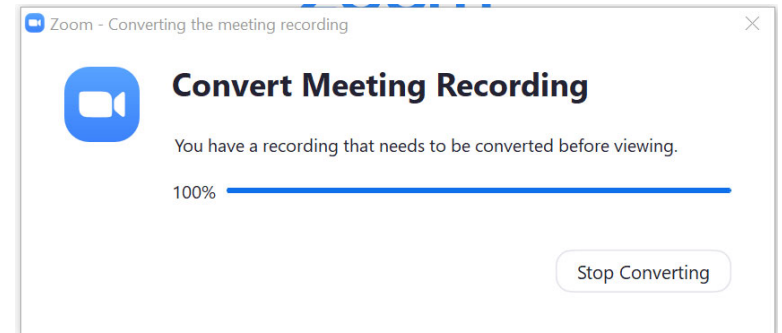
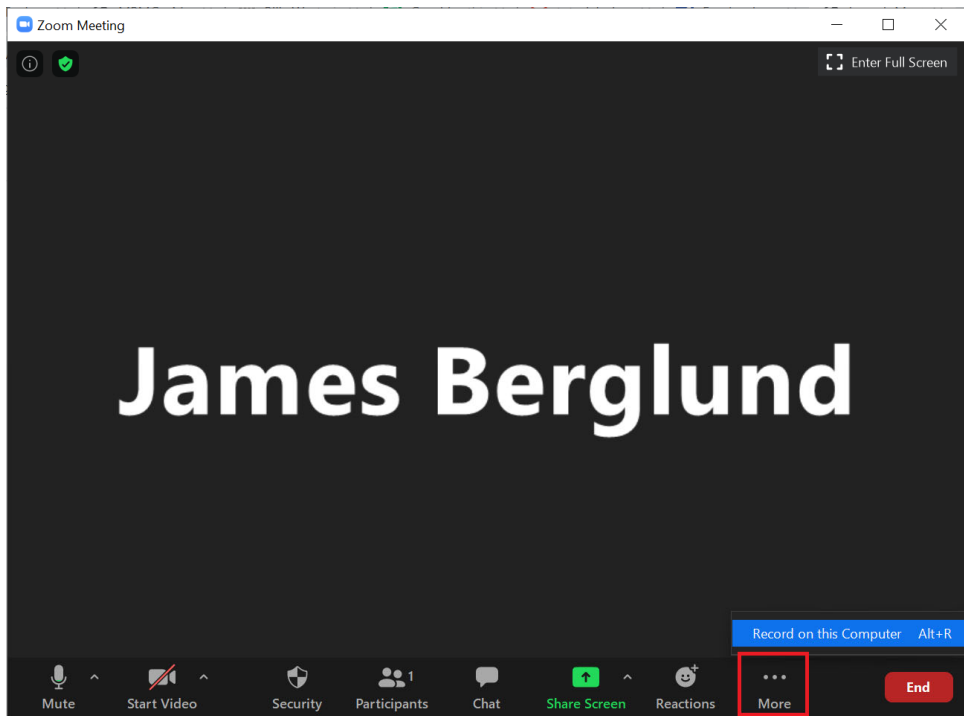


- **Zoom**
 - For recording interview audio between multiple parties
- **Microsoft Word**
 - For transcribing audio into a script
- **Microsoft PowerPoint**
 - For creating an easily editable storyboard between multiple parties
- **WavePad Audio Editor**
 - For editing (trimming, changing volume, enhancing) audio files
- **Windows Video Editor**
 - For combining media files into a final video product

Note: While the software is generally listed in the order it might be used, in actuality creating a video involves jumping back and forth between the different tools as needed.

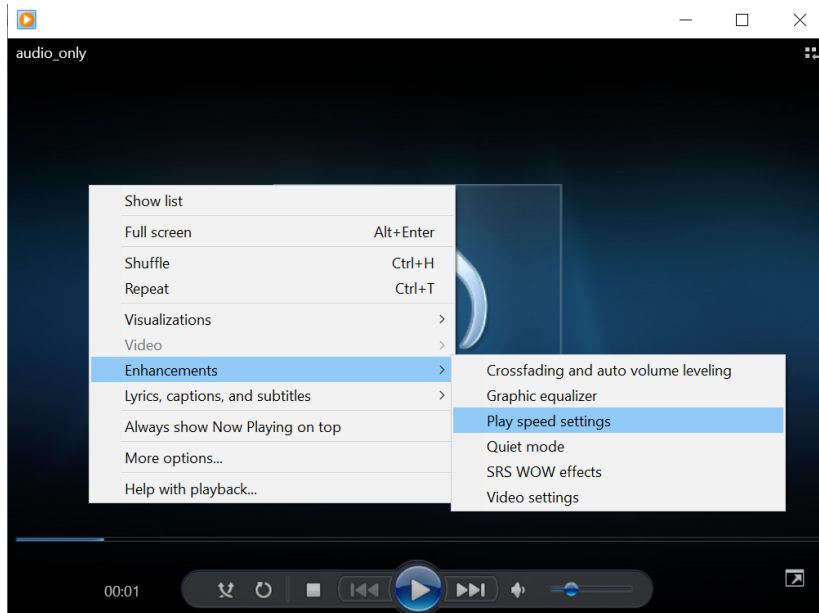
Zoom: Record Interview Audio/Video

After setting up an account to either host or join a Zoom videoconference meeting, the Host (or participant with permissions) can record the meeting by clicking (...) More > Record on this Computer. Once the meeting ends, the meeting will automatically be converted to audio and video files which can be used together or separately to make your virtual field trip.



Word: Transcribe Audio to Dialogue Script

The audio from the Zoom interview is then converted into text dialogue. While automatic speech-to-text software may be used, it can sometimes mis-translate more technical words, so listening to the audio on a default audio player and typing out the script manually may be needed. Listening at a slower speed can be helpful (unless you are a fast typer) – Windows Media Player has a “Play speed settings” option by right-clicking the background under Enhancements. With the audio file in text form it is easy to scan through the interview to search for certain words or phrases to use, and to get an idea for audio length.



<u>Time</u>	<u>Dialogue</u>
1:15-1:16	(Toran): So, just kind of to kick things off, it seemed like one good place to start was to explain what motivated you to study these springs with your student Evan Shuster.
1:28-5:34	(White): Well, there was a considerable amount of backstory that probably goes back at least 10 years before Evan did his master's thesis work. The interest in the karst geomorphology community in the late 1950s/early 1960s was in karst denudation, and how fast new limestone landscapes evolved. And Jaque Corbel from France had published this huge monograph on the karst of Europe in which he argued that the rate of denudation was fastest in Arctic regions because the lower temperatures would increase the solubility of the limestone, and therefore tropical karst features - the gigantic cone karst for instance in China

PowerPoint: Plan out Storyboard

Before adding images, video, or audio to Windows Video Editor, it is helpful to plan out the video Storyboard in PowerPoint, especially if the video is being planned remotely with multiple editors. By breaking up the video into general “scenes” represented by Slides, it can help plan out and visualize and rearrange the video before it’s finally stitched together. In addition to images and text, audio and video can also be added as elements to slides. Feel free to be creative here – do whatever helps you and your co-editors best collaborate.

