

Preparing Your Images for NVPS Digital Projection Competition



The Northern Virginia Photographic Society

*By Scott Musson
with Contributions by Matthew Schmidt*

Introduction.....	3
Color Calibration.....	3
Naming Files, Folders & Directories.....	4
Processing Images.....	4
Sizing Images.....	5
Photoshop Elements Workflow.....	6
Step 1: Duplicate Image - Work with a Copy.....	6
Step 2: Size Your Image.....	7
Step 3: Set Color Profile.....	11
Step 4: Saturate (Optional).....	11
Step 5: Flatten Image (Optional).....	12
Step 6: Sharpen Image (Optional).....	12
Step 7: Save File as JPEG.....	13
Step 8: Submit Image for Competition.....	13
Summary of Workflow.....	15
Things You Don't Need To Do.....	15
Photoshop CS 5 Workflow.....	15
Step 1: Work With a Copy.....	15
Step 2: Sizing Your Images.....	16
Step 3: Setting the Color Profile.....	20
Step 4: Bit Depth Conversion.....	22
Step 5: Saturation (Optional).....	22
Step 6: Flatten Layers (Optional).....	23
Step 7: Sharpen Image (Optional).....	23
Step 8: Save File as JPEG.....	24
Step 9: Submit Image for Competition.....	25
Summary of Workflow.....	26
Things You Don't Need To Do.....	26
Lightroom 3.5 Workflow.....	26
Step 1: Select Image(s).....	26
Step 2: Export Images.....	26
Use NVPS Competition Preset.....	27
References.....	29

Introduction

This document is an update to a document 2.1.3 dated September 11th, 2011. Changes include technical differences that accommodate the club's new projector, updates for Adobe Photoshop CS 5, Adobe Photoshop Elements 10 and Adobe Lightroom 3.5. It will help guide you to prepare images for Digital Projection Competition at NVPS. This document has been prepared based on personal experience and research performed by Scott Musson with revisions by Matthew Schmidt. Please note that the steps provided in this document are in the order in which they should be performed. Changing the order of some of the steps may not provide the optimum results.

We intend to continue to update this document as improved methods are discovered and nuances of the specific projector and software used for processing and competition are discovered.

It's time to relax and realize that preparing images for digital projection is actually easier than printing images. Not only is it easier, digital projection is a more forgiving format than prints. In camera club competitions the deciding factor between a winning and non-winning image can be the quality of the print itself. This factor is totally removed from digital projection. Also minor flaws in image quality are not emphasized to the extent they are in prints. If you are already producing successful prints and competing in competition, you have nothing to worry about. If you are having trouble with your printed output, then relax - preparing for digital projection is easier!

Before we begin with the actual steps for image preparation, let's start with a few recommendations.

Color Calibration

As you prepare for digital competition at NVPS, be sure you are practicing good color management principles. This starts with calibrating your monitor regularly. The subject of color management is beyond the scope of this document but it is recommended that you take the time to learn at least the fundamentals. There are references at the end of this document to help you learn more about color management.

For your monitor calibration we suggest using a hardware solution, one that includes both a colorimeter and software specifically designed for the colorimeter. We've had personal experience with the Spyder 3 Pro, Color Munki Photo and X-Rite i1 Display Pro solutions and find them accurate for the purposes of amateur photography. These particular solutions cost between \$150 - \$450 from B & H, Adorama or Amazon.

We also advise you to calibrate input devices including flatbed scanners and slide scanners, particularly if you are using these devices with your digital workflow or if you plan to compete in the digital projection category at NVPS. If you fail to calibrate your monitor and scanner it will make the color reproduction of your images unpredictable with the digital projector and very likely inaccurate. This will diminish your chances of doing well in competition, especially if skin tones and generally recognizable objects have inappropriate color.

Using an unscientific method of color management with printing is less risky (although you'll waste lots of time, paper and ink) since you can see your results before submitting your image for competition. With digital projection you lose the ability to preview what your images will look like on the digital projector prior to the competition.

The general calibration target for monitors is a Gamma of 2.2 and a White Balance of 6500K. Some calibration software may suggest different settings for Macs, but those recommendations were for PowerPC-based Macs using hardware that is no longer available. Note to Mac users: it is suggested that you calibrate your monitor using Gamma 2.2 since this is the Gamma setting that is used for calibrating the competition projector.

Naming Files, Folders & Directories

What does this have to do with preparing for digital competition? Well really nothing at all. However it's important that you come up with a way to organize your files and folders so that you will be able to find the original file and the processed file many months from now when you realize you would like to make a minor correction or change to that image for another use.



The following is an example directory/folder and file naming convention for organizing your digital images. You can use any convention that works for you- this is just an example that works well with a Bridge & Photoshop CS workflow. Even if you are using Lightroom, which helps automate the organization of your images, having good file organization is very important.

Processing Images

Process your digital captures or scans as you normally do. Crop for artistic content, correct tone & color as needed, adjust contrast, dodge & burn and perform any image cleanup required. Of course all of these are optional, and are not required for your images; however some adjustments will improve the quality of your images.

Digital manipulation is allowed by the rules of NVPS for digital projection, so all types of images (color, black and white and enhanced) will be eligible in the Novice and Advanced Digital Projection categories in accordance with the approved rules for NVPS competitions in the club year 2011 – 2012

(<http://nvps.org/main/about/rules-of-competition/>).

We recommend that you don't apply sharpening to your images until the last step in your workflow, after you have sized your image and set the pixel depth. Applying sharpening to your images and then resizing them can provide undesirable results.

Photoshop users should save your master image in whatever format you normally do (PSD, DNG, TIFF, JPEG, etc.).

IMPORTANT

We suggest that you then save a separate copy of your image to work on for digital projection when using any version of Photoshop. This can help prevent you from destroying your original master file. We recommend employing a file naming convention or using a separate folder to help prevent getting your files mixed up. Please note that this does take up additional hard disk space for the additional files but this is a minor trade off compared to destroying your original image. Note: When using RAW files in your workflow your RAW image is your original file and the chances of overwriting this file are zero since you can't save a RAW file in Photoshop, however you should save a copy of your work with all the changes you've made so you don't have to start over from scratch.

If you are using Adobe Lightroom, it uses a non-destructive workflow and you do not need to save an extra copy of the image.

The purpose of this document is not to explain how to process your images, but how to prepare them for NVPS digital projection competition. If you would like to learn more about processing your images, please see Scott Musson's document *Basic Color, Tonal & Sizing Adjustments You Can Live With Using Photoshop CS3* <http://nvps.org/main/docs/workshop2.pdf> or some of the work of the authors who have inspired us such as Julieanne Kost, Matt Kloskowski, Tim Gray or Scott Kelby.

Sizing Images

1400x 1050 pixels is the maximum size for your images in digital projection competition. 1400 pixels is the maximum width and 1050 pixels is the maximum height. Note that landscape oriented images can include more pixels than portrait oriented images. This is not an advantage for landscape oriented images; a good image is a good image. More pixels doesn't necessarily mean a better photograph and a good judge will choose the better image.

Aspect Ratio is the comparison of two sides of a rectangle. It's not the measurements of each side of the rectangle, it's the ratio of one side compared to the other. DSLRs primarily have 3:2 or 4:3 aspect ratios. Full Frame DSLRs and 35mm film have a 3:2 aspect ratio.

4:3 aspect ratio examples

- 1024 x 768 px
- 1400 x 1050 px
- 12 x 8 in
- Canon 7D

- All Micro 4/3rds Cameras (Olympus, etc.)
- Mamiya DM Series
- Nikon D3s

3:2 aspect ratio examples

- 1024 x 683 px
- 1400 x 933 px
- 4 x 6 in
- Canon Rebel T3
- Nikon D3000
- Nikon D7000

Unless your original image is the same aspect ratio as the NVPS projector (4:3), you will need to make a decision if you should:

- Fit your image to into the digital frame
- Crop your image to fit the digital frame
- Distort your image to fit the digital frame

Now, let's move to the specific steps for preparing your images for digital competition.

Photoshop Elements Workflow

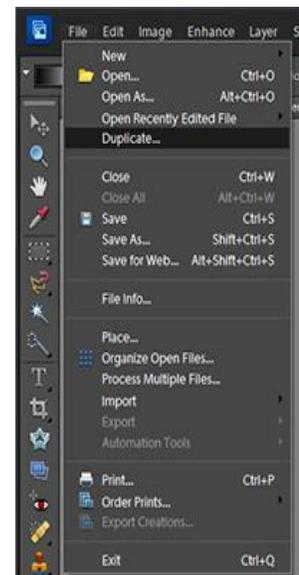
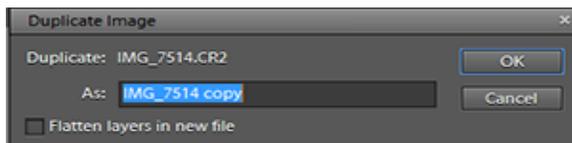
Step 1: Duplicate Image - Work with a Copy

To prevent accidentally overwriting your master file that you've processed, we recommend using a copy of your file. You can save a copy, or use the image/duplicate command and use a copy of the image in memory. You won't accidentally overwrite your image this way and you won't have extra files take up space.

