

In Search of...
The
PERFECT COLOR PRINT

Printing in Photoshop CS3

By Jeff Schewe

PhotoPlus Expo 2007

Additional Notes:

schewephoto.com/workshop

Printing in Photoshop



It's All About The Print...

Image Optimization

Tone & Color Correction
using...

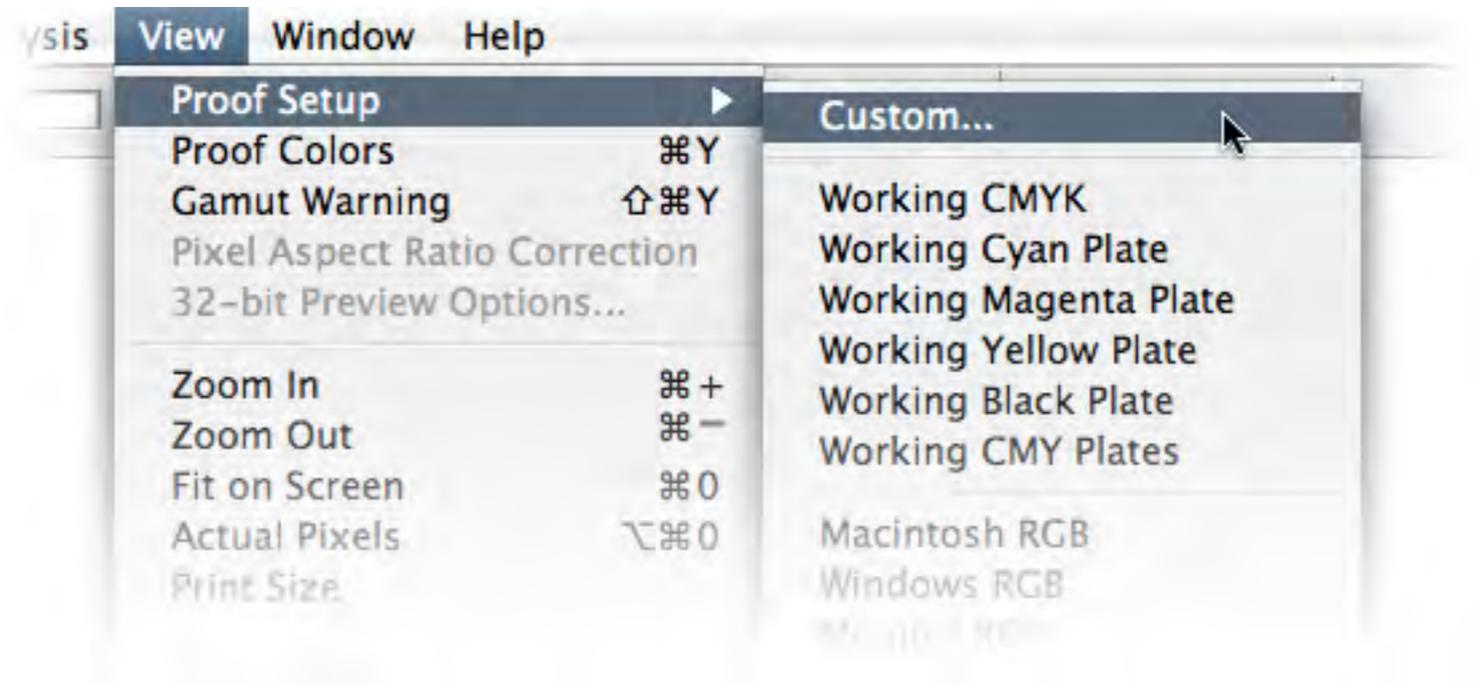
Soft Proofing

To optimize tone and color
for the final output.

Image Optimization

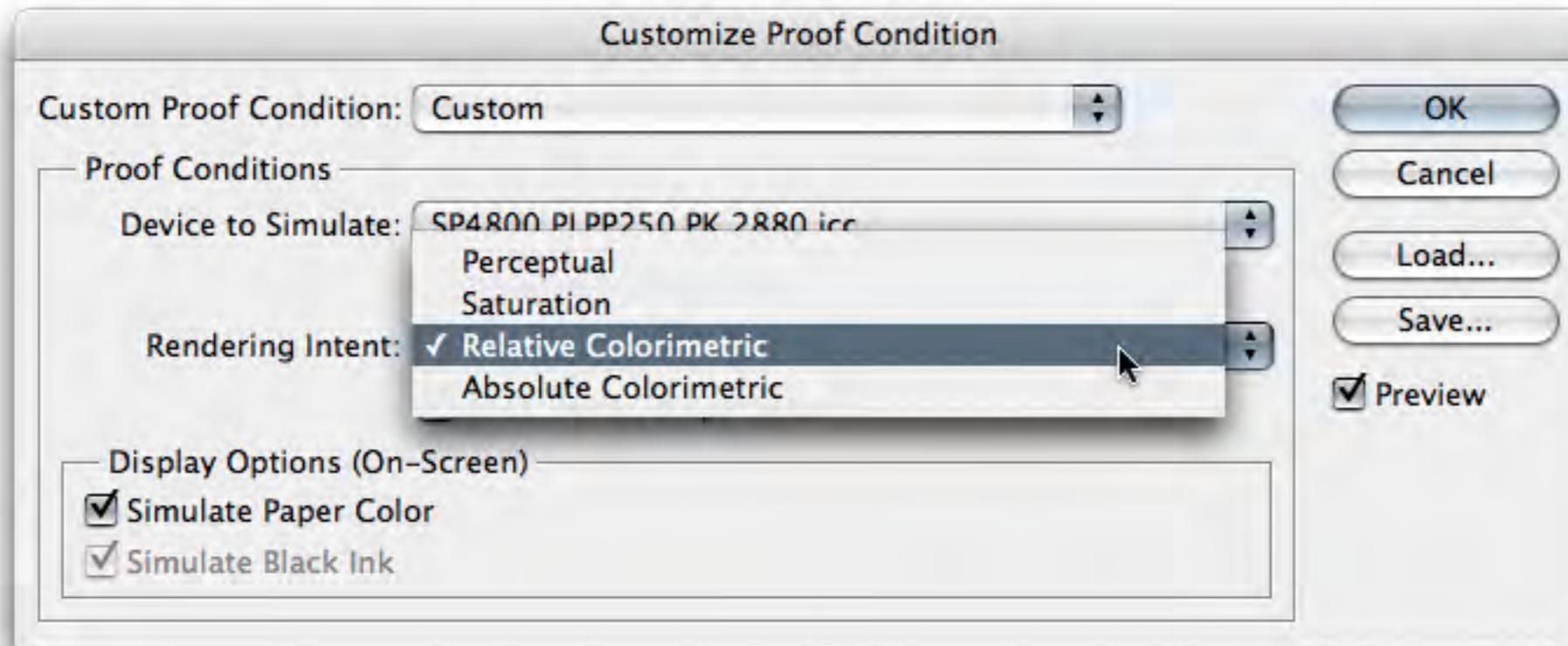
How Many People Use
Soft Proofing
EVERY TIME THEY
PRINT?