2 ★

3 ★

4 ★

5 ★

6 ★

Still shot of Will

Still shot, springs map

(0:27) In the early 1960s people were beginning to understand the geochemistry of carbonate waters. I thought, “boy, we really could use more data,” and at about the same time Evan Shuster appeared looking for a topic for his master’s thesis. I had the idea of actually checking the springs on a regular interval, of about a week or two, something like that.

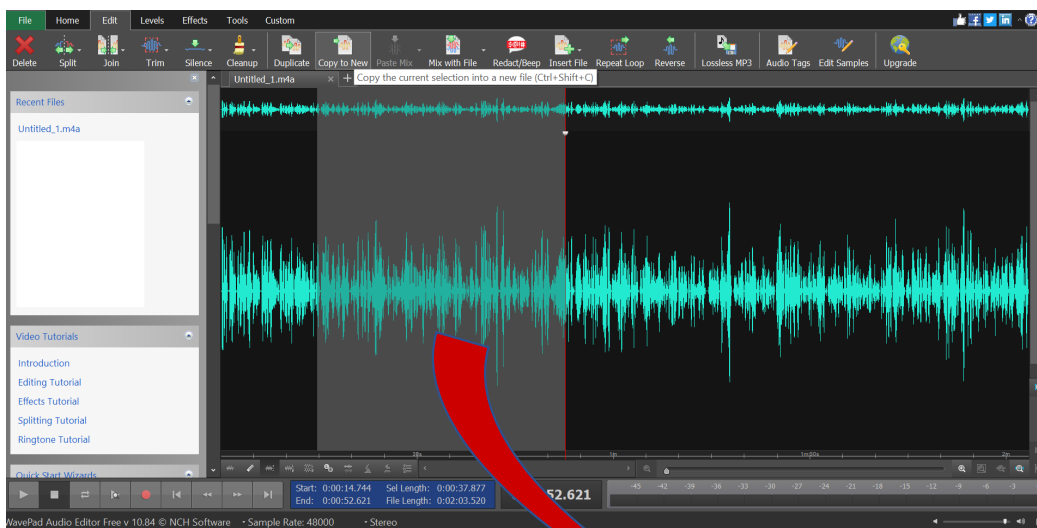
WavePad Audio Editor: Edit Audio

Editing the audio from the Zoom interview is an important step as you will 1) want to take out individual audio clips from the larger audio file, 2) edit those audio clips to remove excessive pauses or unnecessary wordage, or 3) modify the audio volume and tone to account for any discrepancies between the speaking volume of participants and quality of recording devices. While most basic video editing software can accomplish the first part through audio trimming, they often cannot provide enough trim and enhancement control to accomplish parts 2 and 3. I found WavePad Audio Editor to have the right amount of tools to do these without having TOO much of a learning curve (but there is some).

This is the most technical part of the virtual field trip production process, and likely the one aspect that most people have little to no experience in. I had not used WavePad Audio Editor before, though, and it did not take long to figure out well enough to use for making a virtual field trip...

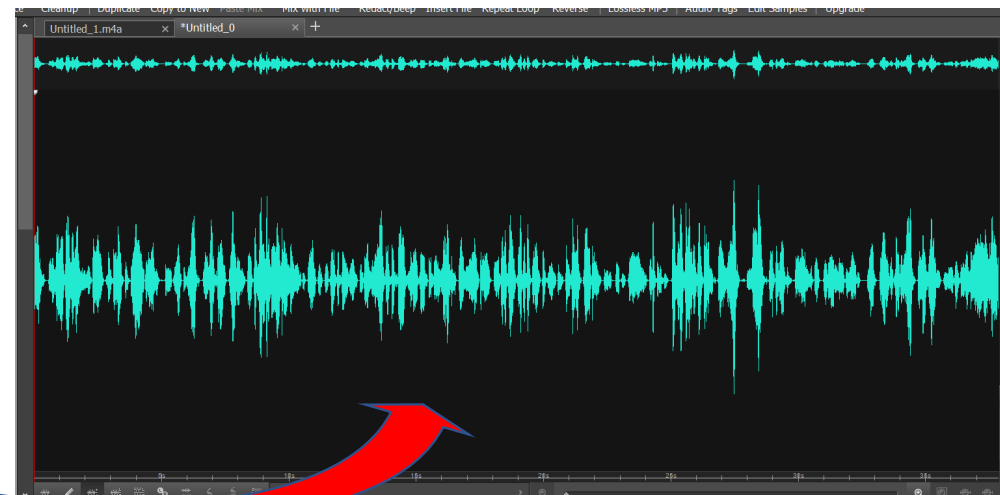
WavePad Audio Editor: Edit Audio

Useful Tool 1: Create new audio clip from part of main audio clip. Highlight the stretch of audio you want to separate from the main audio file, then click Edit > Copy to New. The new audio file can then be saved as its own audio file.



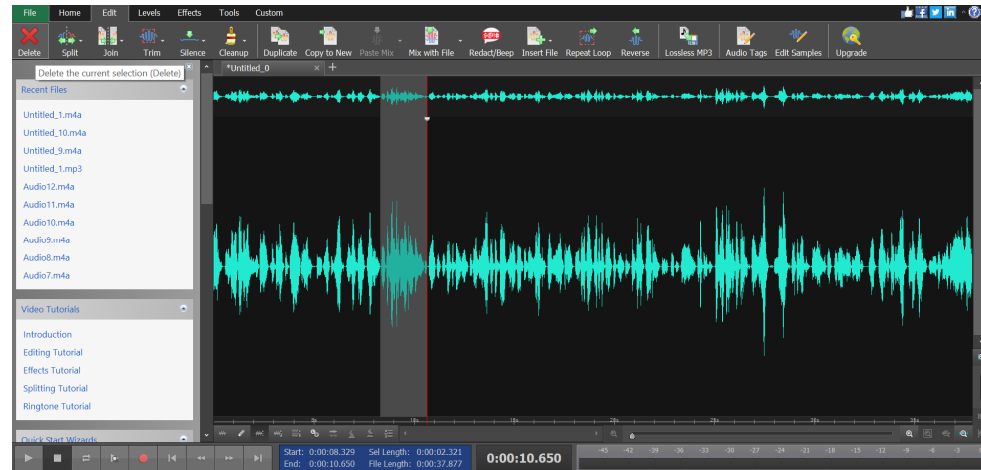
Complete audio file

New audio file created from highlighted selection



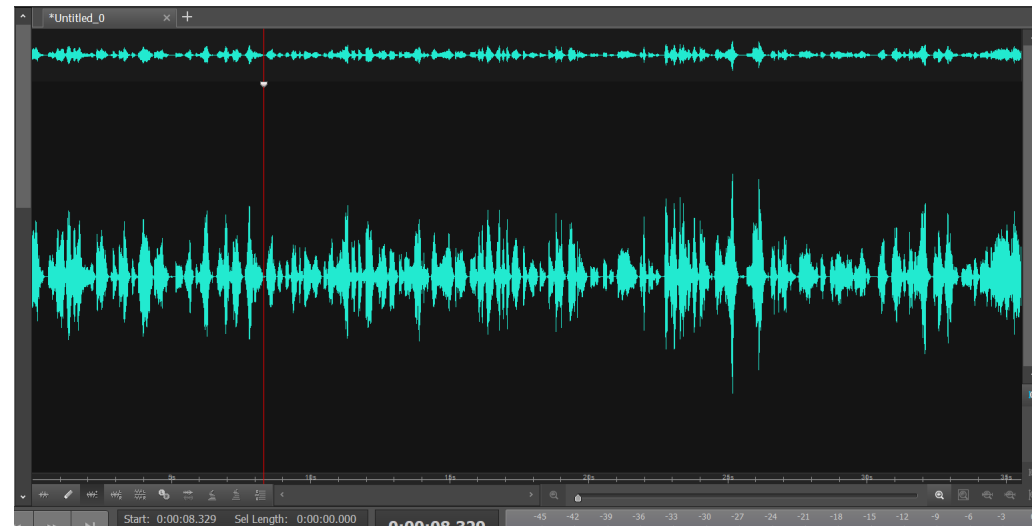
WavePad Audio Editor: Edit Audio

Useful Tool 2: Delete audio snippet. Select the stretch of audio you wish to delete, and click Edit > Delete or press the Delete key.



