

National Park Service
U.S. Department of the Interior

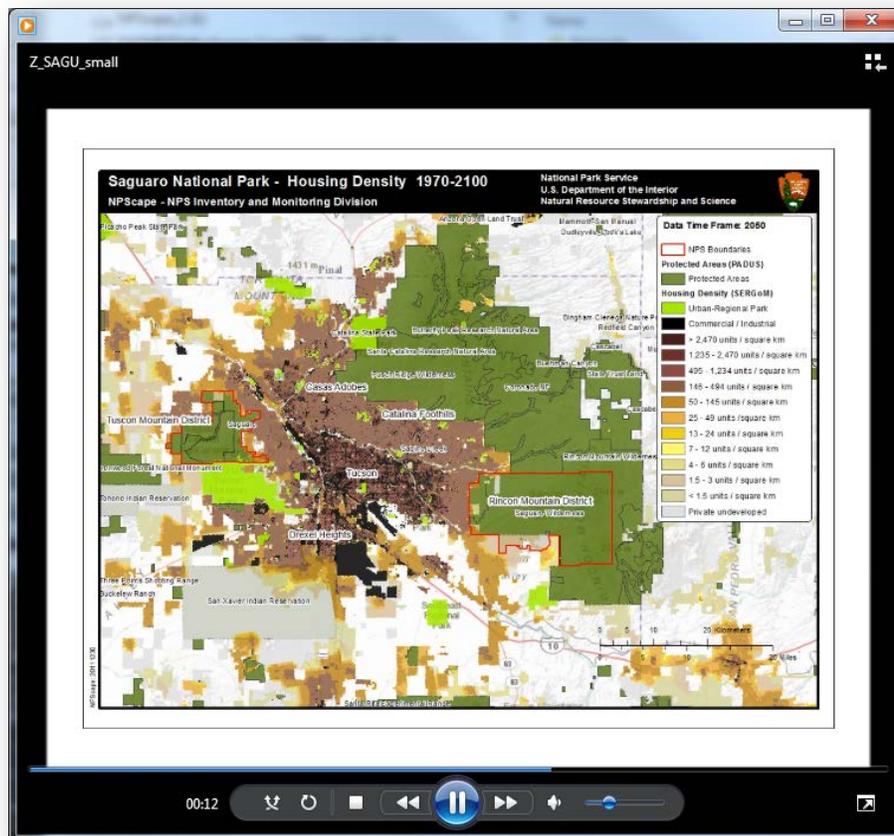
Natural Resource Stewardship and Science



NOTE: There may be revised processes and documentation available.

Check the NPScape maps webpage
(<http://science.nature.nps.gov/im/monitor/npscape/maps.cfm>)
for the most current version.

NPScape Standard Operating Procedure – Creating Map Movies of Time-Aware Data



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Overview

This NPScape SOP provides guidance on how to create animations from time-aware data layers. Example map movies produced by NPScape using this SOP are available for viewing and download at <http://science.nature.nps.gov/im/monitor/npscape/mapmovies.cfm>.

This SOP may be used with other input data that has a time attribute.

Unless noted, the data sources and tools used are assumed to be in ESRI ArcGIS™ format, version 10 Service Pack 3.