Tools Used: File Duplicate Dialog

Steps

1. Open the Image Duplicate Dialog
 - Choose Menu command: **File > Duplicate**
2. Accept the default duplicate name or name as you desire. Suggest you do not flatten layers at this time.
3. Press "OK" to duplicate the image.



Step 2: Size Your Image

The resolution of the digital projector that will be used for competition is 1400x1050 pixels. Your images must be sized no larger than 1400 pixels in width (horizontal) and 1050 pixels in height (vertical). This allows horizontal format images to show more pixels in digital projection. This should not concern the competitor as judges (at least good judges) judge image quality and not the number of pixels in an image.

There are many techniques for resizing your image; I'll demonstrate some of the most common with different images. Some of the tools commonly used in Photoshop Elements for changing the size of images are the "Image Size" dialog, the "Canvas Size" dialog, the "Crop Tool" and the "Marquee Tool". The image size dialog provides the most control and accuracy and it is my "go to" image size method.

Choose one of the sizing methods in this step to size your image. Choose from:

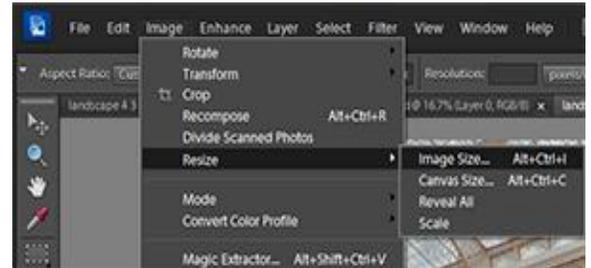
- Image Size Method
- Crop to Fit Method

Landscape Images

This section describes the Image Size Method and Crop to Fit Method for Landscape oriented images.

Image Size Method

Typically, your master file image size will be larger than 1400x1050 pixels so you will need to make your images smaller to enter them into the digital projection competition. This is done by what is called down-sampling and the best method of down-sampling in Photoshop is using Bicubic Sharper (Bicubic Smoother is for up-sampling or interpolating). You select this in the "Image Size" dialog in Photoshop Elements.



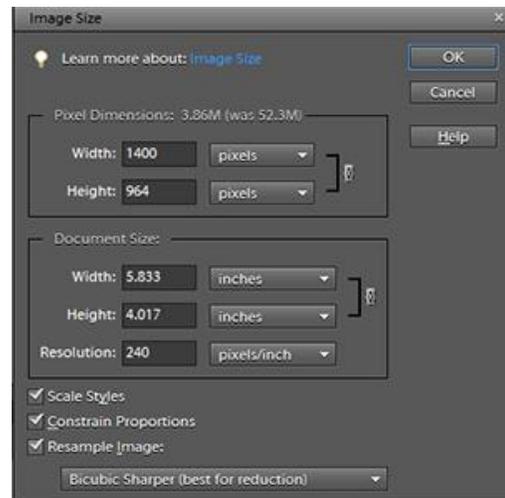
Tools Used: Image Size Dialog

Advantages: Simple, foolproof, will work for many images

Disadvantages: Doesn't give you flexibility to "crop to fit" or take advantage of as much canvas space as possible.

Steps

- 1) Open the Image Size Dialog
- 2) Choose Menu command: **Image > Resize > Image Size**



- 3) On the Image Size Dialog check:
 - a) Scale Styles
 - b) Constrain Proportions
 - c) Resample Image
 - d) Choose: Bicubic Sharper (Best for Reduction)
- 4) Enter 1400 in the pixel dimensions “Width” field
- 5) If the pixel dimensions for height changes to less than or equal to 1050, click “OK”
- 6) If the pixel dimensions for height field changes to more than 1050, change the pixel dimensions height field to 1050
- 7) Click “OK” to apply the image size changes

IMPORTANT

Try to perform sizing with re-sampling/resizing only once and not several times as it can have a degrading effect on your image every time it’s performed. (Re-sampling is either adding/interpolating or discarding pixels from your original image and since neither is desirable, try to only do it once as each sizing has an accumulating impact.)

Crop to Fit Method

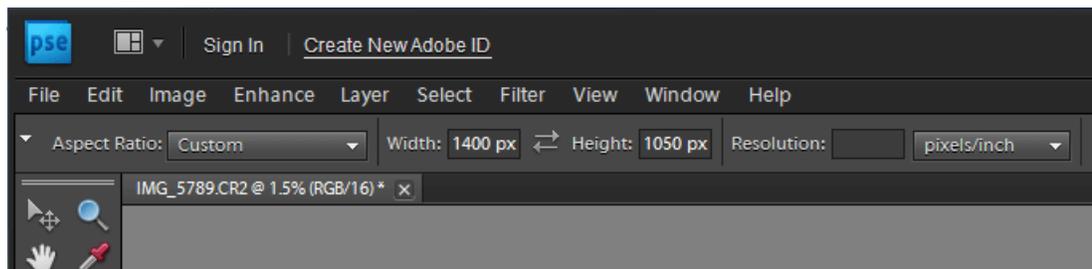
Tools Used: Crop Tool

Advantages: Good control of what is cropped

Disadvantages: Crop can only use “Bicubic” Image Interpolation in Photoshop Elements (not a big deal).

Steps

1. Choose the Crop Tool from the tool pallet the toolbar and specific fields for the crop tool are displayed
2. For a landscape-oriented image:
 - Enter **1400 px** in the “**Width**” field of the toolbar and clear any entry from the Resolution field. Optionally enter **1050 px** in the “**Height**” field of the toolbar.



3. Click and drag the crop tool and select either all of the image or the area you want to remain after the crop.
 - If you want to include the entire image, you can drag the crop outside of the image to ensure the entire image is included. This will cause some blank area to be included in the image as well, but this can be cropped off.
4. Press the **enter** key or click the **checkmark** to perform the crop.

TIP

Be sure to add the letters “px” with the numbers in the crop tool width and height fields; otherwise it may interpret the numbers entered as inches or centimeters depending on your defaults.

Setting both the “Height” and the “Width” will constrain the aspect ratio of the crop tool so you will only be able to select a height and width that conforms to the size entered. If the image doesn’t conform well to this aspect ratio, you can leave either field blank and then use the “Canvas Size” dialog or the “Marquee Tool” to remove any excess image required to get the image to fit the target size. Leaving both fields blank allows for free-form cropping.

IMPORTANT

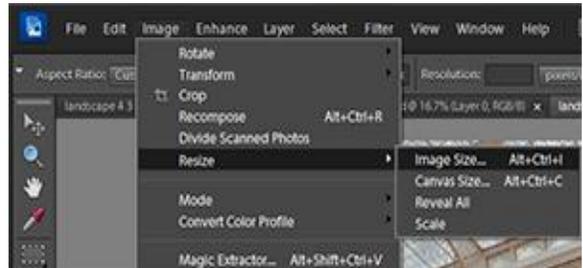
Cropping is a destructive, non-reversible alteration of your image that cannot be undone in a future editing session. Be sure you are satisfied with your changes, or save a separate copy in case you ever want to return to the original size. Try to use the crop tool only once and not several times as it can have degrading effects on your image each time it’s performed because the image is re-sampled. (Re-sampling is either adding/interpolating or discarding pixels from your original image and since neither is desirable, try to only do it once.)

Portrait Images

This section describes the Image Size Method and Crop to Fit Method for Portrait oriented images.

Image Size Method

Typically, your master file image size will be larger than 1400x1050 pixels so you will need to make your images smaller to enter them into the digital projection competition. This is done by what is called down-sampling and the best method of down-sampling in Photoshop is using Bicubic Sharper (Bicubic Smoother is for up-sampling or interpolating). You select this in the “Image Size” dialog in Photoshop Elements.



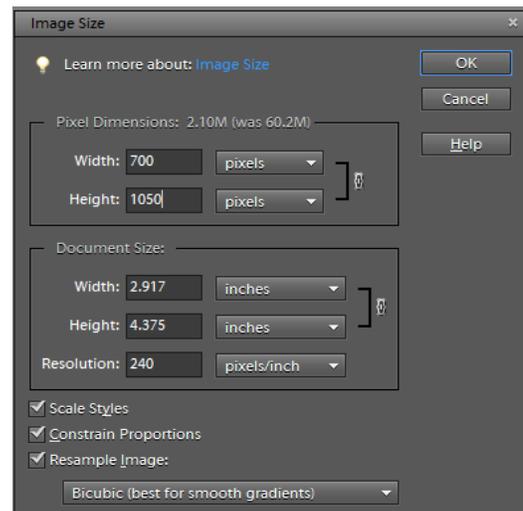
Tools Used: Image Size Dialog

Advantages: Simple, foolproof, will work for many images

Disadvantages: Doesn’t give you flexibility to “crop to fit” or take advantage of as much canvas space as possible.