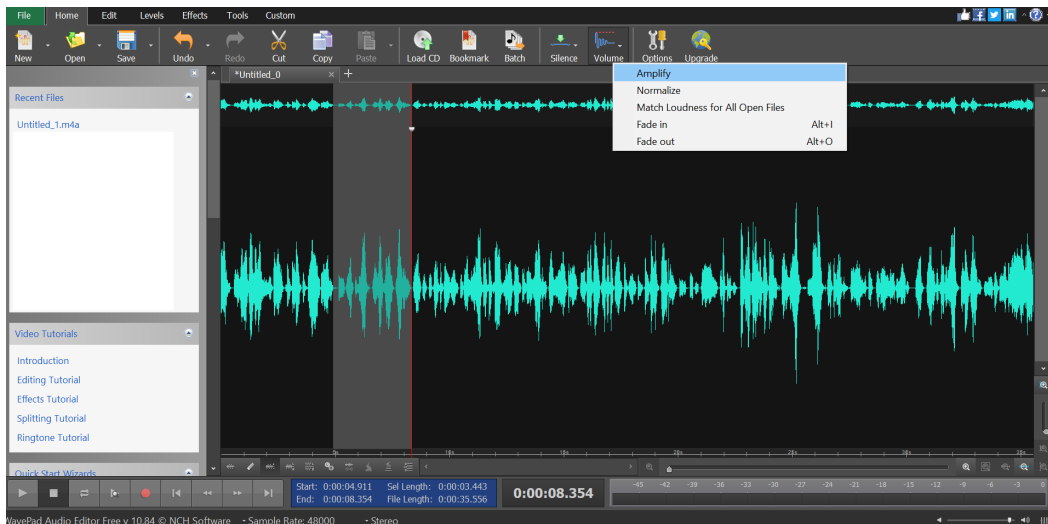
Before

After (snippet deleted)



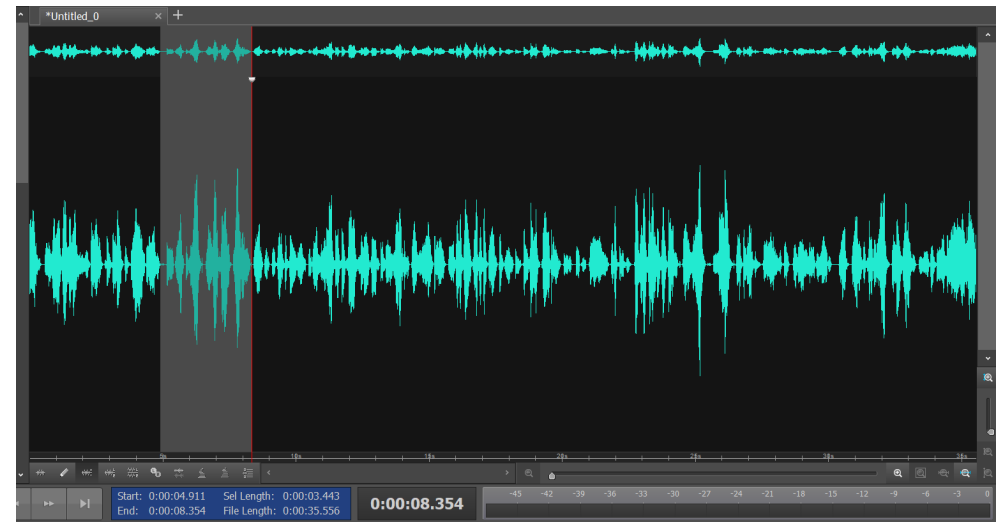
WavePad Audio Editor: Edit Audio

Useful Tool 3: Change Volume. Select the stretch of audio you wish to modify the volume of, then click Home > Volume > Amplify. Play with the different settings presented, but usually in 10% increments, until the desired volume is achieved.



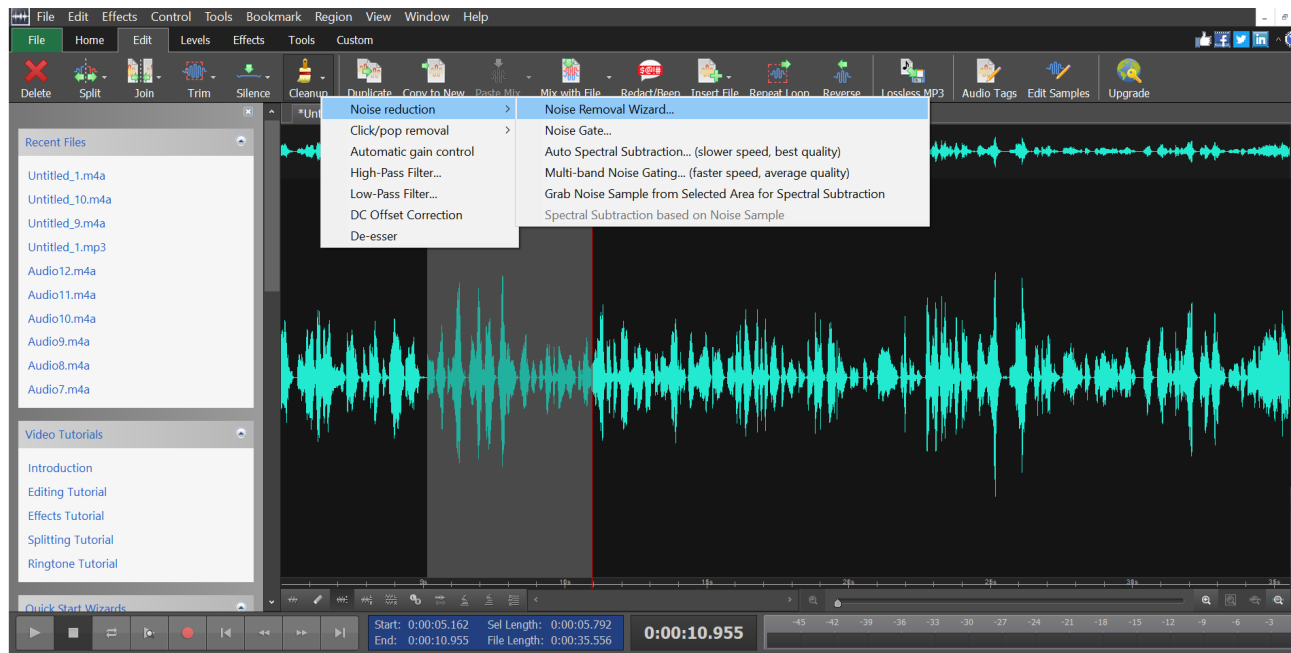
Before

After (selected section is 40% louder)