Software and Data Requirements

Required software

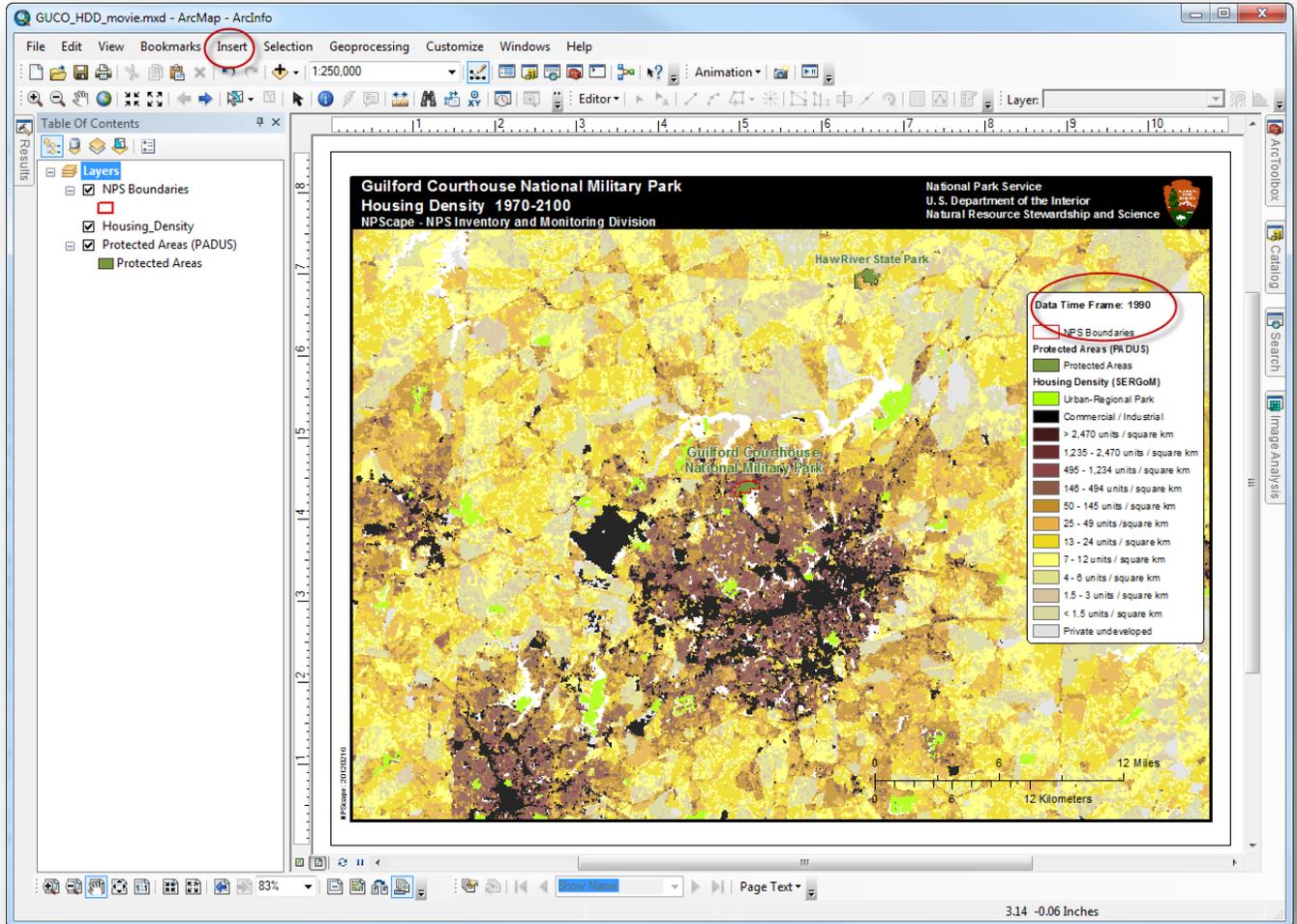
This SOP requires ESRI ArcGIS 10.3 and optionally Microsoft Windows Live Movie Maker.