Steps:

- 1) Open the Image Size Dialog
- 2) Choose Menu command: **Image > Resize > Image Size**
- 3) On the Image Size Dialog check:
 - a) Scale Styles
 - b) Constrain Proportions
 - c) Resample Image



- d) Choose: Bicubic Sharper
(Best for Reduction)
- 4) Enter 1050 in the pixel dimensions “Height” field
- 5) Click “OK” to apply the image size changes

IMPORTANT

Try to perform sizing with re-sampling/resizing only once and not several times as it can have a degrading effect on your image every time it’s performed. (Re-sampling is either adding/interpolating or discarding pixels from your original image and since neither is desirable, try to only do it once as each sizing has an accumulating impact.)

Crop to Fit Method

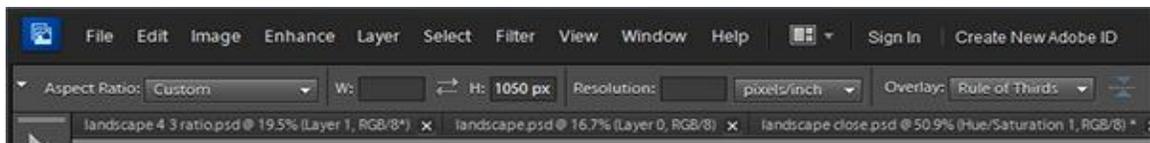
Tools Used: Crop Tool

Advantages: Good control of what is cropped

Disadvantages: Crop can only use “Bicubic” Image Interpolation in Photoshop Elements (not a big deal).

Steps:

1. Choose the Crop Tool from the tool pallet the toolbar and specific fields for the crop tool are displayed
2. For a portrait-oriented image:
 - Enter **1050 px** in the “**Height**” field of the toolbar and clear any entry from the Resolution field.



3. Click and drag the crop tool and select either all of the image or the area you want to remain after the crop.
 - If you want to include the entire image, you can drag the crop outside of the image to ensure the entire image is included. This will cause some blank area to be included in the image as well, but this can be cropped off.
4. Press the **enter** key or click the **checkmark** to perform the crop.

TIP

Be sure to add the letters “px” with the numbers in the crop tool width and height fields; otherwise it may interpret the numbers entered as inches or centimeters depending on your defaults.

Setting both the “Height” and the “Width” will constrain the aspect ratio of the crop tool so you will only be able to select a height and width that conforms to the size entered. If the image doesn’t conform well to this aspect ratio, you can leave either field blank and then use the “Canvas Size” dialog or the “Marquee Tool” to remove any excess image required to get the image to fit the target size. Leaving both fields blank allows for free-form cropping.

IMPORTANT

Cropping is a destructive, non-reversible alteration of your image that cannot be undone in a future editing session. Be sure you are satisfied with your changes, or save a separate copy in case you ever want to return to the original size. Try to use the crop tool only once and not several times as it can have degrading effects on your image each time it's performed because the image is re-sampled. (Re-sampling is either adding/interpolating or discarding pixels from your original image and since neither is desirable, try to only do it once.)

Step 3: Set Color Profile

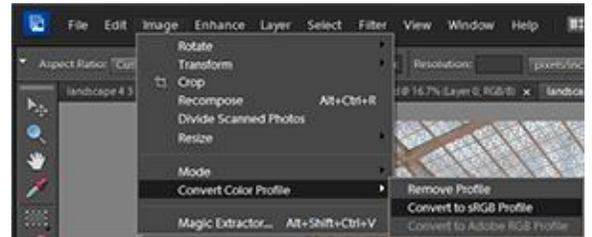
Next you should change your image color destination space profile to sRGB (sRGBIEC61966-2.1). This is the best color space to use with 8-bit JPEG files on the web and for NVPS digital projection. If you do not convert to this color profile, your images may appear flat and de-saturated.

Generally this is not the color profile I would use for my images in other situations as this is one of the smallest color spaces and limits the color representation in printing images. However to get the best display for projected images, you should convert your file to use the “small RGB” color space.

Tools Used: Convert to sRGB Profile

Steps:

- Go to Menu Selection – **Image > Convert Color Profile > Convert to sRGB Profile**



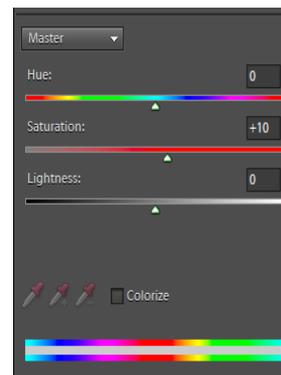
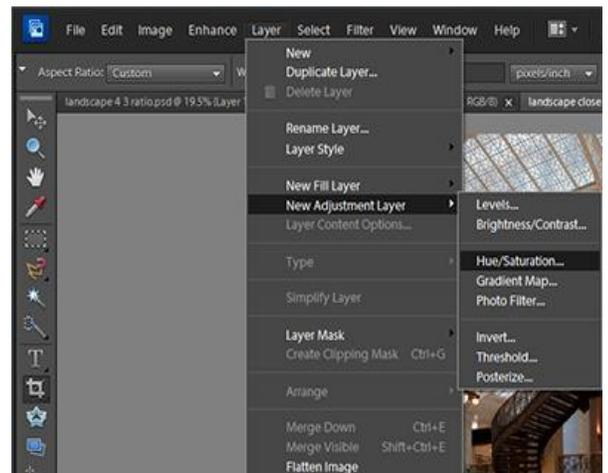
Step 4: Saturate (Optional)

I find a touch of saturation can make your image look better with projected images, but be careful not to over saturate as the projector cannot display colors deeply saturated colors. Also over saturation and over sharpening are the two most common novice mistakes.

Tools Used: New Adjustment Layer (Hue/Saturation)

Steps:

1. Create new hue/saturation layer
 - Menu Commands: **Layer > New Adjustment Layer > Hue/Saturation**
 - or
 - Click new adjustment layer from the palette well
2. Add up to **10%** saturation in the hue saturation dialog



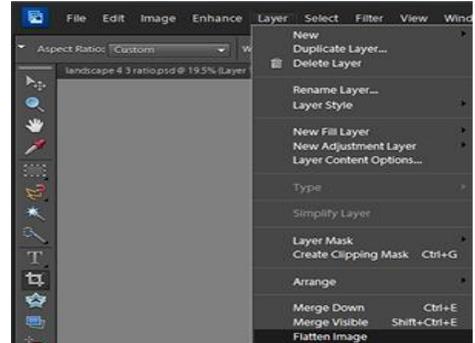
Step 5: Flatten Image (Optional)

It is unnecessary to manually flatten the layers in your image; they will be flattened when you save your image as a jpeg. However it makes it easier to apply sharpening. If you are going to apply some sharpening go ahead and manually flatten the image.

Tools Used: Flatten Image

Step:

Go to the menu choice **Layer > Flatten Image**



Step 6: Sharpen Image (Optional)

Sharpening is an optional step, but can make your image look crisper. Sharpening theory is complex and beyond the scope of this document, but I will give you a general sharpening technique that will work on many images.

A few rules about sharpening:

- Always sharpen as the absolute last step of your workflow
- Don't save your image sharpened
- Never resize a sharpened image
- **ALWAYS SHARPEN WITH YOUR IMAGE AT 100% (VIEW ACTUAL PIXELS)**

Tools Used: Unsharp Mask

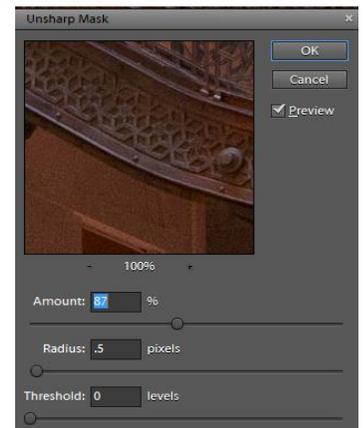
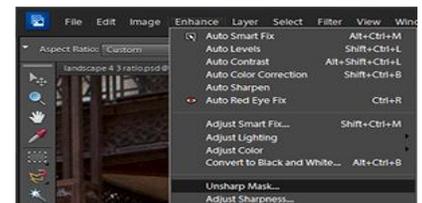
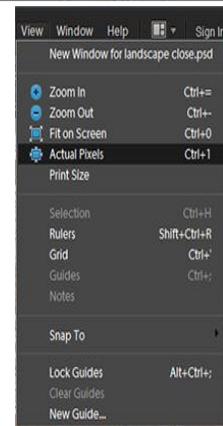
Steps:

1. Choose menu **View > Actual Pixels**
2. From the menu choose **Enhance > Unsharp Mask**
3. Set the radius to **.5**
4. Threshold to **0**
5. **Slowly increase** the amount slider until you get the desired amount of sharpening.