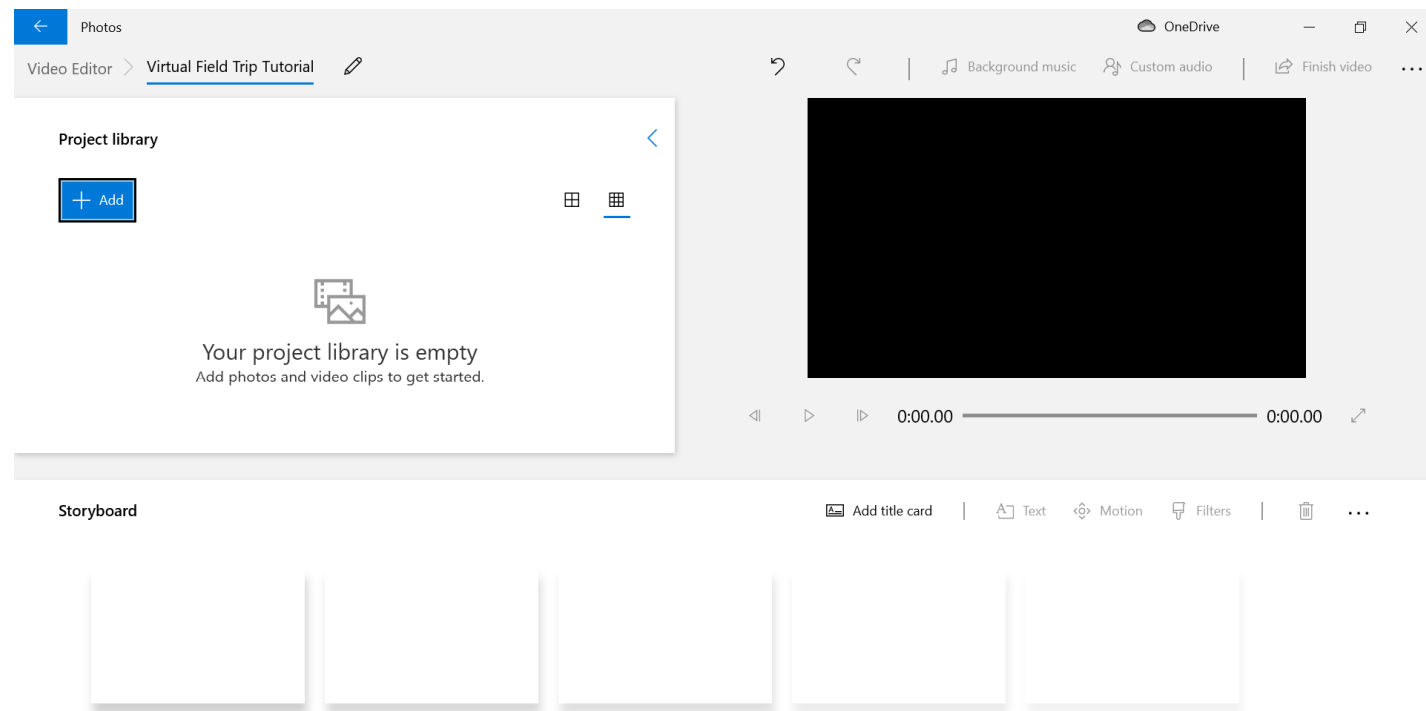
WavePad Audio Editor: Edit Audio

Useful Tool 4: Tone Enhancement. There are numerous tools to help fix the “sound” of the recording to account for any issues with recording quality or speaker tone. No one tool can be suggested for all scenarios, but within WavePad Audio Editor these options are under Edit > Cleanup > Noise reduction > Noise Removal Wizard. A series of options are presented – choose the one that seems most applicable, such as “Low recording volume with background noise” and note the results.



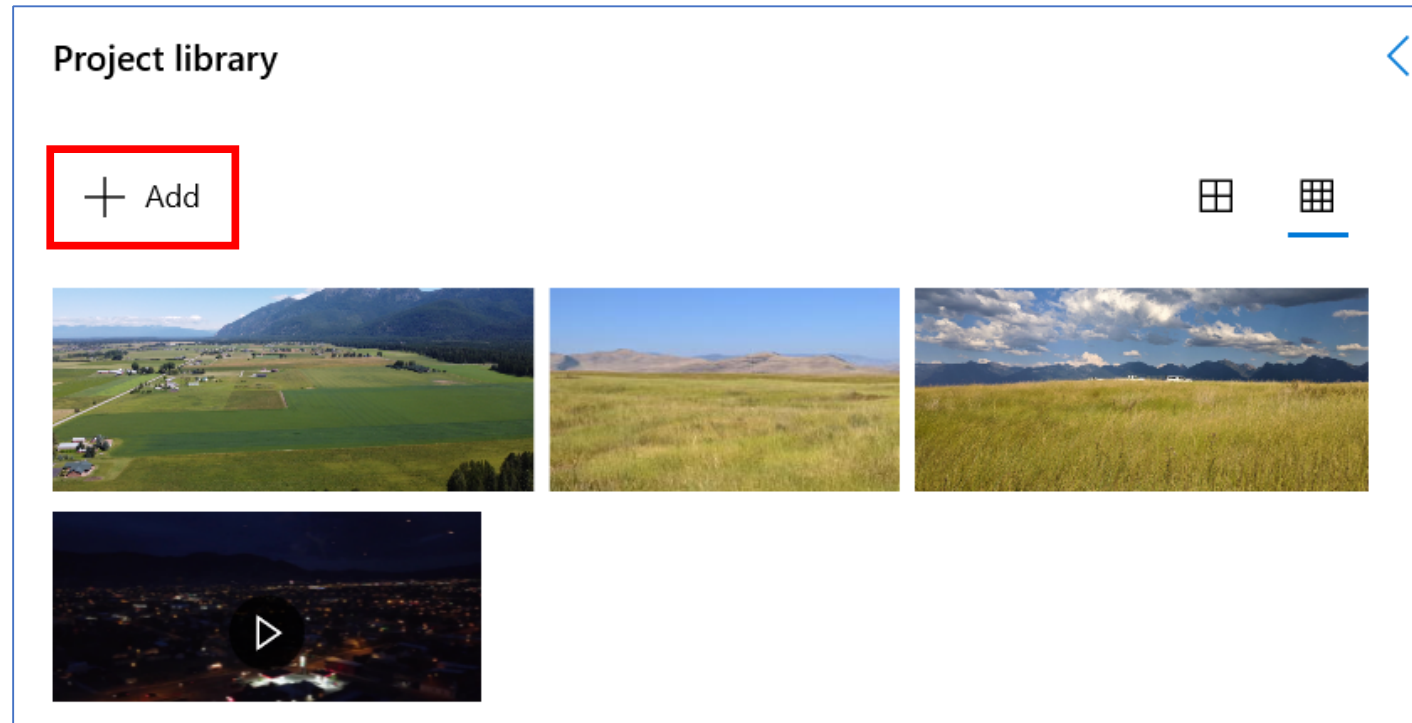
Windows Video Editor: Create the Video

Make a New Project in Windows Video Editor. The default blank screen will look like below, which includes the Project library (images and video you are using or may want to use), the Storyboard (chronological depiction of the images and video clips), and video preview screen (upper right).