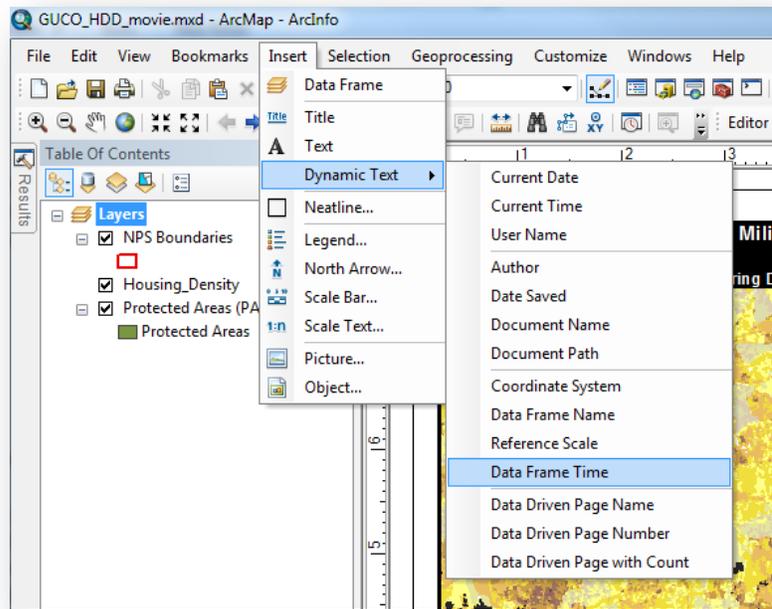
Required data

Data must contain time property field(s) to utilize the time-aware capabilities in ArcGIS 10. For more information on preparing your data, see ESRI's help documentation at <http://help.arcgis.com/en/arcgisdesktop/10.0/help/index.html#//005z0000000q000000.htm> .

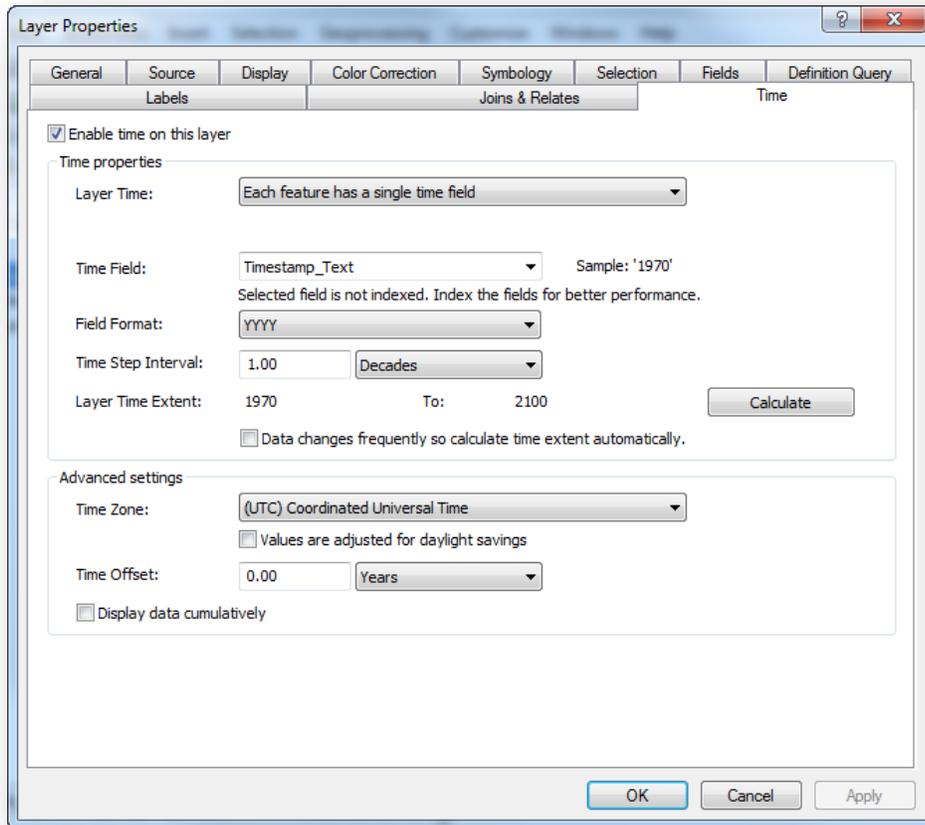
Create Movie Animation

1. Create an mxd with a map layout, an operational data layer (time-aware) and reference layers. Dynamic text to identify the time period can be added to the legend or title (Insert/Dynamic Text/Data Frame Time).