Image Optimization



Soft Proof in Photoshop

Image Optimization



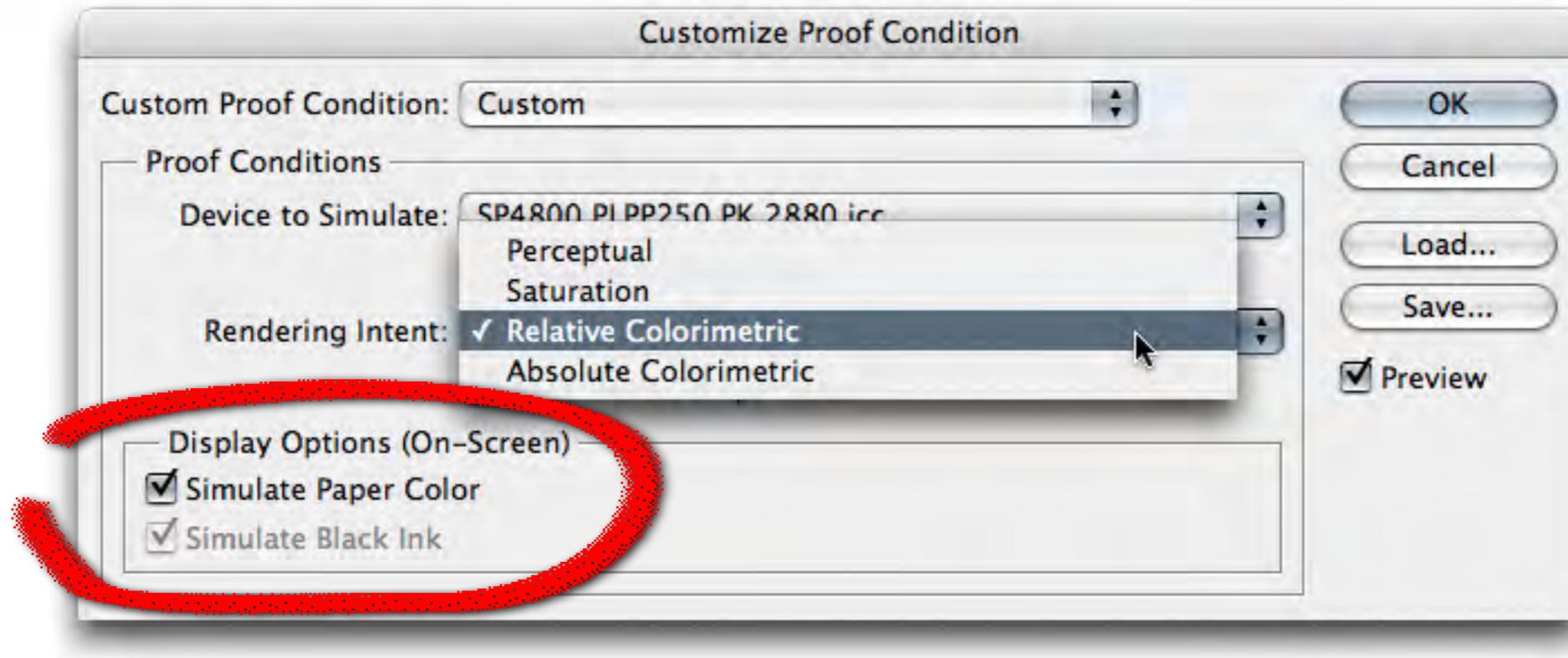
If color & the relationship of color is prime