Windows Video Editor: Create the Video

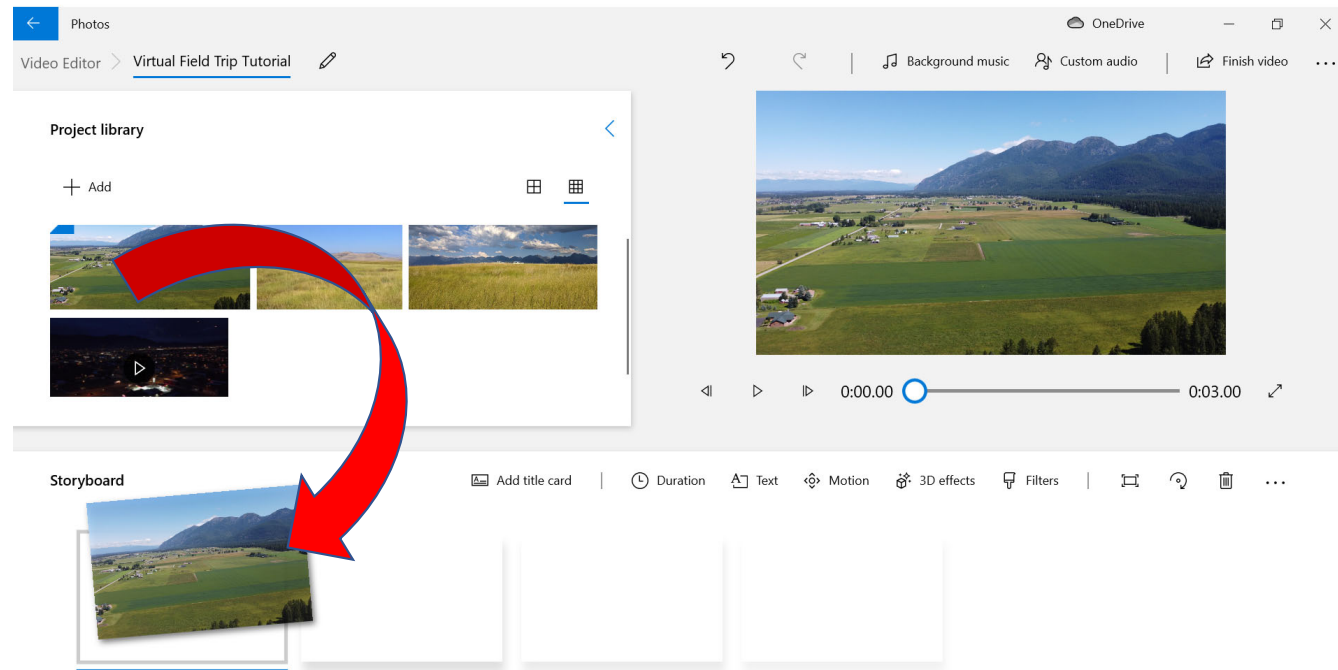
Add the video clips and images you want to include in your video. These are added to the Project Library, which allows you to easily click-and-drag them into the Storyboard.



Windows Video Editor: Create the Video

Adding an Image: Click and drag an image from the Project Library down into the Storyboard. It will then show up in the movie Preview screen (upper right). By default this photo will play for 3 seconds, but this can be changed by double-clicking the time stamp on the image in the Storyboard or clicking Duration.

Note: moving an object from the Project Library does not remove it from the Library so it can be used repeatedly throughout the video.

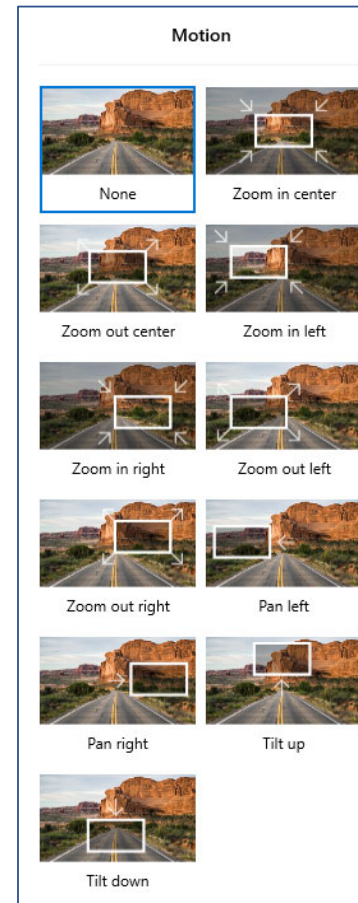


Windows Video Editor: Create the Video

Image Effects (Motion, Filters): When an image element is selected in the Storyboard, several options appear above, including Motion and Filters.

Motion causes the image to slowly pan or zoom during the duration it is on screen. This slight movement helps add some flair to an otherwise still image within a video.

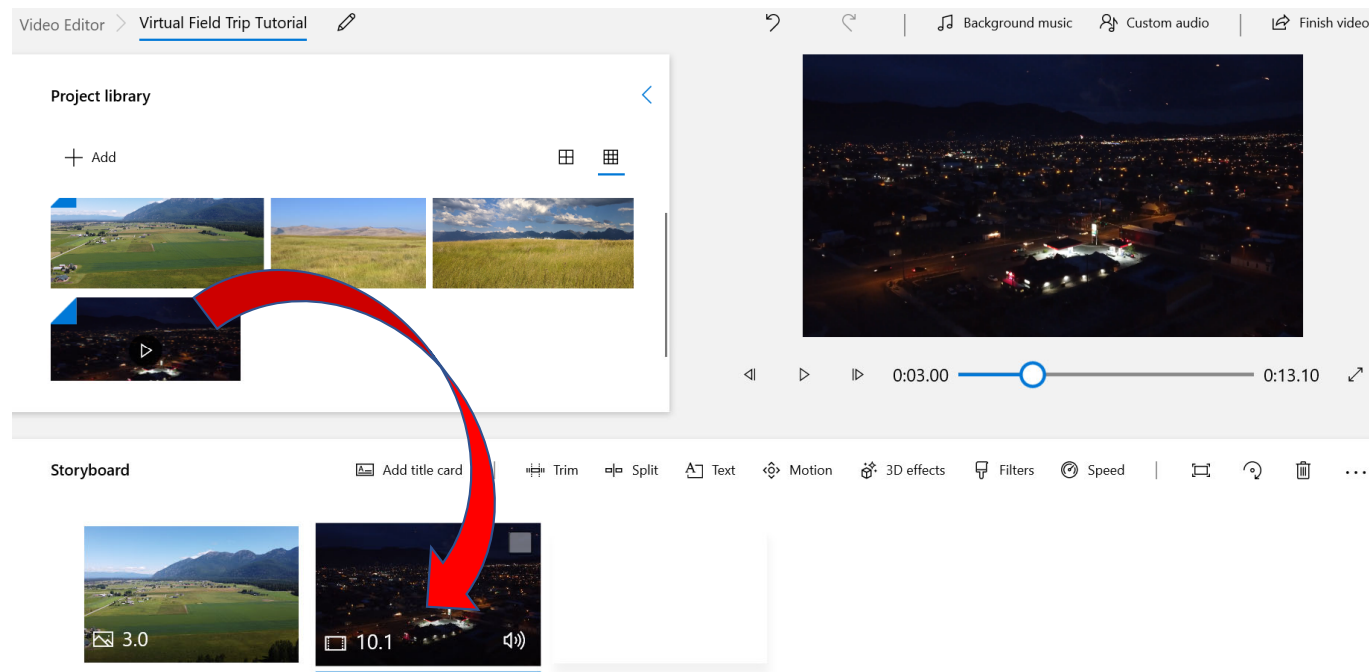
Filters allow you to change the color and tone of an image. Some of these filters are particularly good at enhancing the color of an image due to poor lighting when the photo was taken, or can be purely artistic, such as changing to black and white or pixelated.