If you see halos, or pixilation (hard square edges) you've sharpened too much.

Alternative

Instead of using Unsharp Mask, you can try **Enhance > Auto Sharpen**. This Photoshop Elements specific feature works well and doesn't over sharpen.

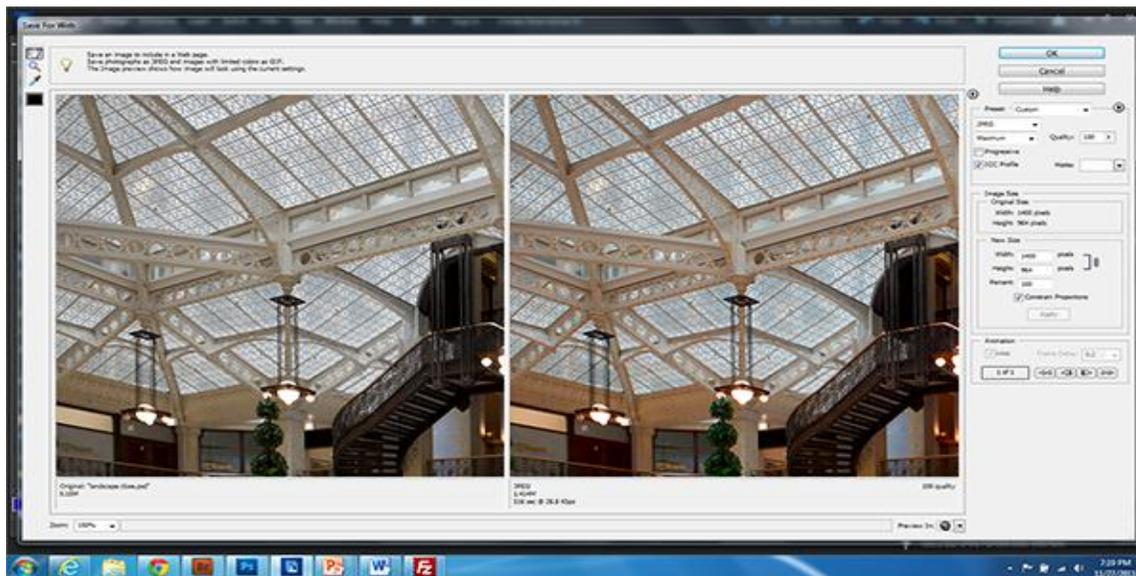
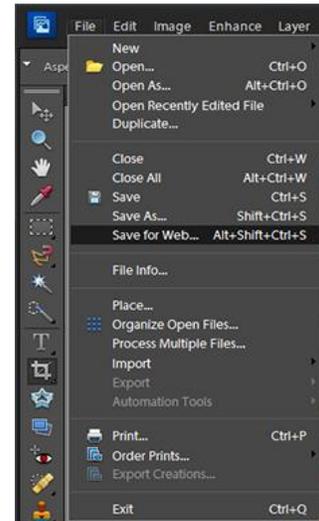


Step 7: Save File as JPEG

Tools Used: Save for Web & Devices

Steps:

1. Choose menu **File > Save for Web**
2. Save for Web dialog opens
3. Choose **JPEG**
4. **Maximum** quality (**100**) (reduce if image is larger than 2 MB)
5. **Progressive** - unchecked
6. **Embed Color Profile** - checked
7. Click **Save** - no specific naming convention is required



Step 8: Submit Image for Competition

- Go to <http://nvps.org/dc/>
- Enter the user name and password (contact competitionsupport@nvps.org to obtain)
- Fill out the form and upload your images

NVPS Competition Upload	
Home	
Competition Upload Cutoff:	6 Days 20 Hours 35 Minutes 31 Seconds
Competition Information	
Competition Date:	September 20, 2011
Upload Window Opens:	September 6, 2011
Upload Window Closes:	September 18, 2011, 6:00 pm
Competition Note:	This is an open competition with no theme.
Image Requirements	
File Type:	JPEG
Maximum Width:	1400 pixels
Maximum Height:	1050 pixels
Recommended Color Space:	sRGB
Date Captured Limitation:	Captured since: September 20, 2009
<ul style="list-style-type: none"> • Please read the competition rules at http://nvps.org/main/about/rules-of-competition/ • Still have questions? Contact the VPs of Competition for rules & eligibility questions, their contact information is at http://nvps.org/main/about/board-members/. Contact the digital competition coordinator and web support team for logistical questions about the digital upload at competitionsupport@nvps.org. 	
Member Information	
First Name:	<input type="text" value="Enter your first name"/>
Middle Name:	<input type="text" value="Enter your middle name"/>
Last Name:	<input type="text" value="Enter your last name"/>
Email Address:	<input type="text" value="Enter your email address"/>
Competition Class:	<input type="text" value="Choose One"/>
Photograph Information	
First Photo Title:	<input type="text" value="Enter your first photo title"/>
Capture Date (mm/dd/yyyy):	<input type="text" value="Enter your first photo capture date"/>
Choose photo	<input type="button" value="Choose File"/> No file chosen
<i>Optional</i>	
Second Photo Title:	<input type="text" value="Optional second photo title"/>
Capture Date (mm/dd/yyyy):	<input type="text" value="Optional second photo capture date"/>
Choose photo	<input type="button" value="Choose File"/> No file chosen
<p>By pressing the upload button you are confirming that you are complying with the NVPS rules of competition.</p>	
<input type="button" value="Upload Photos"/> <input type="button" value="Reset"/>	

Summary of Workflow

- 1) Duplicate your image; work with a copy
- 2) Size your image
- 3) Set color profile
- 4) Saturate (optional)
- 5) Flatten image (optional – do if sharpening)
- 6) Sharpen image (optional)
- 7) Save as JPEG
- 8) Submit image to competition

Things You Don't Need To Do

- 1) Set the image resolution
- 2) Fill the background with black
- 3) Follow any kind of file naming convention

Photoshop CS 5 Workflow

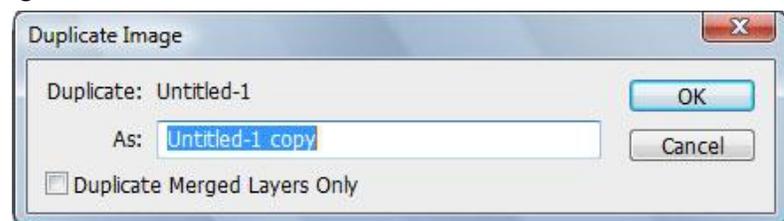
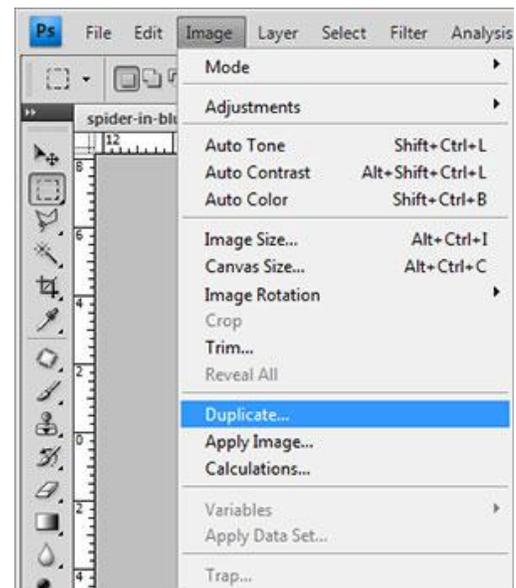
Step 1: Work With a Copy

To prevent accidentally overwriting your master file that you've processed, we recommend using a copy of your file. You can save a copy, or use the image/duplicate command and use a copy of the image in memory. You won't accidentally overwrite your image this way and you won't have extra files take up space.

Tools Used: Image Duplicate Dialog

Steps

1. Open the Image Duplicate Dialog
2. Menu Selection - **Image > Duplicate**
3. Accept the default duplicate name or name as you desire. Suggest you do not flatten layers at this time.
4. Press "OK" to duplicate the image.