Perceptual Rendering

If the tone values are prime

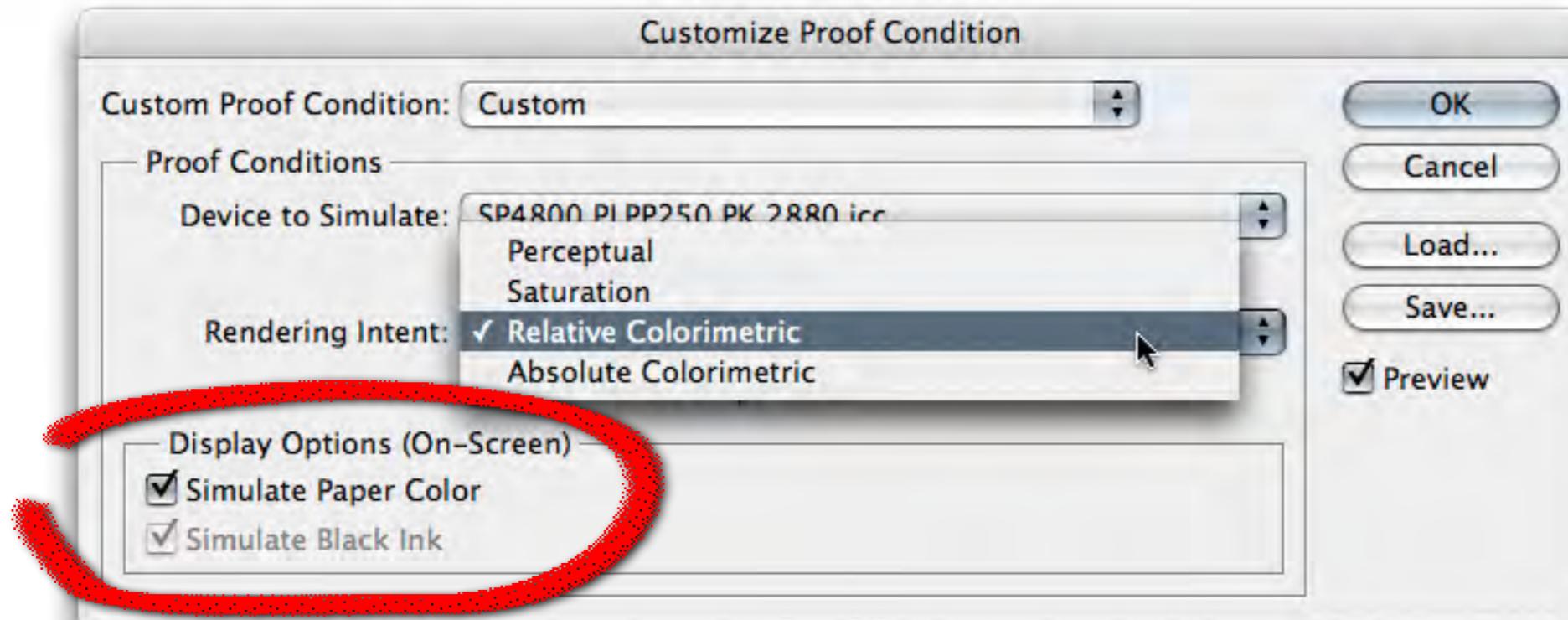
Relative Colorimetric Rendering

Image Optimization



**The “Make My Image Look Like Crap”
Button.**

Image Optimization

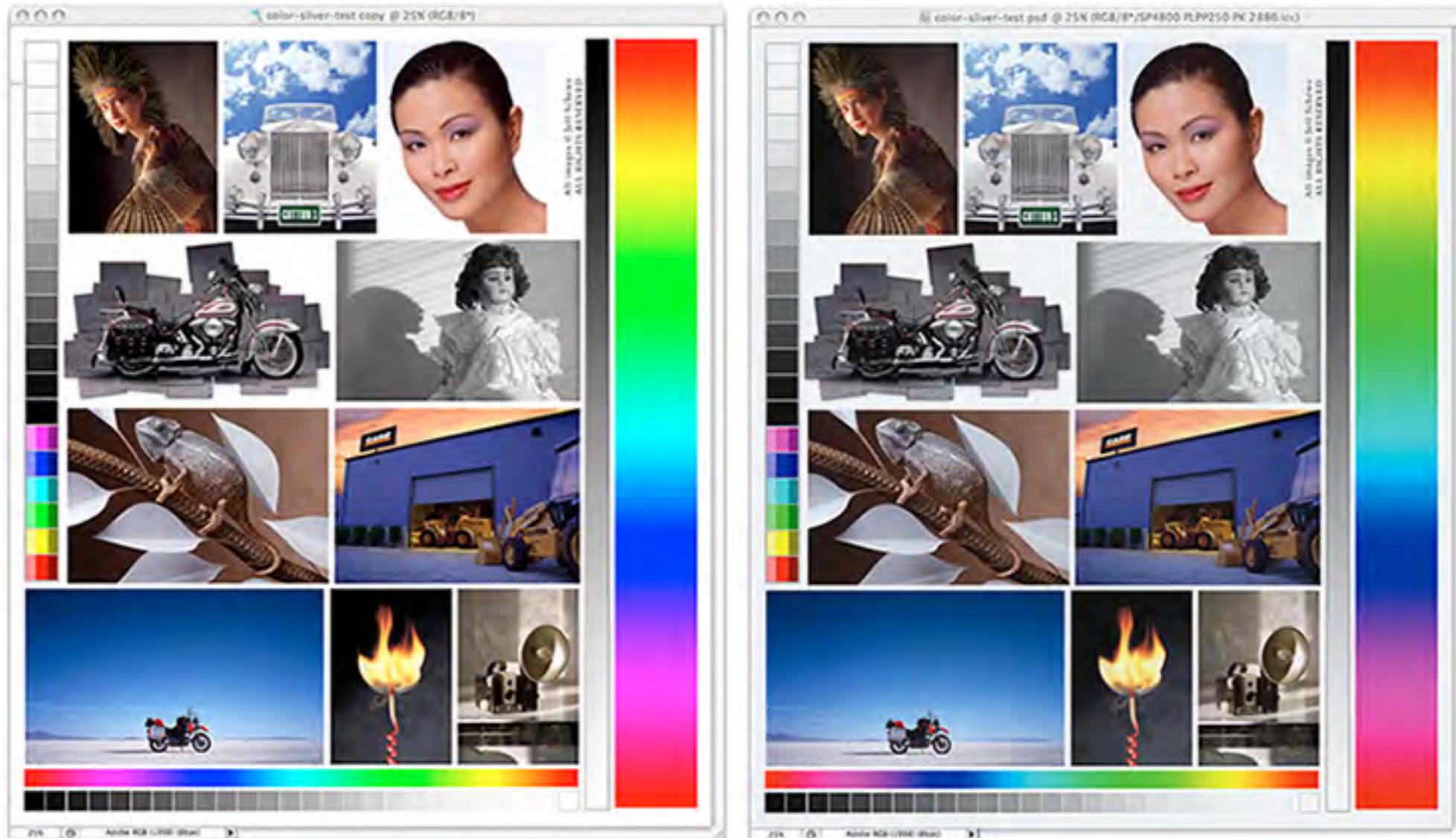


With Simulate on it's an
Absolute Colorimetric Screen Rendering

With Simulate off it's a
Relative Colorimetric Screen Rendering

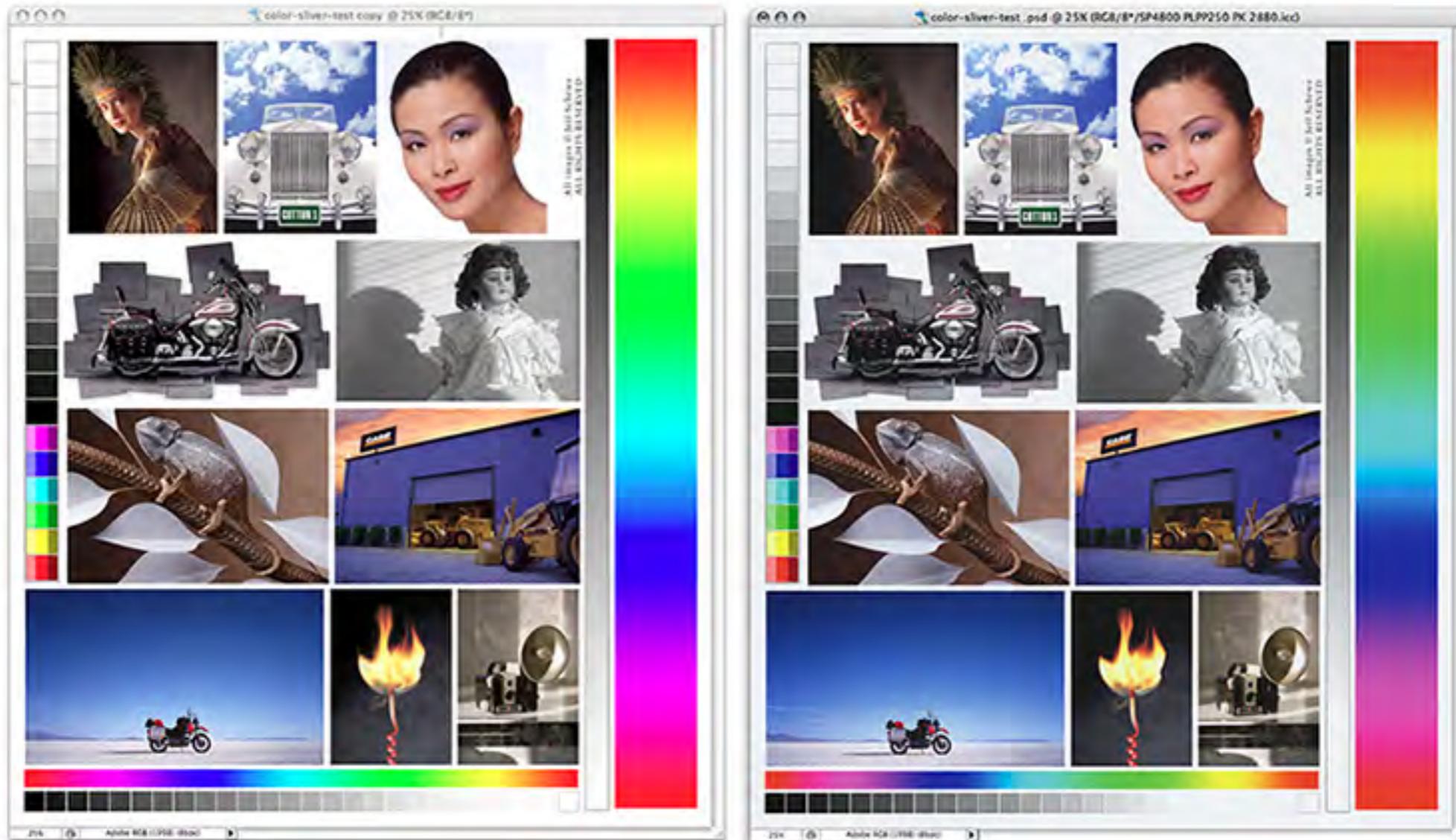
You need it ON to see the effect of the
reduced dynamic range of the print.

Image Optimization



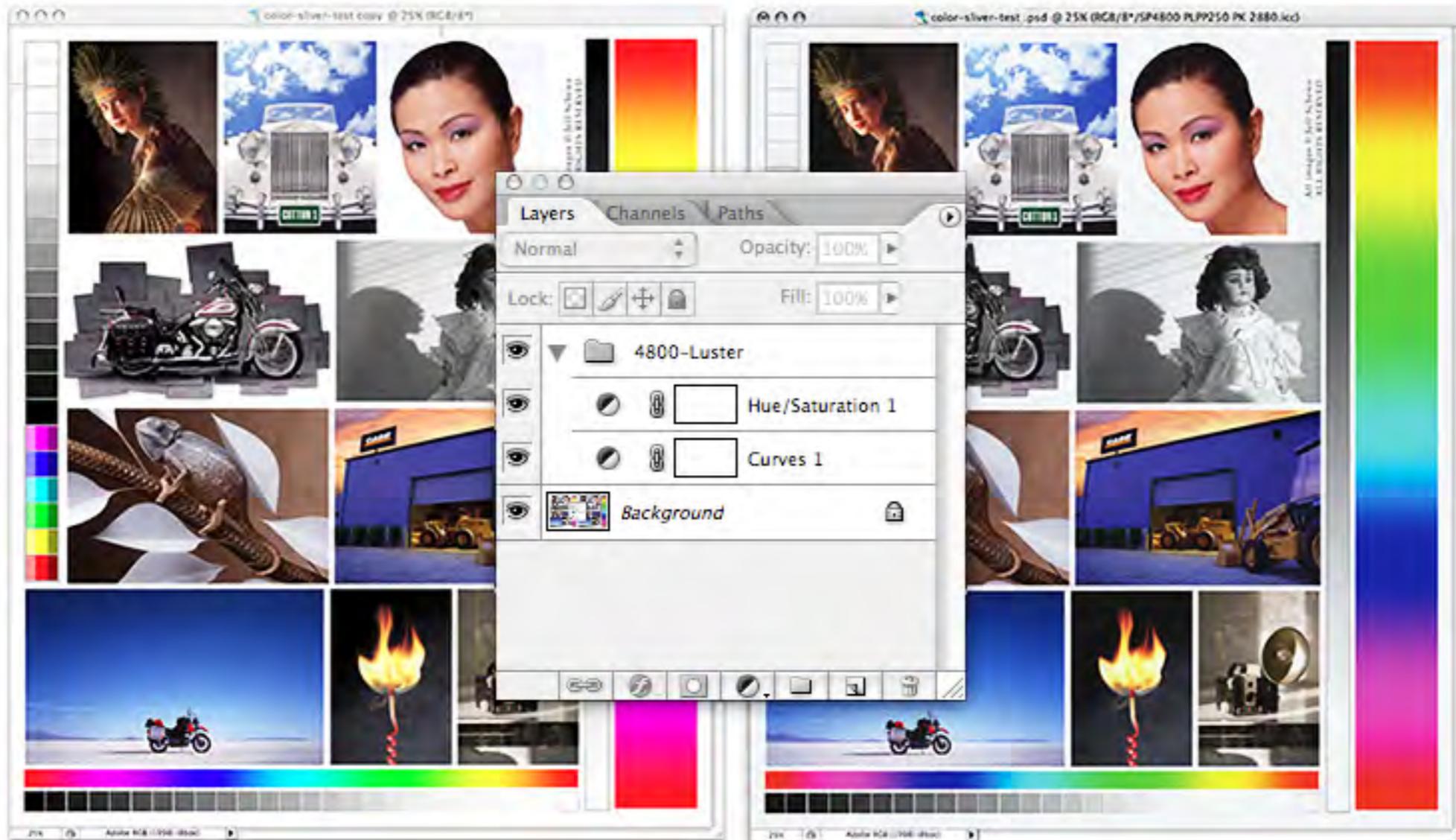
**Duplicate the image and apply
Soft Proofing to the Original**

Image Optimization



Apply Adjustment Layers for corrections to match.