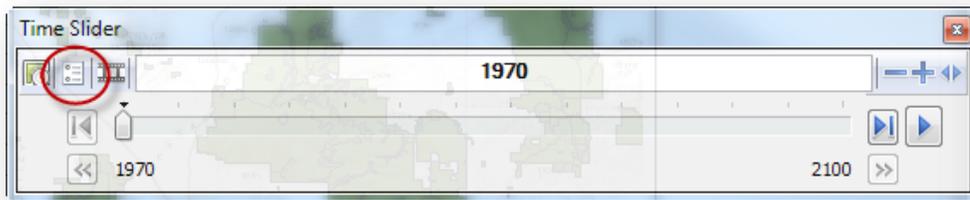
- 2. Enable time properties for the operational data layer through the Layer Properties Time dialogue.



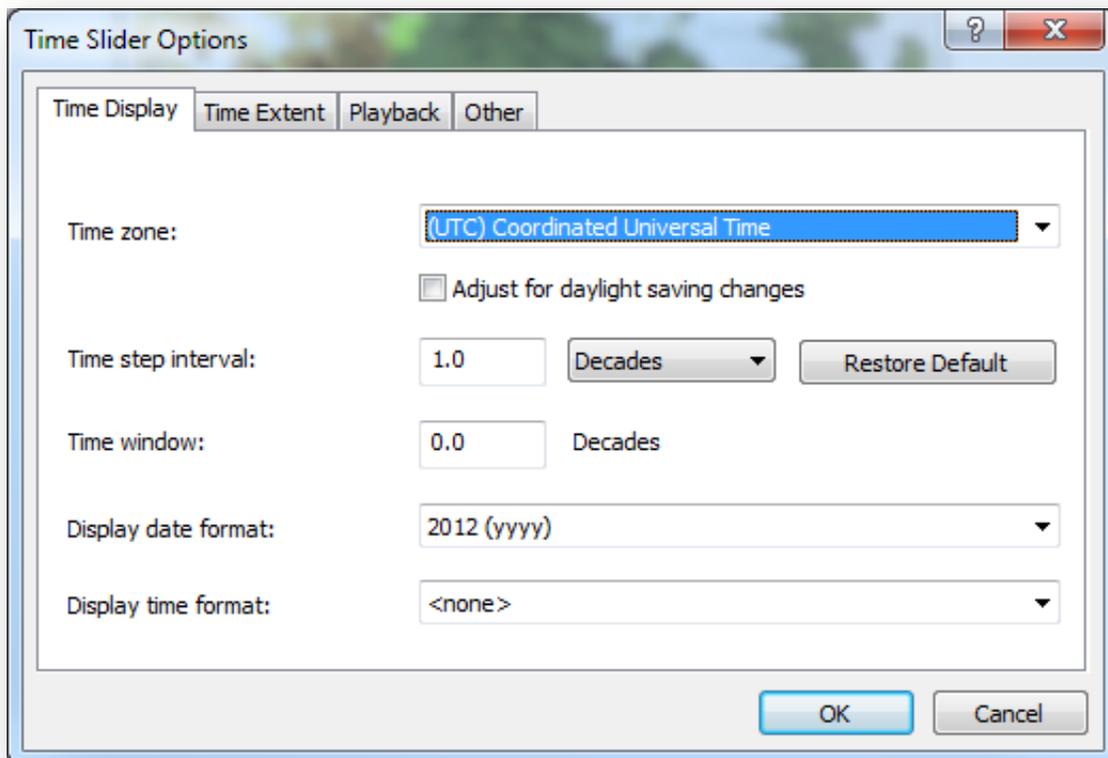
- 3. Open the Time Slider Window from the tools toolbar