Windows Video Editor: Create the Video

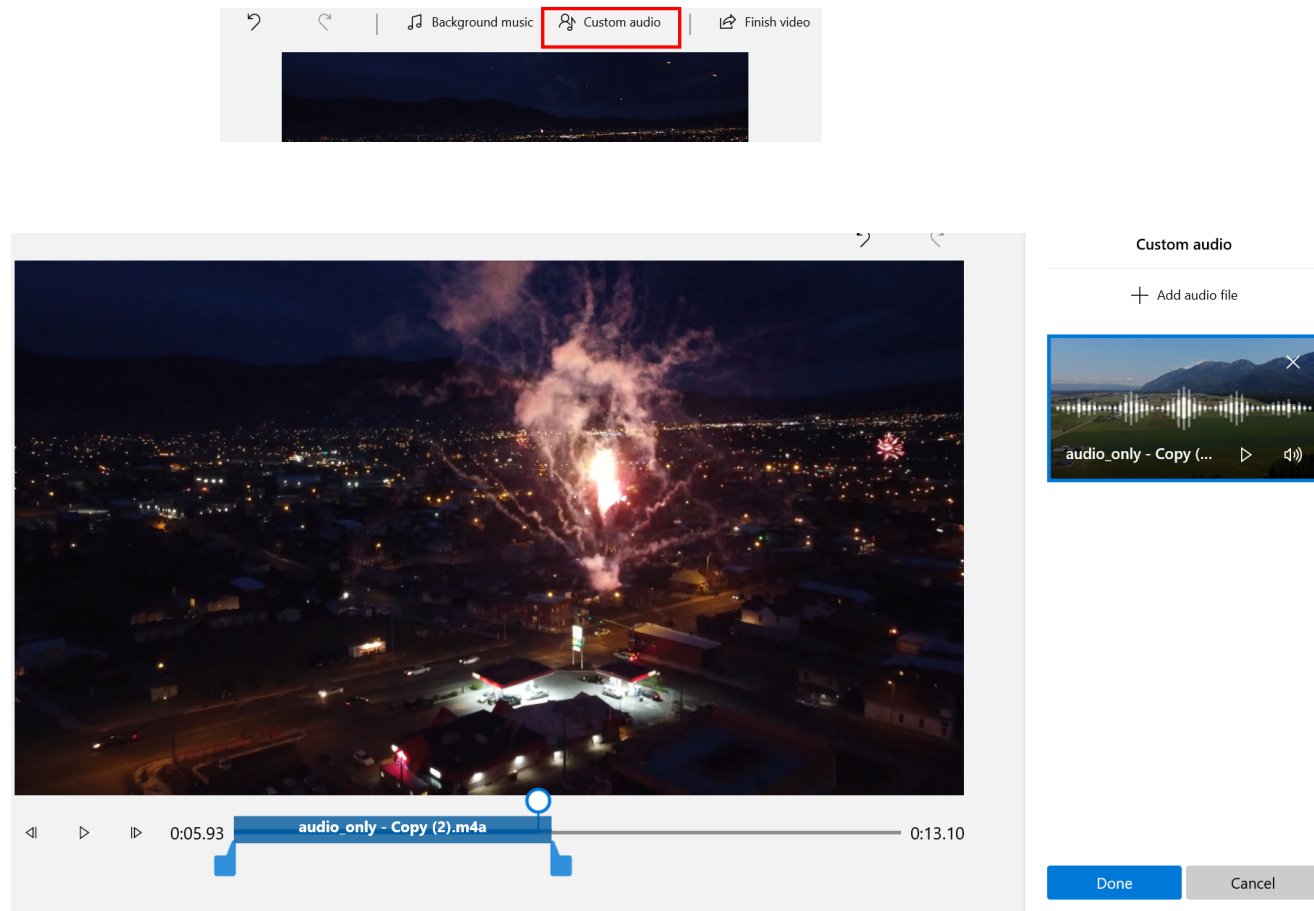
Adding a Video Clip: Click and drag a video clip from the Project Library down into the Storyboard. Video clips play whatever length they are internally. In this example, the video clip is 10.1 seconds.

Note: there are several new tools that pop up above the video clip in the Storyboard when it is clicked, including Trim and Split (which can be used to trim down the video clip or split it into more than one clip), Filters (which change coloration, similar to Images), and Speed (which can alter speed of the video clip).



Windows Video Editor: Create the Video

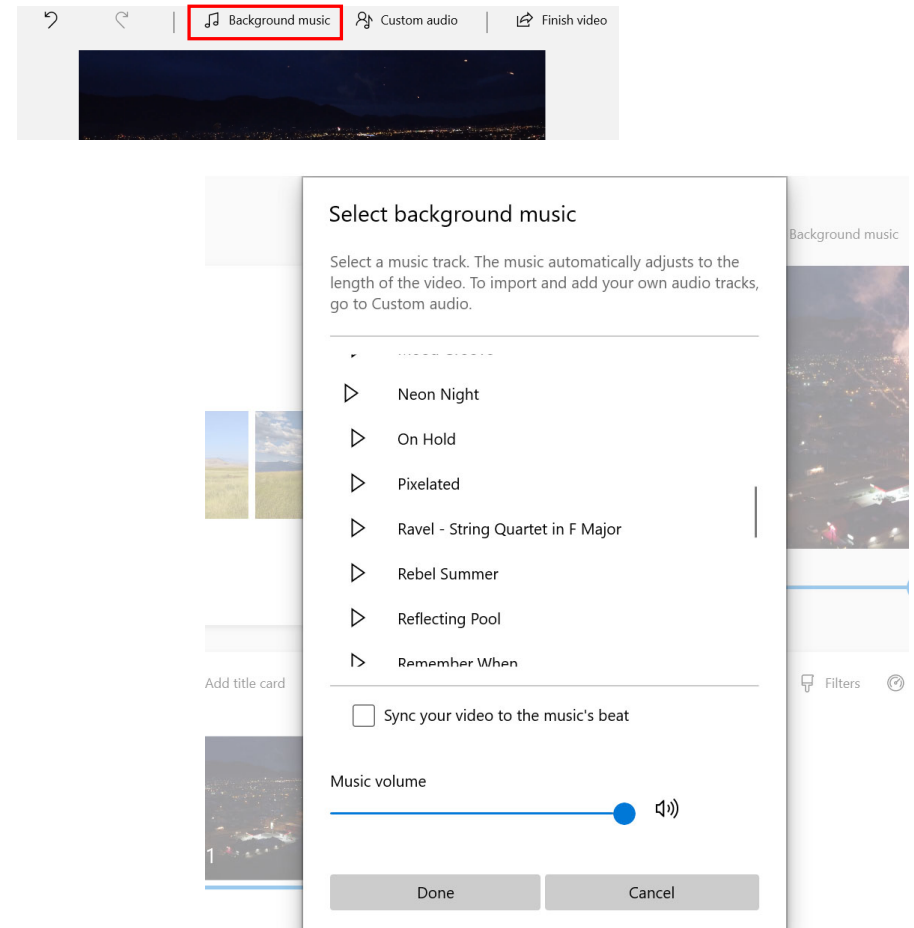
Adding Audio Clips: While images and video are in the Project library, audio clips are added separately. Above the Preview window, click “Custom audio.” In this window you can click “Add audio file” and add in the audio files you have put together, such as from the Zoom interview. Audio clips are added wherever the slider is position in the video preview window to the left, but can be easily moved around and deleted as desired. The duration and timing of a selected audio file is indicated on the time slider, which can be dragged around to new times as desired.