Image Optimization



Usually a Contrast adjustment and a Saturation bump will do it.

Image Optimization

IMAGE PROCESSING

Okay, Now You're Ready
To Print, Right?

Uh, NO!

Image Optimization

IMAGE PROCESSING

Now You're Ready to...

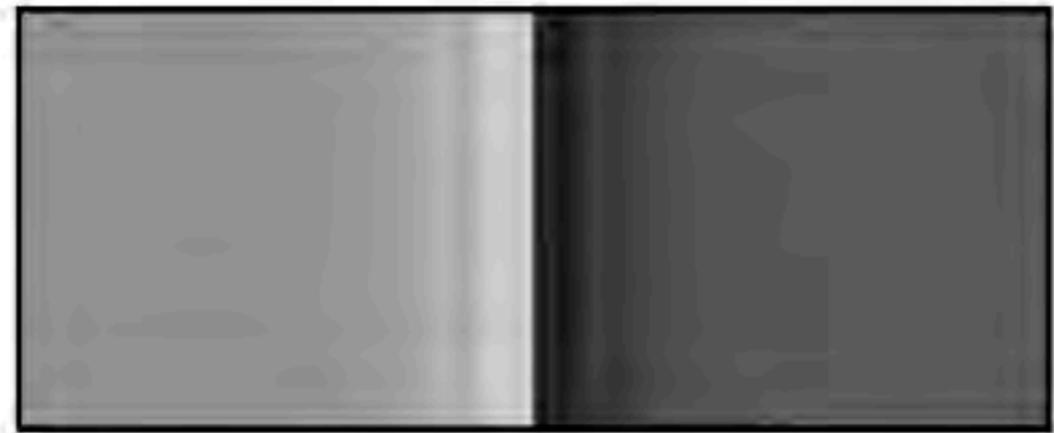
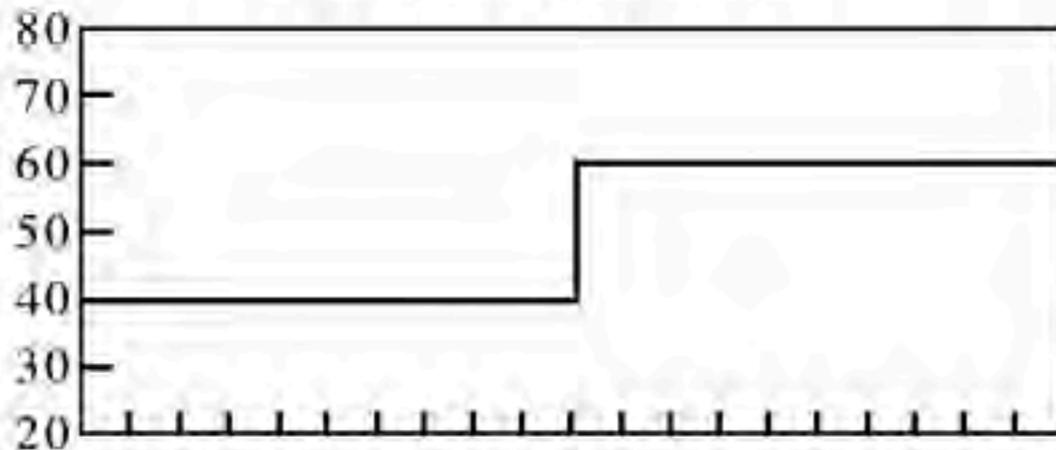
Get It Sharp!

Image Optimization

IMAGE PROCESSING



Unsharpened



Sharpened

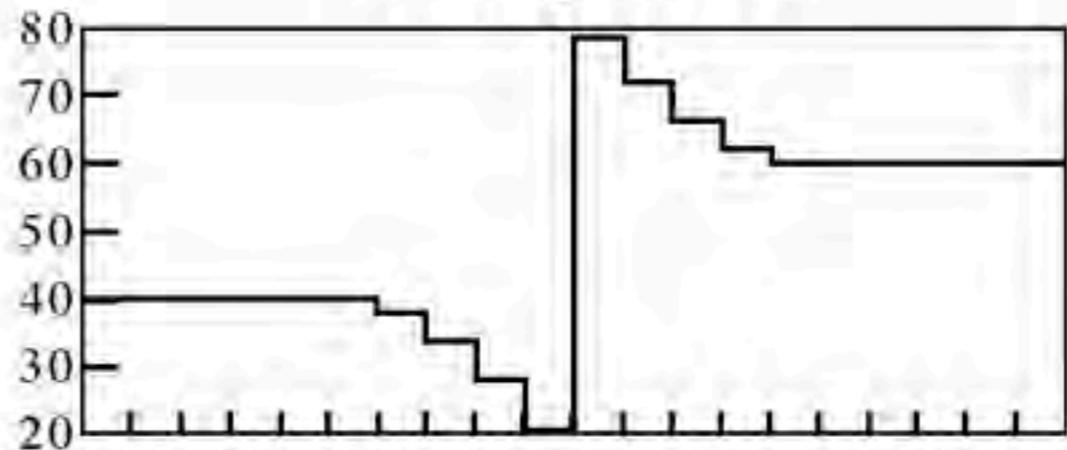
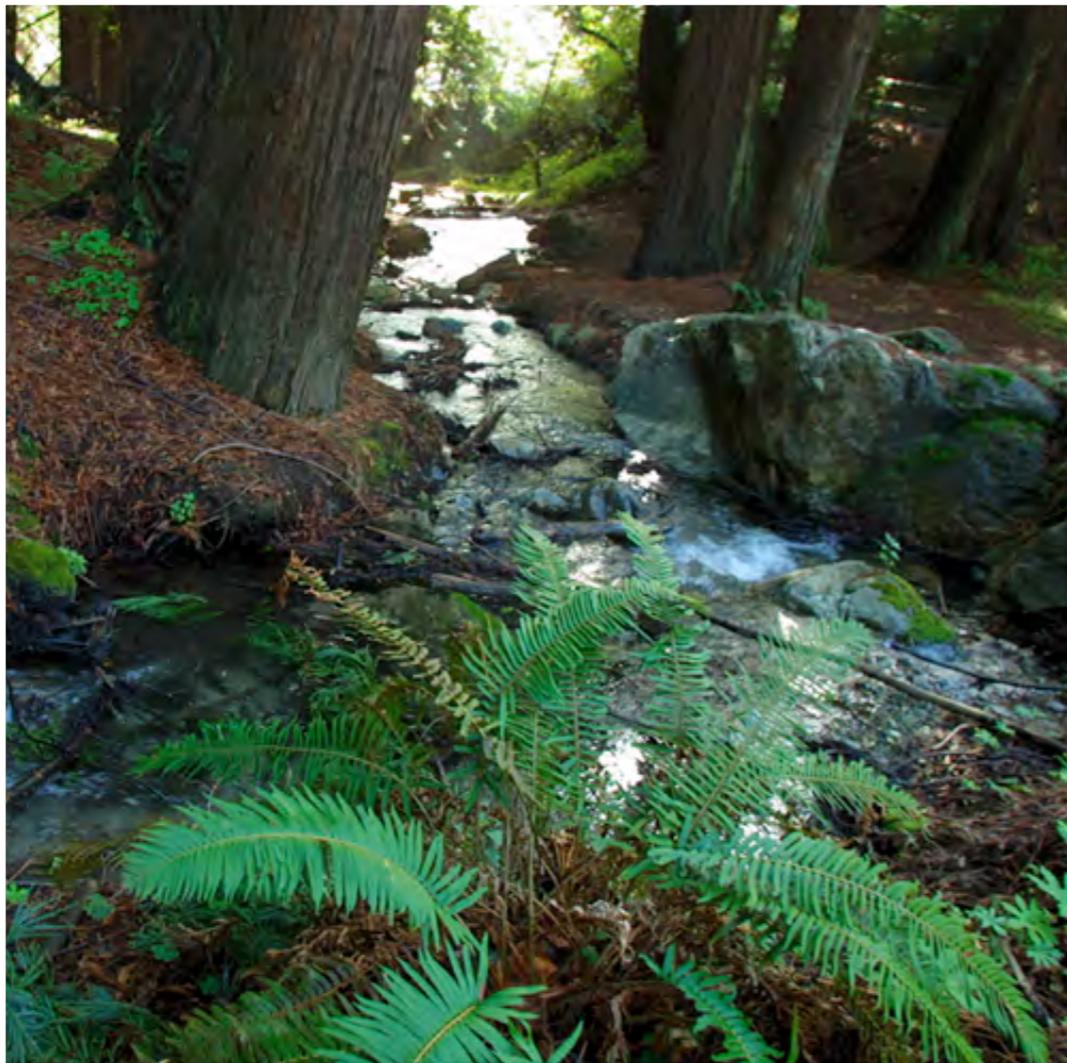