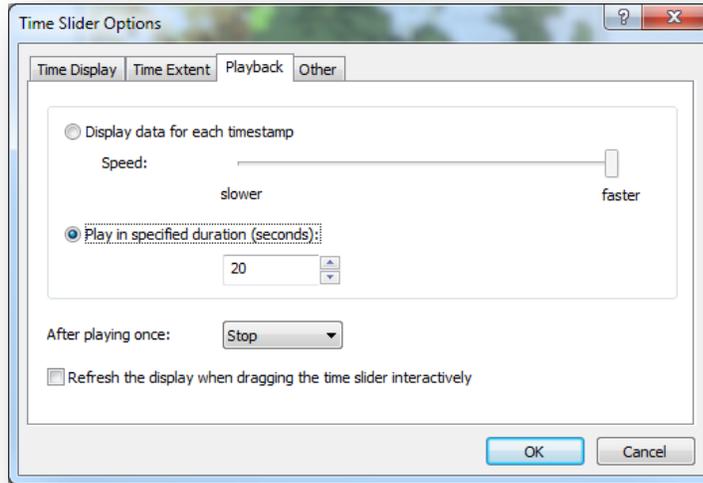
- 4. The quality of the animation is dependent on the quality of the computer's video card as well as the size of the image being captured. We recommend that you maximize your ArcMap window, close the Table of Contents, and then maximize the layout view (Map Layout toolbar) before recording.
- 5. Open the Time Slider Options dialogue.



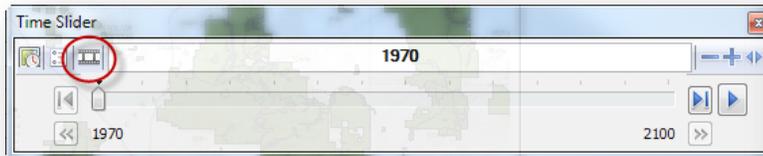
- 6. The time settings should carry over from the time settings on the layer properties, but check the Time Display and Time Extent settings.



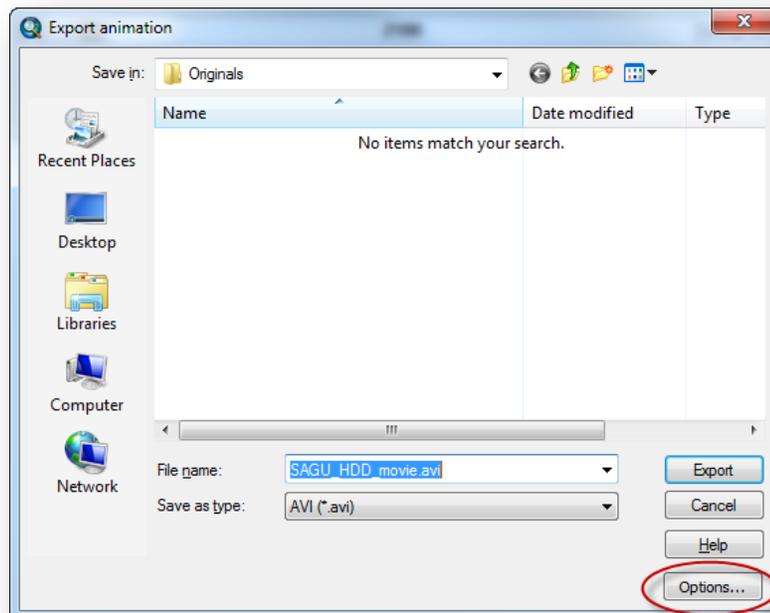
- 7. On the Playback tab, change the default display to Play in Specified Duration (seconds) and set to 20 seconds (or other desired duration).