Step 2: Sizing Your Images

The resolution of the digital projector that will be used for competition is 1400x1050 pixels. Your images must be sized no larger than 1400 pixels in width (horizontal) and 1050 pixels in height (vertical). This allows horizontal format images to show more pixels in digital projection. This should not concern the competitor as judges (at least good judges) judge image quality and not the number of pixels in an image.

There are many techniques for resizing your image; I'll demonstrate some of the most common with different images. Some of the tools commonly used in Photoshop Elements for changing the size of images are the "Image Size" dialog, the "Canvas Size" dialog, the "Crop Tool" and the "Marquee Tool". The image size dialog provides the most control and accuracy and it is my "go to" image size method.

Choose one of the sizing methods in this step to size your image. Choose from:

- Image Size Method
- Crop to Fit Method
- Fit Image Method

Landscape Images

This section describes the Image Size Method and Crop to Fit Method for Landscape oriented images.

Image Size Method

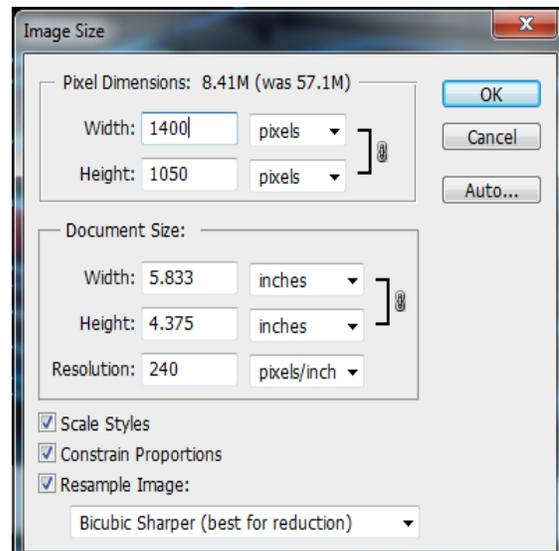
Tools Used: Image Size Dialog

Advantages: Simple, foolproof, will work for many images

Disadvantages: Doesn't give you flexibility to "crop to fit" or take advantage of as much canvas space as possible.

Steps

1. Open the Image Size Dialog
2. Menu Selection - **Image > Image Size**
3. On the Image Size Dialog check "**Scale Styles**", "**Constrain Proportions**", and set the **Resample Image** selection to "**Bicubic Sharper**" if reducing the size of your image. Choose "Bicubic Smoother" if increasing the size of your image.
4. Enter **1400** in the pixel dimensions "**Width**" field
 - a. If the corresponding amount in the pixel dimensions height field changes to less than or equal to 1050, press "**OK**" to dismiss the "Image Size" dialog.



- b. If the corresponding amount in the pixel dimensions height field changes to more than 1050, change the pixel dimensions **height** field to **1050** then press “OK” to dismiss the “Image Size” dialog.

IMPORTANT

Try to perform sizing with re-sampling/resizing only once and not several times as it can have a degrading effect on your image every time it’s performed. (Re-sampling is either adding/interpolating or discarding pixels from your original image and since neither is desirable, try to only do it once as each sizing has an accumulating impact.)

Crop to Fit Method

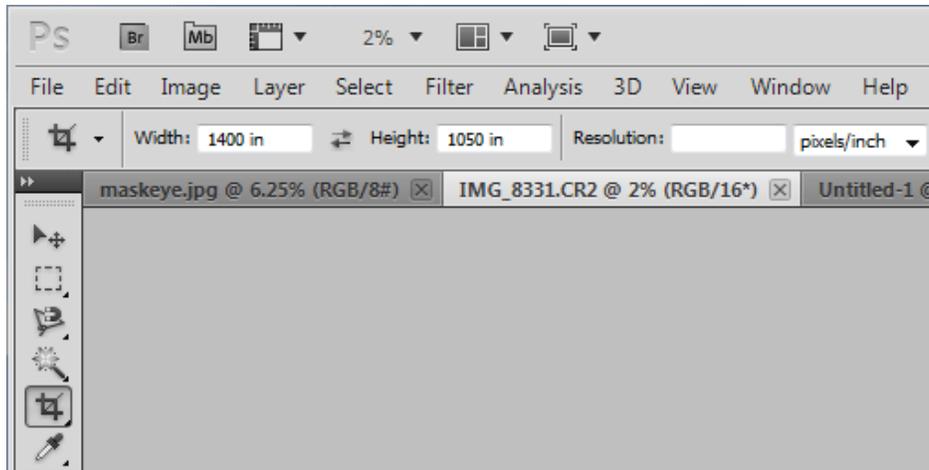
Tools Used: Crop Tool & General Preferences

Advantages: Good control of what is cropped

Disadvantages: Resamples the image so for best results you should set the default Image Interpolation in General Preferences to Bicubic Sharper.

Steps

1. Set Default Image Interpolation
Edit > Preferences > General and set the default “Image Interpolation” to “Bicubic Sharper”
2. Choose the Crop Tool from the tool pallet the toolbar and specific fields for the crop tool are displayed



3. For a landscape-oriented image:
 - Enter **1400 px** in the “Width” field of the toolbar and clear any entry from the Resolution field. Optionally enter **1050 px** in the “Height” field of the toolbar.

TIP

Be sure to add the letters “px” with the numbers in the crop tool width and height fields; otherwise it may interpret the numbers entered as inches or centimeters depending on your defaults.

Setting both the “Height” and the “Width” will constrain the aspect ratio of the crop tool so you will only be able to select a height and width that conforms to the size entered. If the image doesn’t

conform well to this aspect ratio, you can leave either field blank and then use the “Canvas Size” dialog or the “Marquee Tool” to remove any excess image required to get the image to fit the target size. Leaving both fields blank allows for free-form cropping.

4. Click and drag the crop tool and select either all of the image or the area you want to remain after the crop
5. Press the **enter** key or click the **checkmark** (the checkmark is on the toolbar in the CS family and on the image in Elements), to perform the crop.

IMPORTANT

Cropping is a destructive, non-reversible alteration of your image that cannot be undone in a future editing session. Be sure you are satisfied with your changes, or save a separate copy in case you ever want to return to the original size. (Note that the CS family has an option to hide the cropped areas instead of removing them). Try to use the crop tool only once and not several times as it can have degrading effects on your image each time it’s performed because the image is re-sampled. (Re-sampling is either adding/interpolating or discarding pixels from your original image and since neither is desirable, try to only do it once.)

Portrait Images

This section describes the Image Size Method and Crop to Fit Method for Portrait oriented images

Image Size Method

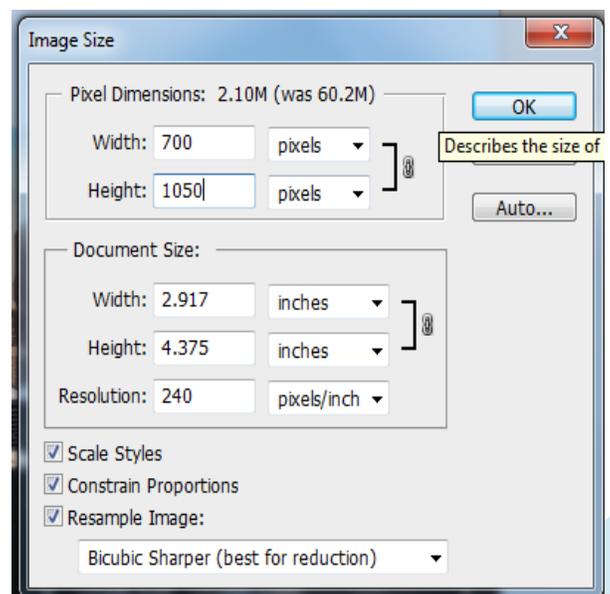
Tools Used: Image Size Dialog

Advantages: Simple, foolproof, will work for many images

Disadvantages: Doesn’t give you flexibility to “crop to fit” or take advantage of as much canvas space as possible.

Steps

1. Open the Image Size Dialog
2. Menu Selection - **Image > Image Size**
3. On the Image Size Dialog check “**Scale Styles**”, “**Constrain Proportions**”, and set the **Resample Image** selection to “**Bicubic Sharper**” if reducing the size of your image. Choose “**Bicubic Smoother**” if increasing the size of your image.
 - a. For a portrait oriented image enter **1050** in the pixel dimensions height field
 - b. The corresponding amount in the pixel dimensions width field should change to less than or equal to 1050 pixels (otherwise it's a landscape image).
 - c. Press “**OK**” to dismiss the Image Size dialog.



IMPORTANT

Try to perform sizing with re-sampling/resizing only once and not several times as it can have a degrading effect on your image every time it's performed. (Re-sampling is either adding/interpolating or discarding pixels from your original image and since neither is desirable, try to only do it once as each sizing has an accumulating impact.)