Image Optimization

IMAGE PROCESSING



Unsharpened



Sharpened

Image Optimization

IMAGE PROCESSING

Each film format or digital capture device has their own signature of resolution and noise.

The ideal is to sharpen the detail without exaggerating the noise.

Incorrect sharpening can lose detail and increase noise!

Image Optimization

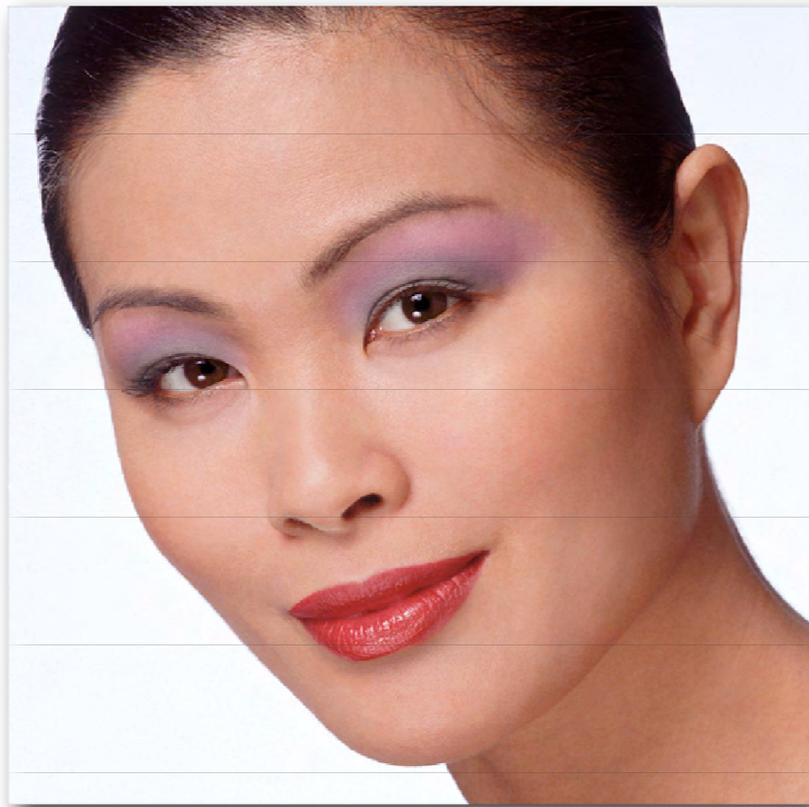
IMAGE PROCESSING

Different subjects require different treatments.

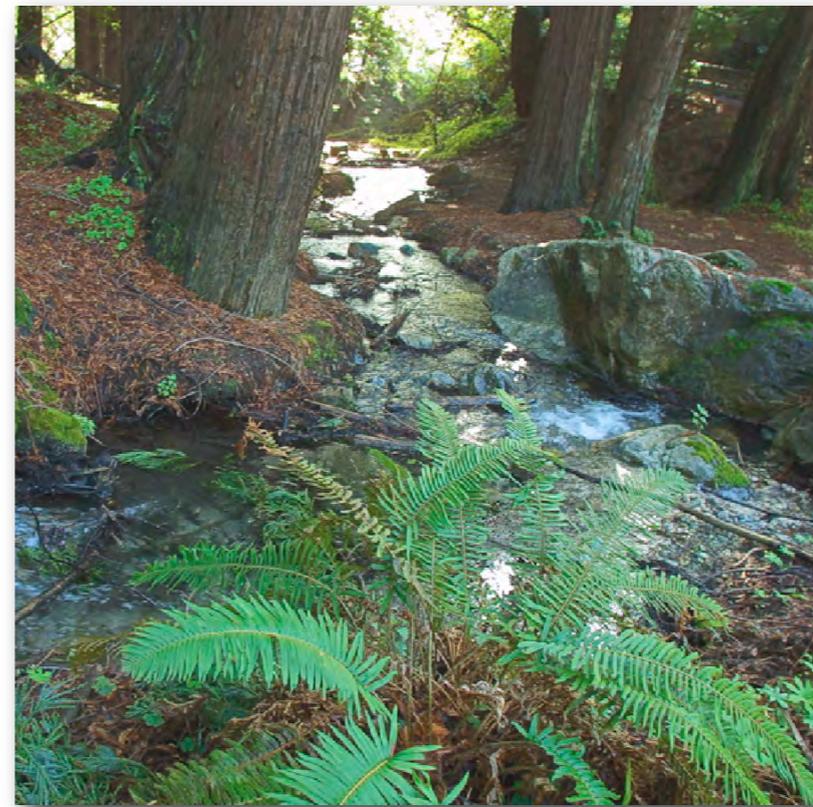
High-frequency texture needs different sharpening
than low-frequency texture.

Image Optimization

IMAGE PROCESSING



Low-frequency



High-frequency

Image Optimization

IMAGE PROCESSING

**Localized Sharpening and Smoothing helps
emphasize details...**

**Sharpen the “Eyes”
not the “Skin”.**

Image Optimization

IMAGE PROCESSING



Original



Local Sharpen/Smooth

Image Optimization

IMAGE PROCESSING

**No single sharpening will be right
for all purposes.**

Image Optimization

IMAGE PROCESSING

The Sharpening Workflow Solution

Image Optimization

Capture Sharpening:

is applied early in the image-editing process.

But ONLY restore the loss.

Creative Sharpening:

is applied locally to accentuate features in an image.

The image dictates this stage.

Output Sharpening:

is applied only to final output size & resolution, and is tailored to a specific type of output process.

(Printer, Paper & Ink)

Image Optimization

IMAGE PROCESSING

Sharpening Workflow

Ease of use

Optimal Sharpening

Repurposability

Image Optimization

IMAGE PROCESSING

Sharpening Workflow

A Lot of Ways to Skin that Cat...

USM in Photoshop

Smart Sharpen in Photoshop

3rd party plug-ins,

BUT...

Image Optimization

IMAGE PROCESSING

Sharpening Workflow

The Problem is,

**You can't use a Display
To Judge the AMOUNT
To Sharpen**

Image Optimization

IMAGE PROCESSING

Sharpening Workflow

An LCD might be able to display about 100PPI which is 1/3 the resolution of an image at 300PPI and less than 1/4 of an image at 480PPI.

So, an image at 100% zoom will be 3-4 TIMES the size of the final print size.

And that's a REAL PROBLEM...

Image Optimization

IMAGE PROCESSING

Sharpening Workflow

A Photoshop Screen Zoom of 100%

Is only useful to see what's happening to the pixels

Not to Judge

the Amount to Sharpen.