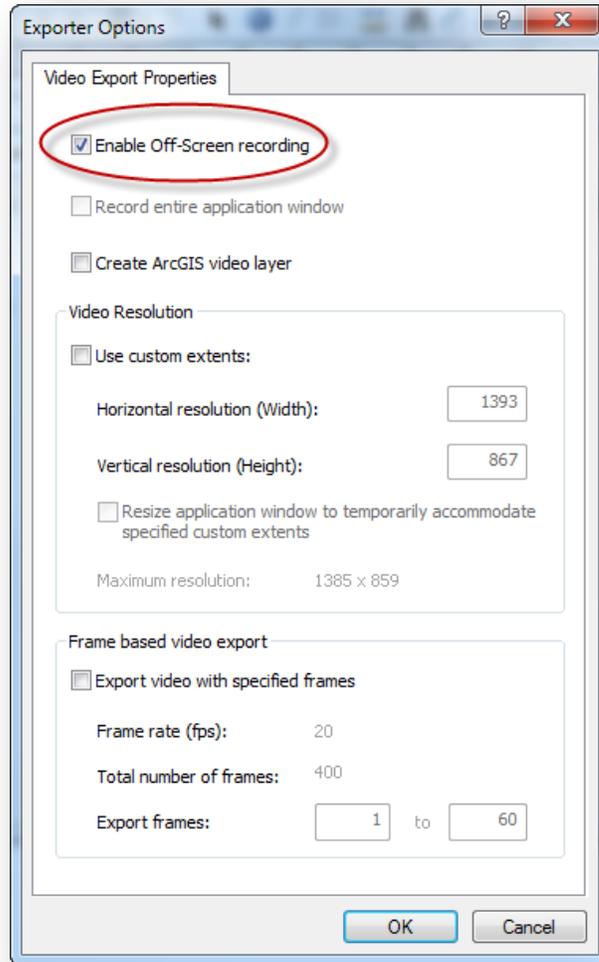
- 8. Choose Export to Video.



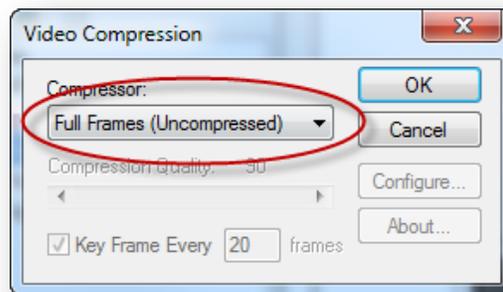
- 9. Provide a file name and disk location for the video file output. Select Options in the Export Animation dialogue window for further settings.



- 10. In Exporter Options Video Export Properties choose Enable Off-Screen recording. This allows you to continue working on your computer while the recording occurs in the background.



- 11. Select Export and you are presented with Video Compression options. Select Full Frames (Uncompressed) for the Compressor. This will create a large .avi file.

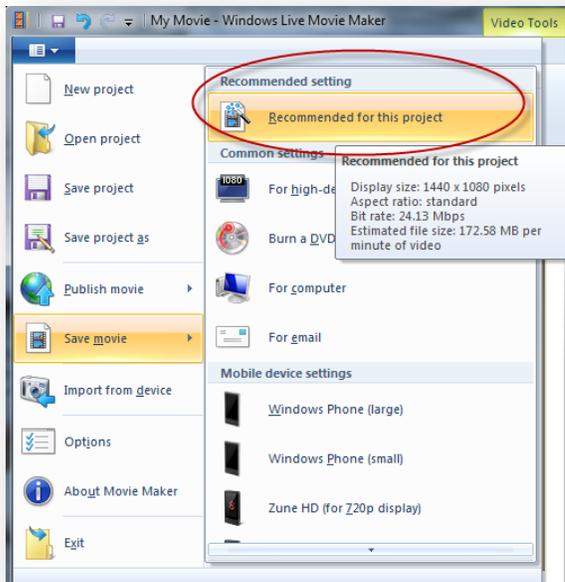


Compress File Size

1. Open Windows Live Movie Maker. If you do not already have this installed on your computer you can download it for free at www.microsoft.com/downloads - Windows Live Essentials.
2. Add .avi video file that you created through ArcMap