Crop to Fit Method

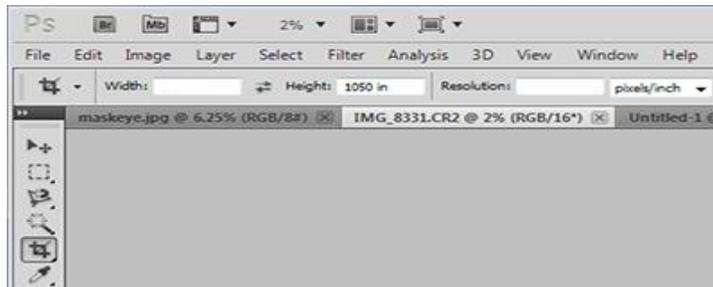
Tools Used: Crop Tool & General Preferences

Advantages: Good control of what is cropped

Disadvantages: Resamples the image so for best results you should set the default Image Interpolation in General Preferences to Bicubic Sharper. Crop can only use "Bicubic" Image Interpolation in Photoshop Elements (not a big deal).

Steps

1. Set Default Image Interpolation
Edit > Preferences > General and set the default "Image Interpolation" to "Bicubic Sharper"
2. Choose the Crop Tool from the tool pallet the toolbar and specific fields for the crop tool are displayed



3. For a portrait oriented image:
 - Enter **1050 px** in the height field of the toolbar and clear any entry from the resolution field.

TIP

Be sure to add the letters "px" with the numbers in the crop tool width and height fields; otherwise it may interpret the numbers entered as inches or centimeters depending on your defaults.

Setting both the "Height" and the "Width" will constrain the aspect ratio of the crop tool so you will only be able to select a height and width that conforms to the size entered. If the image doesn't conform well to this aspect ratio, you can leave either field blank and then use the "Canvas Size" dialog or the "Marquee Tool" to remove any excess image required to get the image to fit the target size. Leaving both fields blank allows for free-form cropping.

4. Click and drag the crop tool and select either all of the image or the area you want to remain after the crop
5. Press the **enter** key or click the **checkmark** (the checkmark is on the toolbar in the CS family and on the image in Elements), to perform the crop.

IMPORTANT

Cropping is a destructive, non-reversible alteration of your image that cannot be undone in a future editing session. Be sure you are satisfied with your changes, or save a separate copy in case you ever want to return to the original size. (Note that the CS family has an option to hide the cropped areas instead of removing them). Try to use the crop tool only once and not several times as it can have degrading effects on your image each time it's performed because the image is re-sampled. (Re-sampling is either adding/interpolating or discarding pixels from your original image and since neither is desirable, try to only do it once.)

Portrait or Landscape Images

Portrait or Landscape oriented images can use the CS Fit Image Method

Fit Image Method

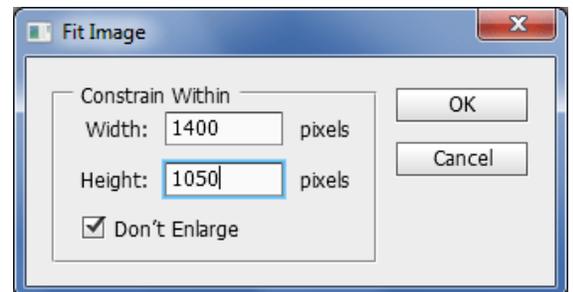
Tools Used: Fit Image & General Preferences

Advantages: Very easy

Disadvantages: Re-samples the image using the default “Image Interpolation” setting, so it must be correctly set for optimal resizing in using the CS family.

Steps

1. Set Default Image Interpolation
 - **Edit > Preferences > General** and set the default “Image Interpolation” to “Bicubic Sharper”
2. Go to Menu Selection – **File > Automate > Fit Image**
3. Enter **1400** in the **width** field and **1050** in the **height** field.
4. Check the “don't enlarge” checkbox
5. Press **OK** to confirm your intentions in the “Fit Image” dialog.



TIP

It doesn't matter if it's portrait or landscape orientation; the image will be constrained so neither height nor width will be larger than the target. At least one dimension will be exactly set and the other will be either exactly set or less than the entered amount.

Step 3: Setting the Color Profile

Next you should change your image color destination space profile to sRGBIEC61966-2.1. This is the best color space to use with 8-bit JPEG files on the web and for NVPS digital projection. If you do not convert to this color profile, your images may appear flat and de-saturated.

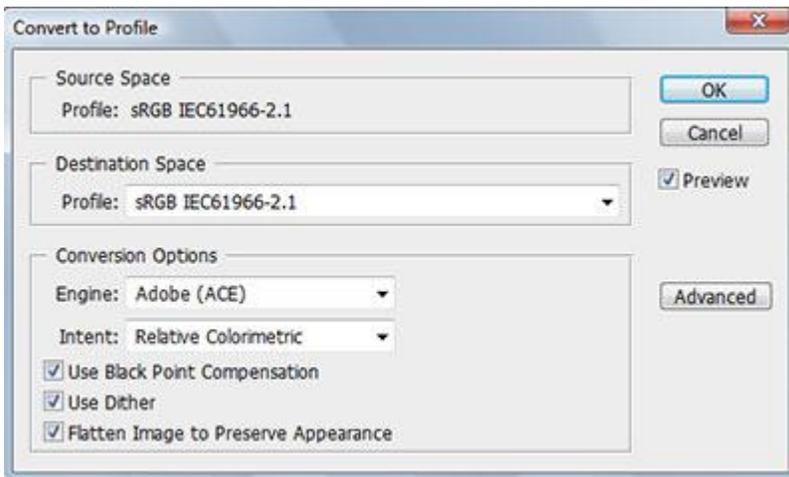
Generally this is not the color profile I would use for my images in other situations as this is one of the smallest color spaces and limits the color representation in printing images. However to get the best display for projected images, you should convert your file to use the “small RGB” color space.

The following will demonstrate how to change your color profile to sRGB IEC61966-2.1.

Tools Used: Convert to Profile

Steps

1. Go to Menu Selection – **Edit > Convert to Profile**
2. Select the **sRGB IEC61966-2.1** color profile in the destination space
3. It is recommended that you use the following conversion options in the convert to profile dialog
 - a. Engine: **Adobe**
 - b. Intent: **Relative Colorimetric**
 - c. Use Black Point Compensation (**checked**)
 - d. Use Dither (**checked**) – Makes larger files, but smoother color
 - e. Flatten Image – (**checked**) if you care to be able to further alter this file using any previously created adjustment layers, turn flattening off.
4. Press **OK** to accept your settings



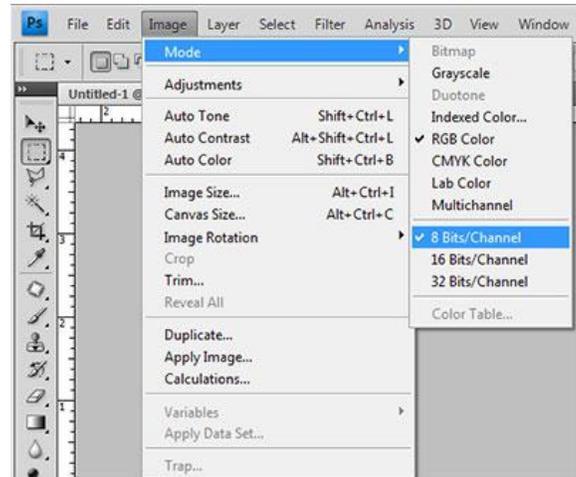
Step 4: Bit Depth Conversion

Since your intended file format is JPEG, and if your image is currently a 16-bit image, you should convert it to an 8-bit image. I do not recommend doing this to your master image if it can be avoided as you will lose subtle color information which provides good dynamic range that is particularly apparent in prints.

Tools Used: Image Mode Menu

Steps

1. Go to Menu Selection – **Image > Mode**
2. Select **8 Bits/Channel**



IMPORTANT

Reducing the bit depth of your image is an irreversible action and the additional information cannot be restored in future editing sessions. Therefore it is recommended you do not do this type of conversion to your original image unless necessary for some other reason (file size concerns, using Elements, etc.) The difference between 16 and 8 bit images are imperceptible on your monitor but can be noticed when images are printed causing color banding and blocking.