Image Optimization

IMAGE PROCESSING

Sharpening Workflow

A Photoshop Screen Zoom of 50%

Allows you to SEE the Results Of Dithering Four
Images Pixels into a Single Display Pixel

Very Similar to the Practice of Supplying 2X the Line
Screen Ruling 300PPI for a 150LPI Screen

Image Optimization

IMAGE PROCESSING

Sharpening Workflow

A Photoshop Screen Zoom of 25%

Will Help You Judge

The Amount of Sharpening

For High Rez Ink Jet

Image Optimization

IMAGE PROCESSING

Sharpening Workflow

It “Ain’t Perfect”

But it’s Better than

Spitting Into the Wind...

Photoshop's Color Settings

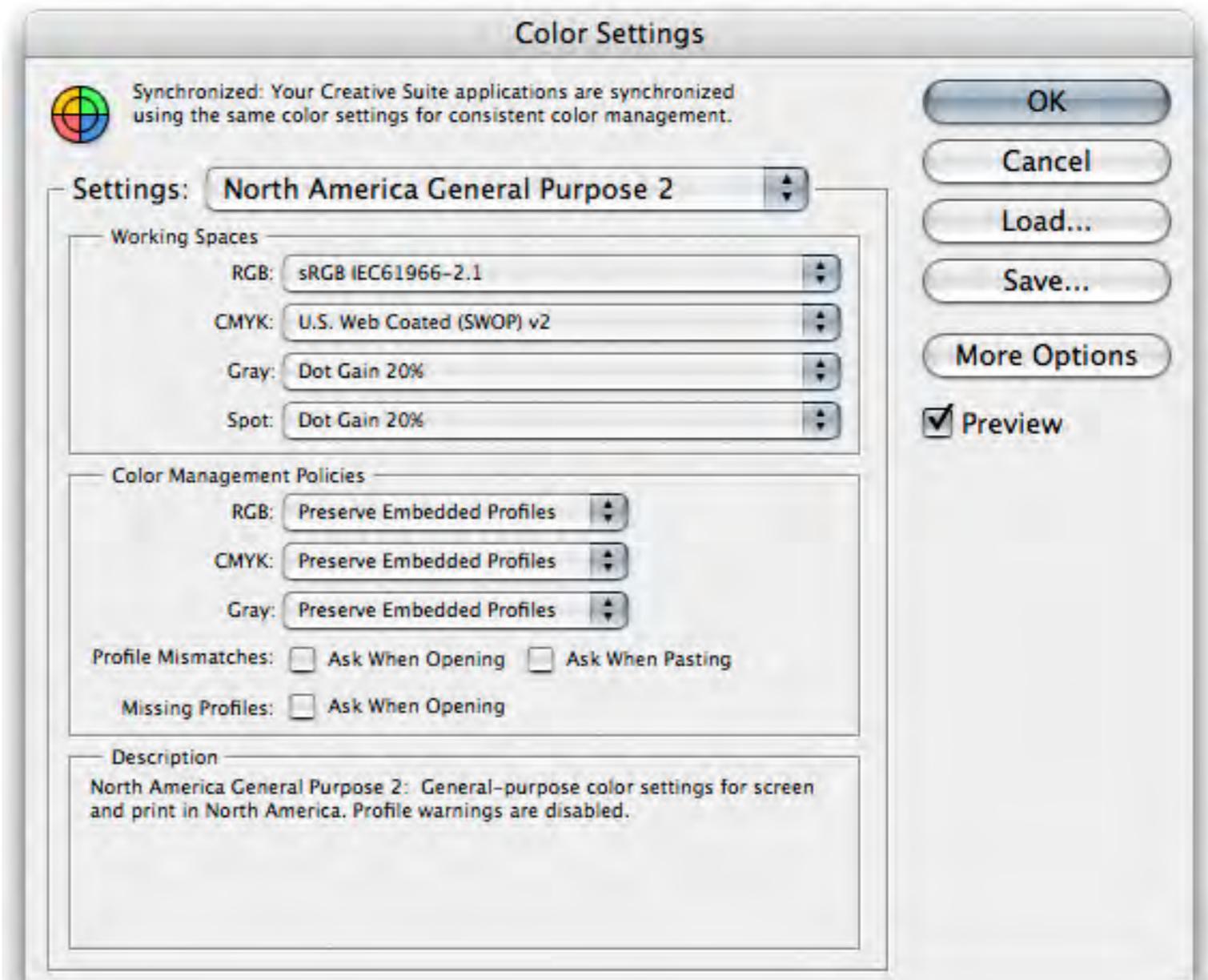
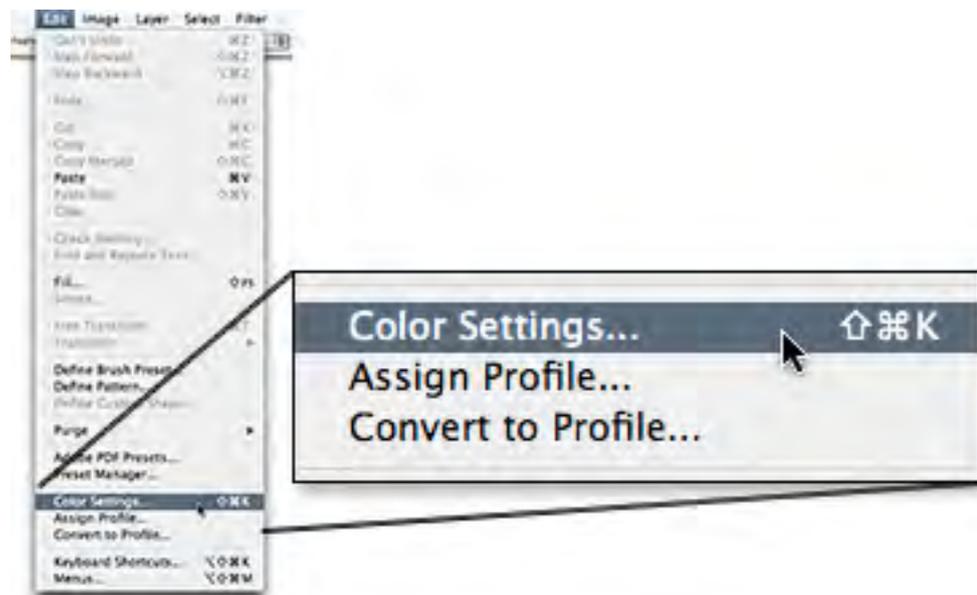
Color Management

EEEEK!

Yep, sorry...