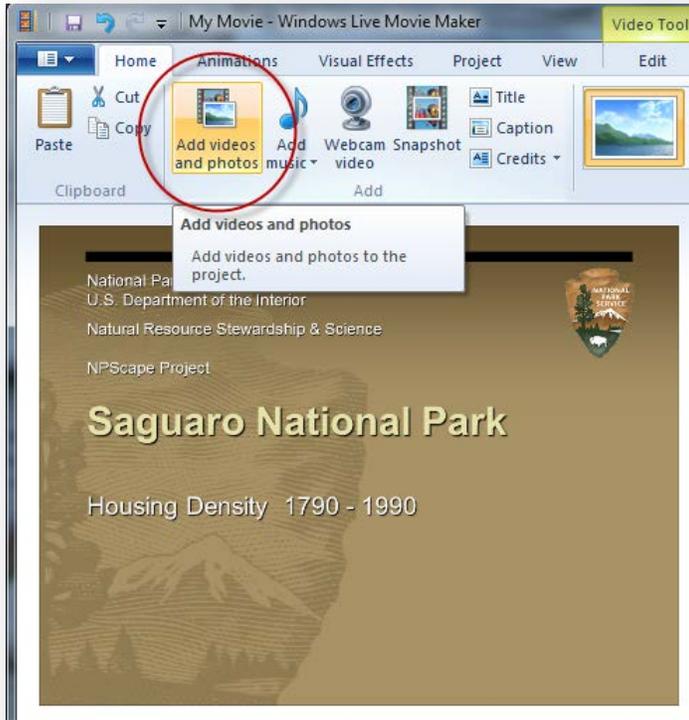


3. Save movie using the recommended settings. This will create a .wmv file (sample .avi files of 1.5 gb compressed to 5 mb .wmv files).

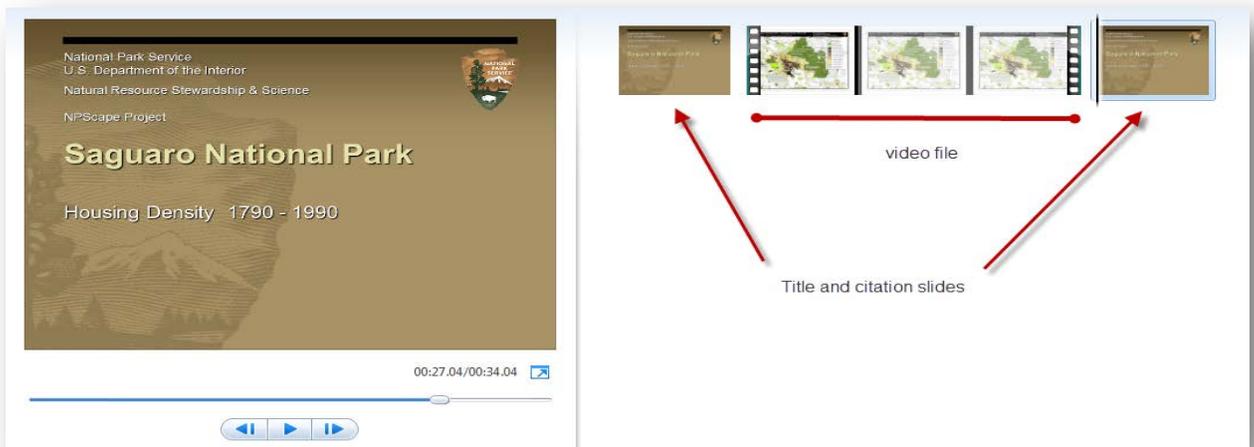


Adding Title Slides to Animation (Optional)

1. Open Windows Live Movie Maker. If you do not already have this installed on your computer you can download it for free at www.microsoft.com/downloads - Windows Live Essentials.
2. Add photo file(s). Supported file types are:
Photos (*.jpg;*.png;*.bmp;*.dib;*.rle;*.gif;*.ico;*.icon;*.jpeg;*.jpe;*.jfif;*.exif;*.tiff;*.tif;*.wdp)



3. Add .avi video file. The order of the parts can be rearranged after the video segments are added. Also note that you can here optionally alter the time and transition of each frame.



4. Save movie file.