Windows Video Editor: Create the Video

Adding Background Music: While music **COULD** be added as an audio clip (Note: adding copyrighted music will usually get your video flagged and/or removed from social media), WVE offers its own background music options. Above the Video preview window, click “Background music.” Many options are available and can be played and previewed before selecting. Additionally, they are designed to sync with your video clip timings, giving your final product a more professional video/audio appearance. Background music will also play behind the audio clips you’ve added, and the volume can be changed so as not to drown out your other audio.

If you would prefer to add music not included here, it must be added as an Audio clip (see Slide 16). Many royalty-free music and sound effect options are available online (search for “royalty free music/sounds”).



Windows Video Editor: Create the Video

Rearranging the Storyboard: The individual Image and Video elements within the storyboard can be rearranged by clicking and dragging them to a new position.

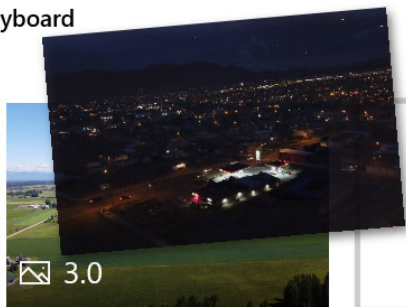
NOTE: The arrangement of Audio Clips (Slide 16) is independent of the arrangement of Images and Video, so rearranging Images and Videos in the Storyboard will not shift Audio Clips around to “follow” the Images and Video you intended for them to sync up with – this must be done separately.

Click-and-drag

Storyboard

Add title card

Trim

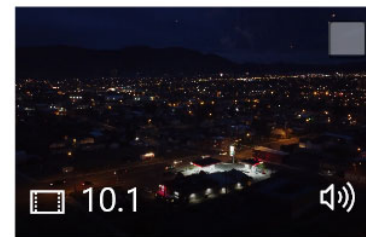


Before

Storyboard

Add title card

Trim

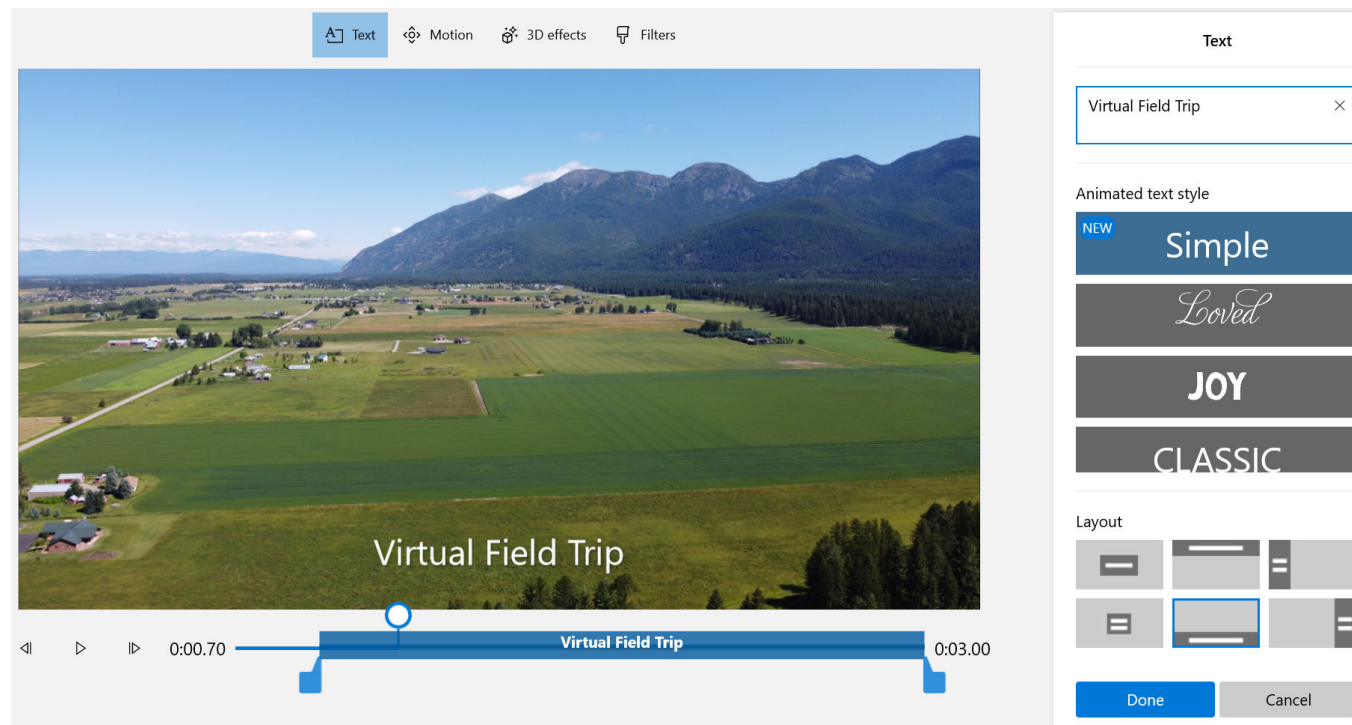


After

Windows Video Editor: Create the Video

Adding Text: Cinematic text can be added to each individual Storyboard element (images or video). Within the Storyboard window, click “Text” and a new window will appear with many options.