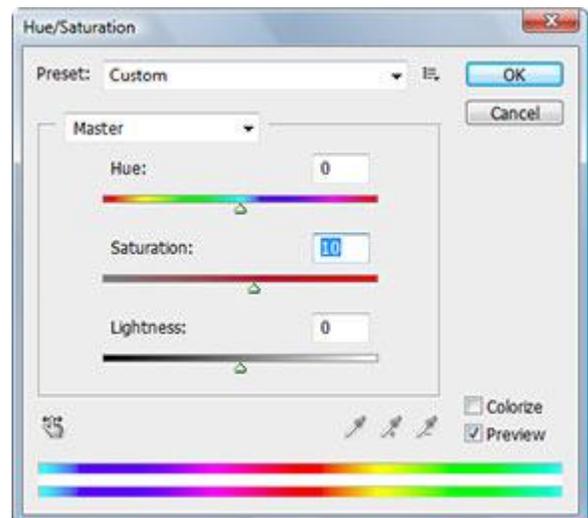
Step 5: Saturation (Optional)

I find a touch of saturation can make your image look better with projected images, but be careful not to over saturate as the projector cannot display colors deeply saturated colors. Also over saturation and over sharpening are the two most common novice mistakes.

Tools Used: Hue Saturation Layer or Image Adjustment Hue/Saturation

Steps

1. Create new hue/saturation layer
 - **Layer > New Adjustment Layer > Hue/Saturation**
 - or
 - Click new adjustment layer from the palette well
2. Add up to **10%** saturation in the hue saturation dialog



Step 6: Flatten Layers (Optional)

It is unnecessary to manually flatten the layers in your image; they will be flattened when you save your image as a jpeg. However it makes it easier to apply sharpening. If you are going to apply some sharpening go ahead and manually flatten the image.

Tools Used: Menu Flatten Image

Step

Go to the menu choice **Layer > Flatten Image**

Step 7: Sharpen Image (Optional)

Sharpening is an optional step, but can make your image look crisper. Sharpening theory is complex and beyond the scope of this document, but I will give you a general sharpening technique that will work on many images.

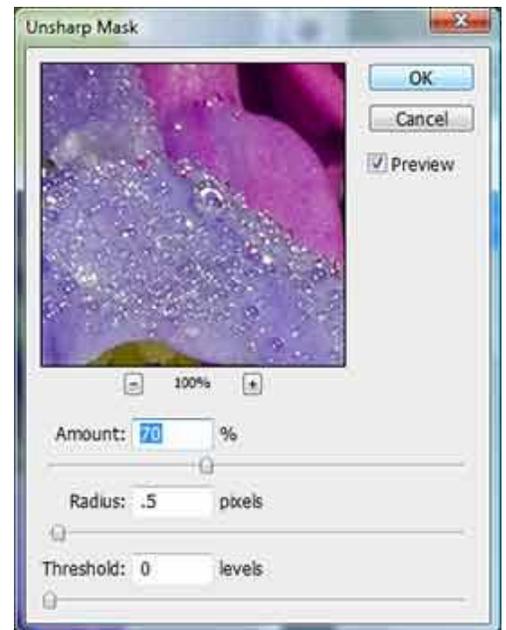
A few rules about sharpening I always follow:

1. Always sharpen as the absolute last step of your workflow
2. Don't save your image sharpened
3. Never resize a sharpened image
4. **ALWAYS SHARPEN WITH YOUR IMAGE AT 100% (VIEW ACTUAL PIXELS)**

Tools Used: Unsharp Mask Filter

Steps

1. Choose menu **View > Actual Pixels**
 2. From the menu choose **Filter > Sharpen > Unsharp Mask**
 3. Set the radius to **.5**
 4. Threshold to **0**
 5. **Slowly increase** the amount slider until you get the desired amount of sharpening
 6. If you see halos, or pixilation (hard square edges) you've sharpened too much.
-

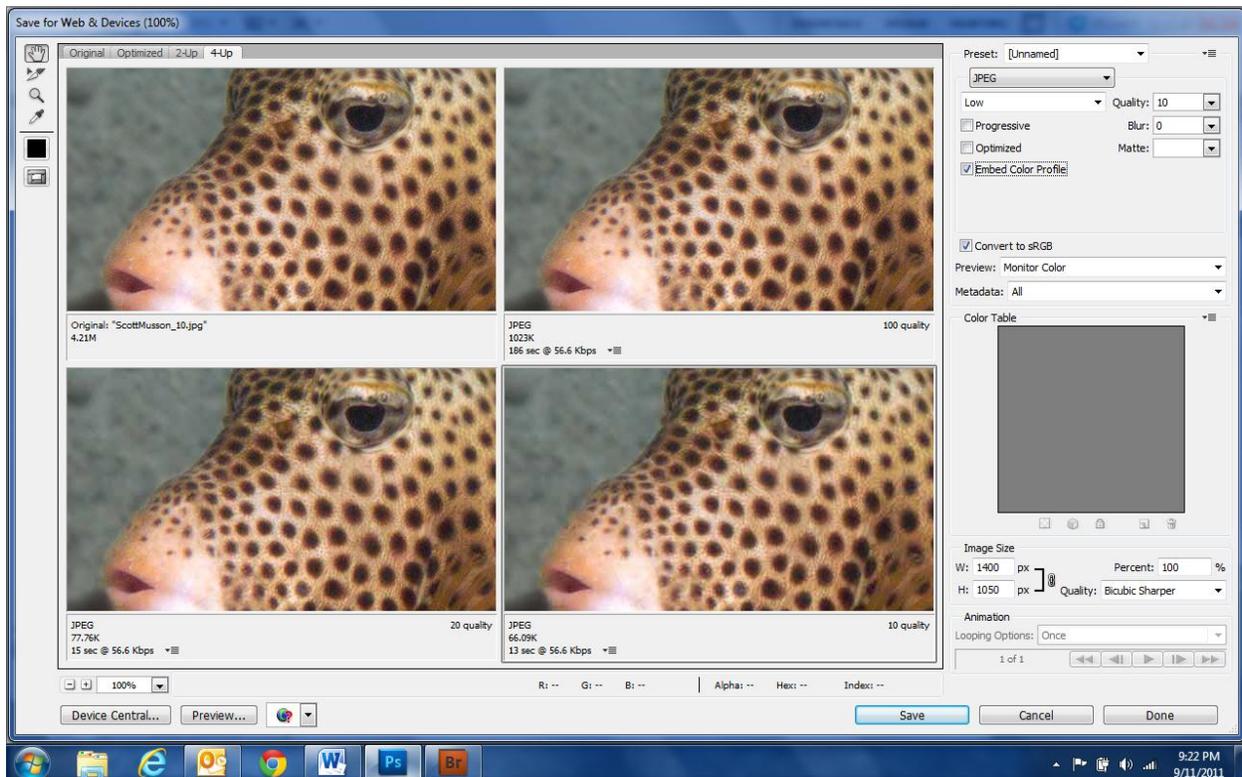


Step 8: Save File as JPEG

Tools Used: Save for Web & Devices

Steps

1. Choose menu **File > Save for Web & Devices**
2. Save for Web dialog opens (see image on next page)
3. Choose **JPEG**
4. **Maximum** quality (**100**) (reduce if image is larger than 2 MB)
5. **Progressive & Optimize** - unchecked
6. **Embed Color Profile** - checked
7. **Convert to sRGB** - checked
8. Preview - **Monitor Color**
9. Metadata - **All**
10. Image size - **100%**
11. Press **Save** - no specific naming convention is required



Step 9: Submit Image for Competition

- Go to <http://nvps.org/dc/>
- Enter the user name and password (contact competitionsupport@nvps.org to obtain)
- Fill out the form and upload your images

NVPS Competition Upload	
Home	
Competition Upload Cutoff:	6 20 35 31 Days Hours Minutes Seconds
Competition Information	
Competition Date:	September 20, 2011
Upload Window Opens:	September 6, 2011
Upload Window Closes:	September 18, 2011, 6:00 pm
Competition Note:	This is an open competition with no theme.
Image Requirements	
File Type:	JPEG
Maximum Width:	1400 pixels
Maximum Height:	1050 pixels
Recommended Color Space:	sRGB
Date Captured Limitation:	Captured since: September 20, 2009
<ul style="list-style-type: none"> • Please read the competition rules at http://nvps.org/main/about/rules-of-competition/ • Still have questions? Contact the VPs of Competition for rules & eligibility questions, their contact information is at http://nvps.org/main/about/board-members/. Contact the digital competition coordinator and web support team for logistical questions about the digital upload at competitionsupport@nvps.org. 	
Member Information	
First Name:	<input type="text" value="Enter your first name"/>
Middle Name:	<input type="text" value="Enter your middle name"/>
Last Name:	<input type="text" value="Enter your last name"/>
Email Address:	<input type="text" value="Enter your email address"/>
Competition Class:	<input type="text" value="Choose One"/>
Photograph Information	
First Photo Title:	<input type="text" value="Enter your first photo title"/>
Capture Date (mm/dd/yyyy):	<input type="text" value="Enter your first photo capture date"/>
Choose photo	<input type="button" value="Choose File"/> No file chosen
<i>Optional</i>	
Second Photo Title:	<input type="text" value="Optional second photo title"/>
Capture Date (mm/dd/yyyy):	<input type="text" value="Optional second photo capture date"/>
Choose photo	<input type="button" value="Choose File"/> No file chosen
<p>By pressing the upload button you are confirming that you are complying with the NVPS rules of competition.</p>	
<input type="button" value="Upload Photos"/> <input type="button" value="Reset"/>	