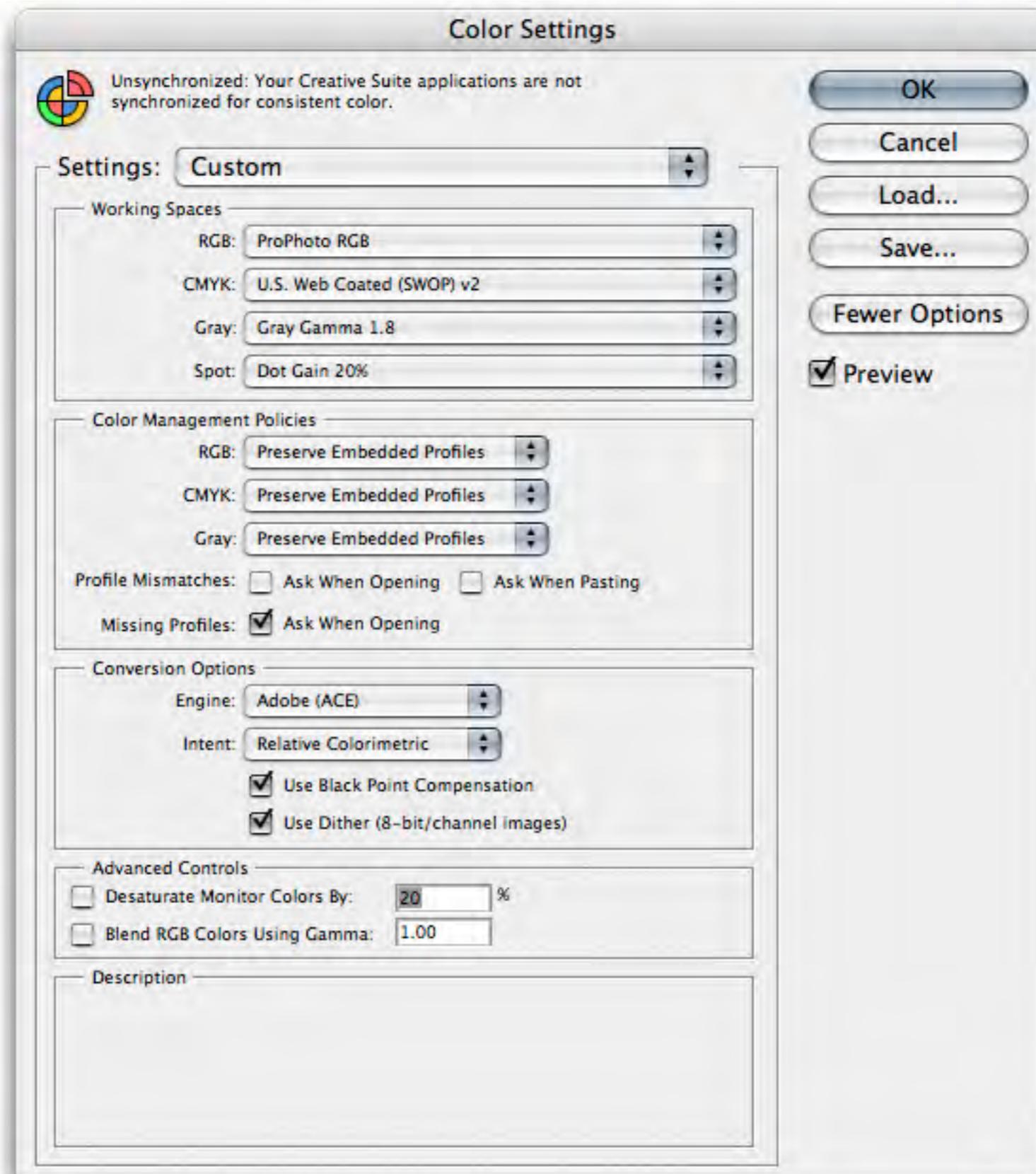
But it's really easy..!

Photoshop's Color Settings



The “Default” is NOT for you..

Photoshop's Color Settings



Photoshop's Color Settings

Settings: ProPhoto RGB

Working Spaces

RGB: ProPhoto RGB

CMYK: U.S. Web Coated (SWOP) v2

Gray: Gray Gamma 1.8

Spot: Dot Gain 20%

Color Management Policies

RGB: Preserve Embedded Profiles

CMYK: Preserve Embedded Profiles

Gray: Preserve Embedded Profiles

Profile Mismatches: Ask When Opening Ask When Pasting

Missing Profiles: Ask When Opening

Photoshop's Color Settings

Settings: ProPhoto RGB

Working Spaces

RGB: ProPhoto RGB

CMYK: U.S. Web Coated (SWOP) v2

Gray: Gray Gamma 1.8

Spot: Dot Gain 20%

Color Management Policies

RGB: Preserve Embedded Profiles

CMYK: Preserve Embedded Profiles

Gray: Preserve Embedded Profiles

Profile Mismatches: Ask When Opening Ask When Pasting

Missing Profiles: Ask When Opening

Why Pro Photo RGB?

Photoshop's Color Settings

Settings: ProPhoto RGB

Working Spaces

RGB: ProPhoto RGB

CMYK: U.S. Web Coated (SWOP) v2

Gray: Gray Gamma 1.8

Spot: Dot Gain 20%

Color Management Policies

RGB: Preserve Embedded Profiles

CMYK: Preserve Embedded Profiles

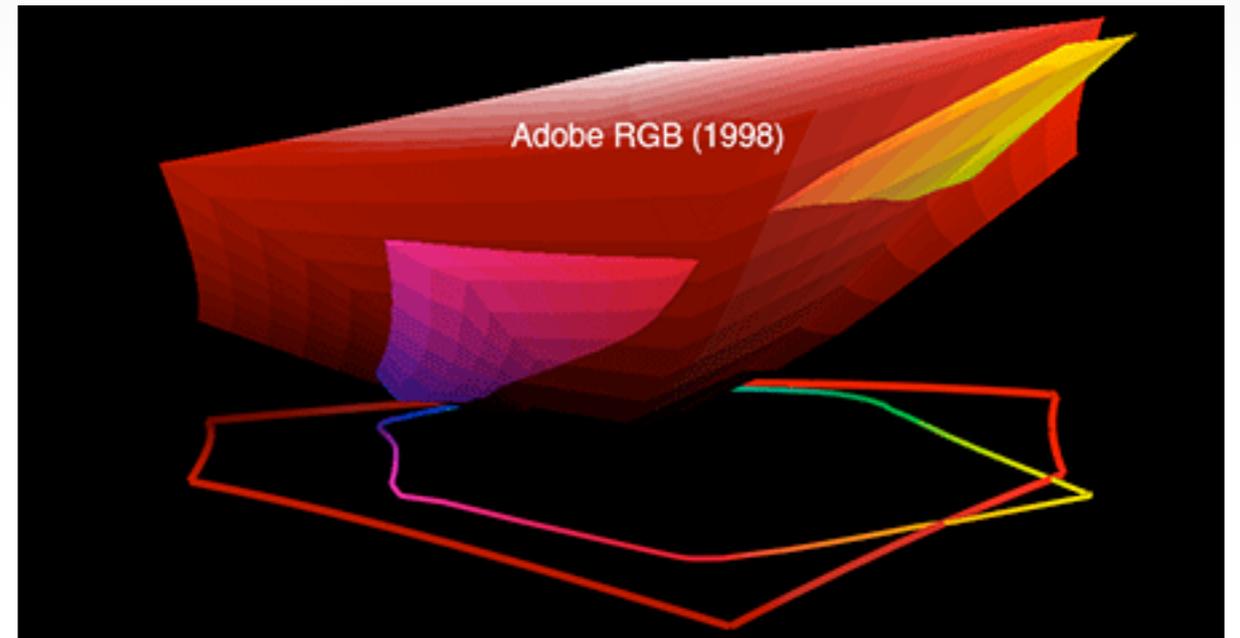
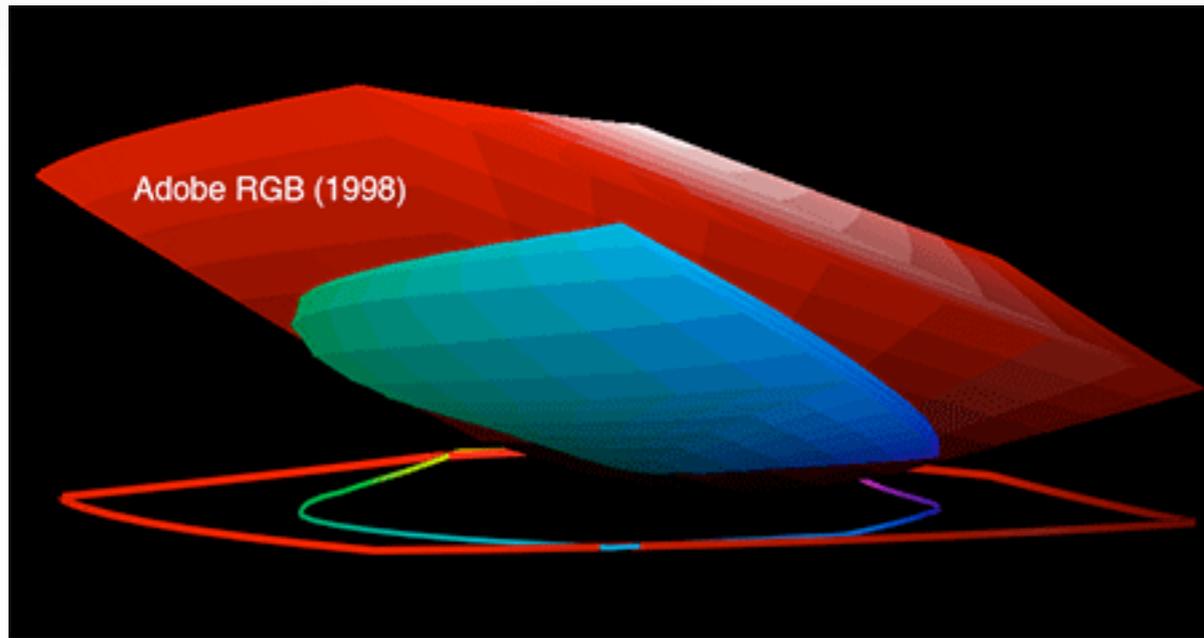
Gray: Preserve Embedded Profiles

Profile Mismatches: Ask When Opening Ask When Pasting

Missing Profiles: Ask When Opening

So you don't clip printable color.