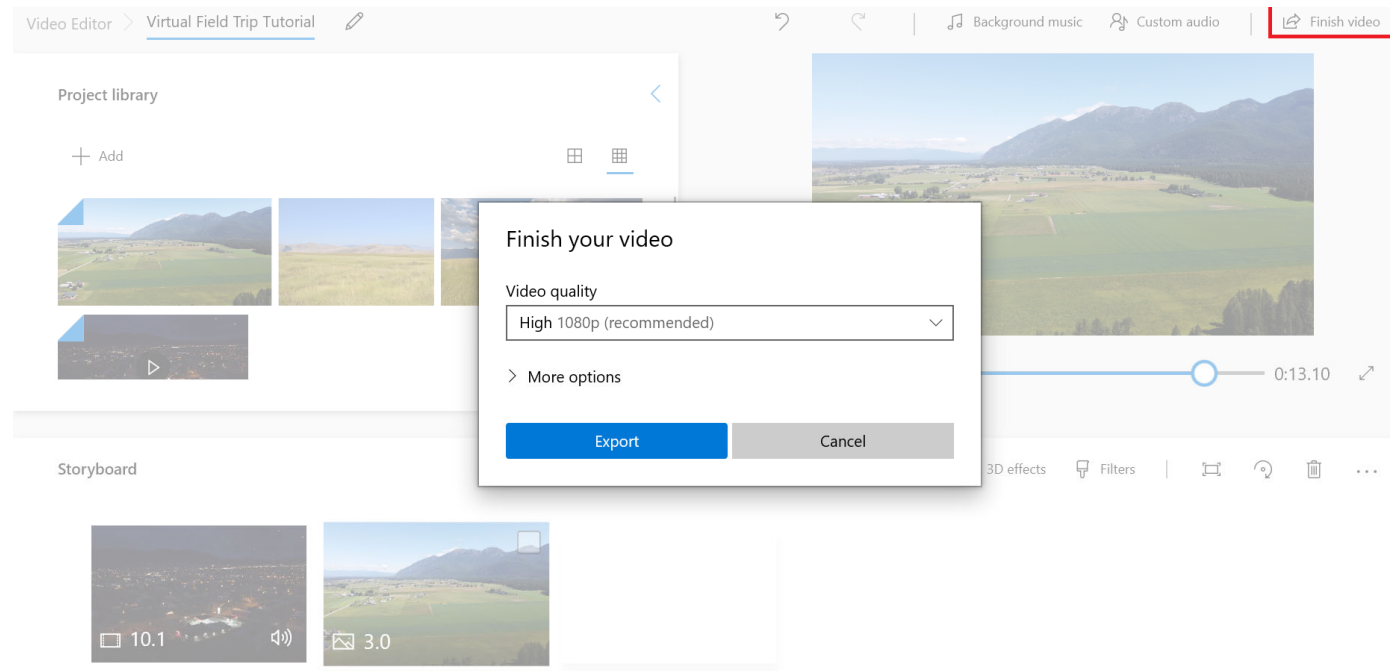
Type the text you want to appear in the Text Box, and then explore the different options below, which include Style (which determines font, size, and animations) and Layout (text position on-screen). The duration of the text on the screen is controlled in the time slider at the bottom left. Note: it’s always good to preview how the text will look by clicking the Play button, as the different text styles have their own internal animations.



Windows Video Editor: Create the Video

Finish the Video: When you are ready to export your video as a final product, click “Finish Video” in the top right.” A few options appear, but in most cases you will want to export it as High quality (1080p). This step is fairly quick, but you can always preview your video in the Preview window at any time. Watch your newly completed video for quality and errors.

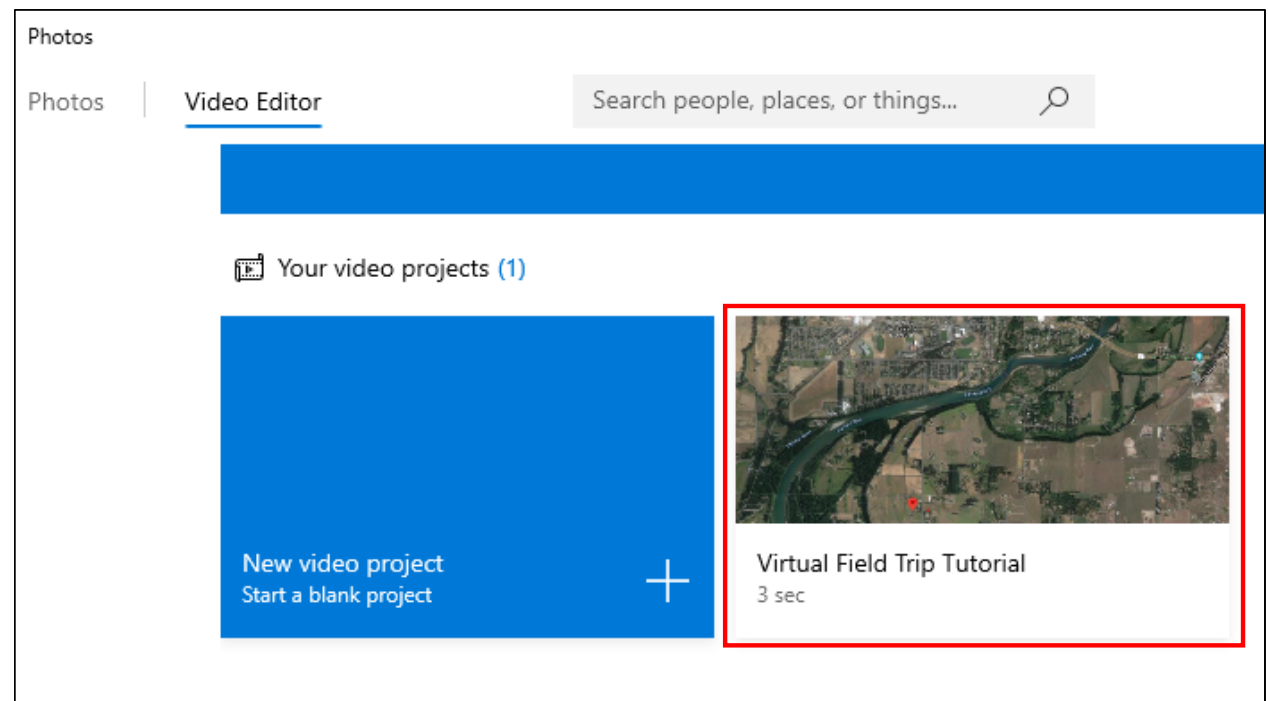
Congratulations! Your video is complete.



Windows Video Editor: Create the Video

Editing a Finished Video: If you wish to change something in your video after exporting it as a final product, simply re-open your project in Windows Video Editor. Exporting your video does not alter the Project itself, so you can just carry on from where you had left off. WVE also automatically saves your project as you go, so there is no need to remember to save the project periodically.

Note: Your finished video can also now be imported as a Video element itself in any new video projects!



Final Thoughts

This tutorial demonstrates a basic way for someone with limited video editing experience to use readily available software to turn images, audio, and video into a virtual field trip. As an example, this video below was created entirely using these tools. Feel free to be creative with these options or discover new editing tools for yourself!



<https://www.youtube.com/watch?v=l0MFVAcipBQ&t=6s>

Tutorial and Video By:

CARBONATE CRITICAL ZONE RESEARCH COORDINATION NETWORK

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James Berglund and Laura Toran produced the video

Drone footage from James Berglund

Photos from our collection with contributions
from Ellen Herman and Dorothy Vesper

<https://carbonatecriticalzone.research.ufl.edu>