Summary of Workflow

1. Duplicate Image - work with a copy
2. Size your image - 1400 x 1050
3. Set Color Profile - Change your image color destination space profile to sRGBIEC61966-2.1
4. Bit Depth - Change your file to 8-bit mode
5. Saturation (optional) - add a touch of saturation if needed
6. Flatten (optional) - suggest flattening prior to adding any sharpening
7. Sharpen (optional) - make your image look crisp if needed; don't overdo!
8. Save for web in JPEG format
9. Upload to the NVPS website

Things You Don't Need To Do

1. Set the image resolution
 2. Fill the background with black
 3. Follow any kind of file naming convention
-

Lightroom 3.5 Workflow

Because Lightroom was designed from the ground up as a photography application it has fewer options and controls than Photoshop, and consequently the resizing workflow is simplified, taking only a few steps to complete. It is unnecessary to create duplicate images when resizing in Lightroom as the workflow is non-destructive. However, it is not possible to soft-proof your images in Lightroom.

Step 1: Select Image(s)

In the Library module of Lightroom, select the image or images that you want to resize and export for the competition. You can select multiple images by pressing and holding the Ctrl key (or command key on a Mac) and clicking on each image to be exported.



Step 2: Export Images

Select **File > Export** from the main menu to begin the export process.

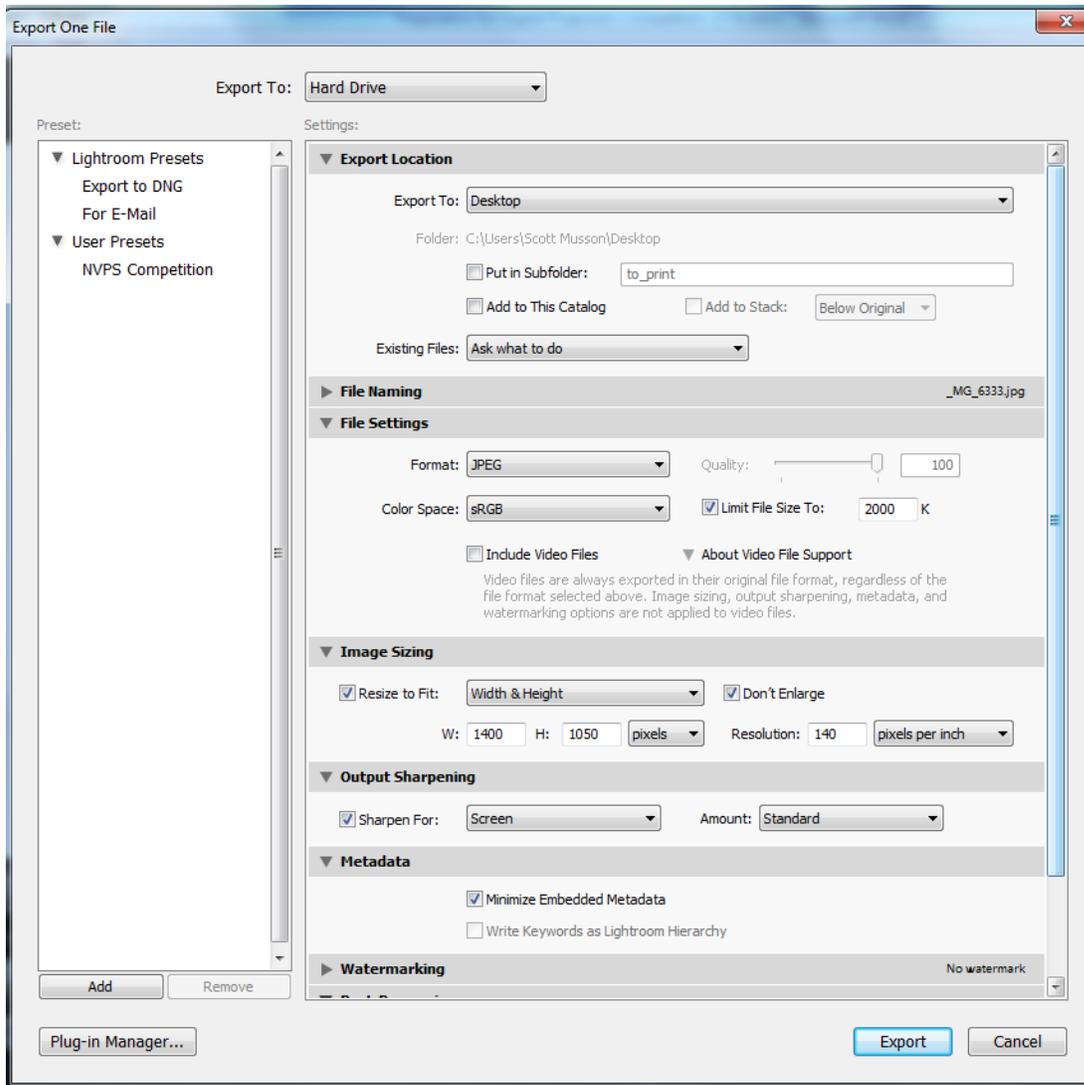
With the Export dialog open, select the **Export Location** to tell Lightroom where you would like to save the resized JPEGs.

In the **File Settings** section of the dialog, set the **Format** to **JPEG**, **Color Space** to **sRGB**, and **Limit File Size** **To 2000K**.

In the **Image Sizing** section of the dialog, check the **Resize to Fit**, select **Width & Height**, check **Don't Enlarge**, set the **W** to **1400**, set the **H** to **1050**, and select **pixels**. The **Resolution** value can be left blank or populated with any value; it has no effect on the image displayed on the screen. In the **Output Sharpening** section of the dialog, check **Sharpen For**, select **Screen**, and set **Amount** to **Standard**.

Lastly in the **Post-Processing** section of the dialog, set **After Export** to **Show in Windows Explorer (Show in Finder on the Mac)**.

Press the **Export** button and your images should begin resizing, then a Windows Explorer (Finder on the Mac) should open in the directory where your resized JPEGs are located.



Use NVPS Competition Preset

We have saved a Lightroom Export preset that automatically configures settings for NVPS competitions. This should simplify the process of defining all of the correct export settings. You can download this preset at <http://nvps.org/main/misc/digital-competition-info/>. Right click on the link Download the Lightroom Export Preset and “save link/target as” and choose a location to download the file.

Installing the LR Export Preset

After downloading the *NVPS Competition.lrtemplate* file, copy the file to the following directory based on your operating system

- **Windows XP:** C:\Documents and Settings*username*\Application Data\Adobe\Lightroom\Export Presets\User Presets
- **Windows Vista & Windows 7:** C:\Users*username*\AppData\Roaming\Adobe\Lightroom\Export Presets\User Presets
- **Mac OS X:** /Library/Application Support/Adobe/Lightroom/Export Presets/User Presets

Applying the LR Export Preset

Select the image(s) to be resized, then select **File**, and **Export**. Select **NVPS Competition** under **User Presets** in the **Preset** section of the Export dialog. This will automatically apply the appropriate competition settings.

Press the **Export** button and a Windows Explorer window (or Finder window on the Mac) should open with the resized images in it.

References

Color Calibration

Colour Confidence is a British reseller of color calibration products. They have a good document on color calibration for available for download on their website. This document is used to sell their products, but also includes good information on color calibration.

www.colourconfidence.com

DataColor is the distributor of the Spyder 3 monitor calibration tool. The website also has some good basic color management information.

<http://www.datacolor.com/>

X-Rite is the distributor of the ColorMunki calibration products and as well as many other color management products.

<http://www.xrite.com/home.aspx>

<http://www.colormunki.com/>

Digital Workflow & Color Management

Tim Grey (www.timgrey.com) authors a daily email (Digital Darkroom Questions) that is very informative about digital darkroom issues. He's employed by Microsoft and is a Color Management, Digital Workflow and Photoshop expert. His two books

"Color Confidence: The Digital Photographers Guide to Color Management" and *"Photoshop CS3 Workflow: The Digital Photographer's Guide"* are two excellent books for improving your digital photography.

Photoshop & Lightroom

Julianne Kost (<http://jkost.com/>) is the 'Senior Digital Imaging Evangelist' for Adobe Systems. She is a passionate photographer and an expert in teaching the powerful features and techniques in Photoshop & Lightroom. See her site for great videos and more. Also she has a number of tutorials on

<http://tv.adobe.com/>