Photoshop's Color Settings

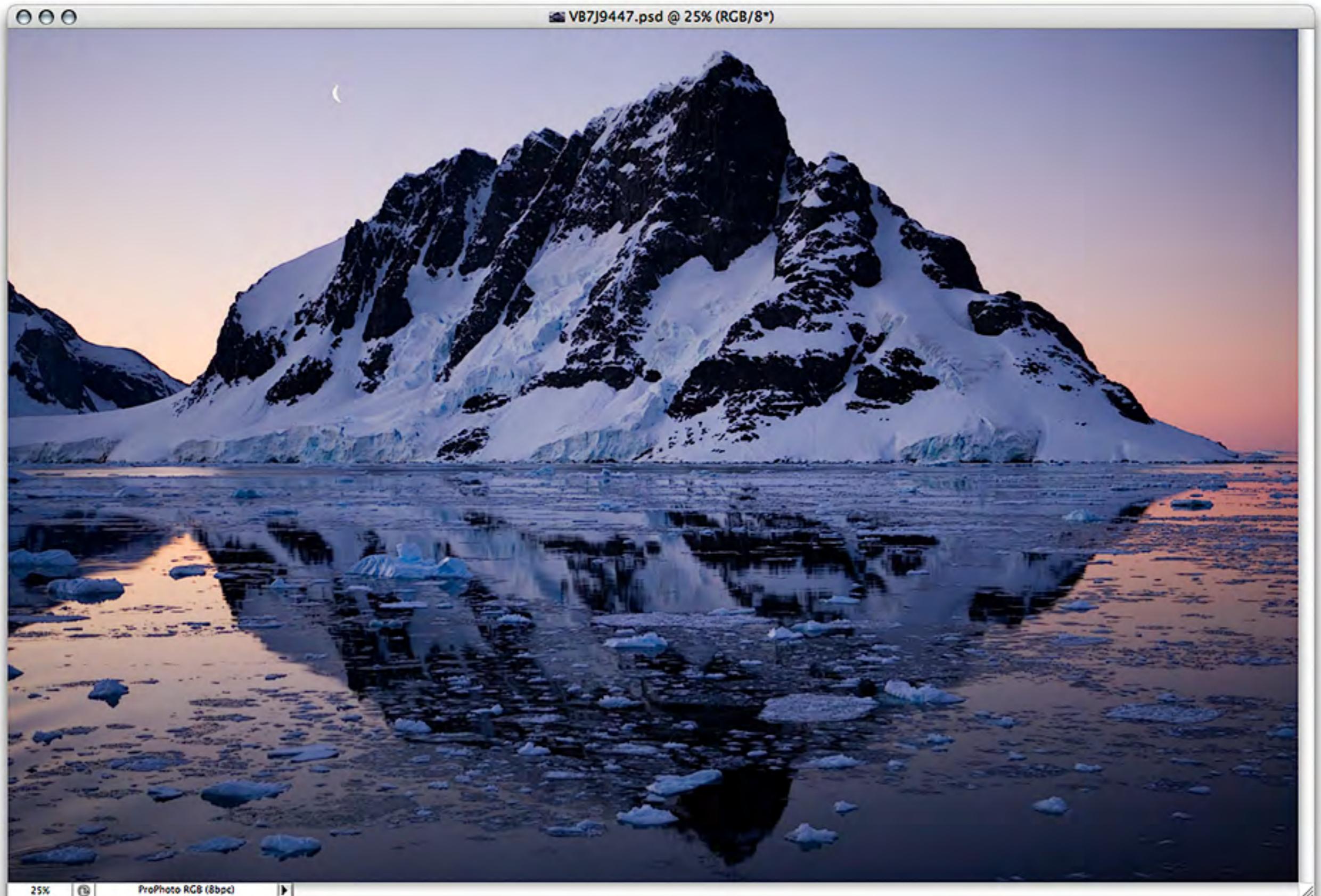


11880 with Vivid Magenta Profile Plotted Against Adobe RGB

Blues, Greens, Reds and Oranges
clip in Adobe RGB

So, does color matter to you?

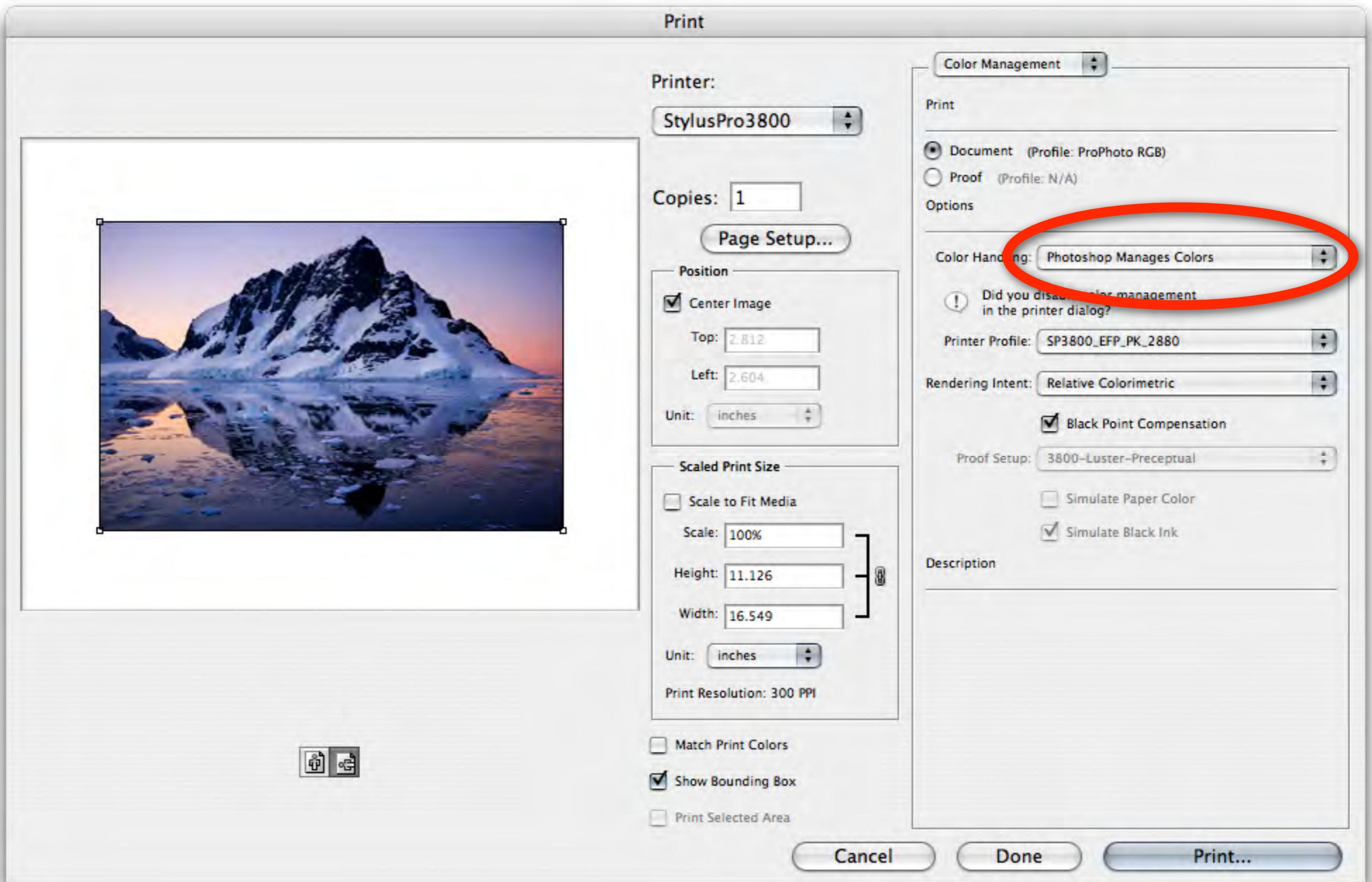
Printing in Photoshop



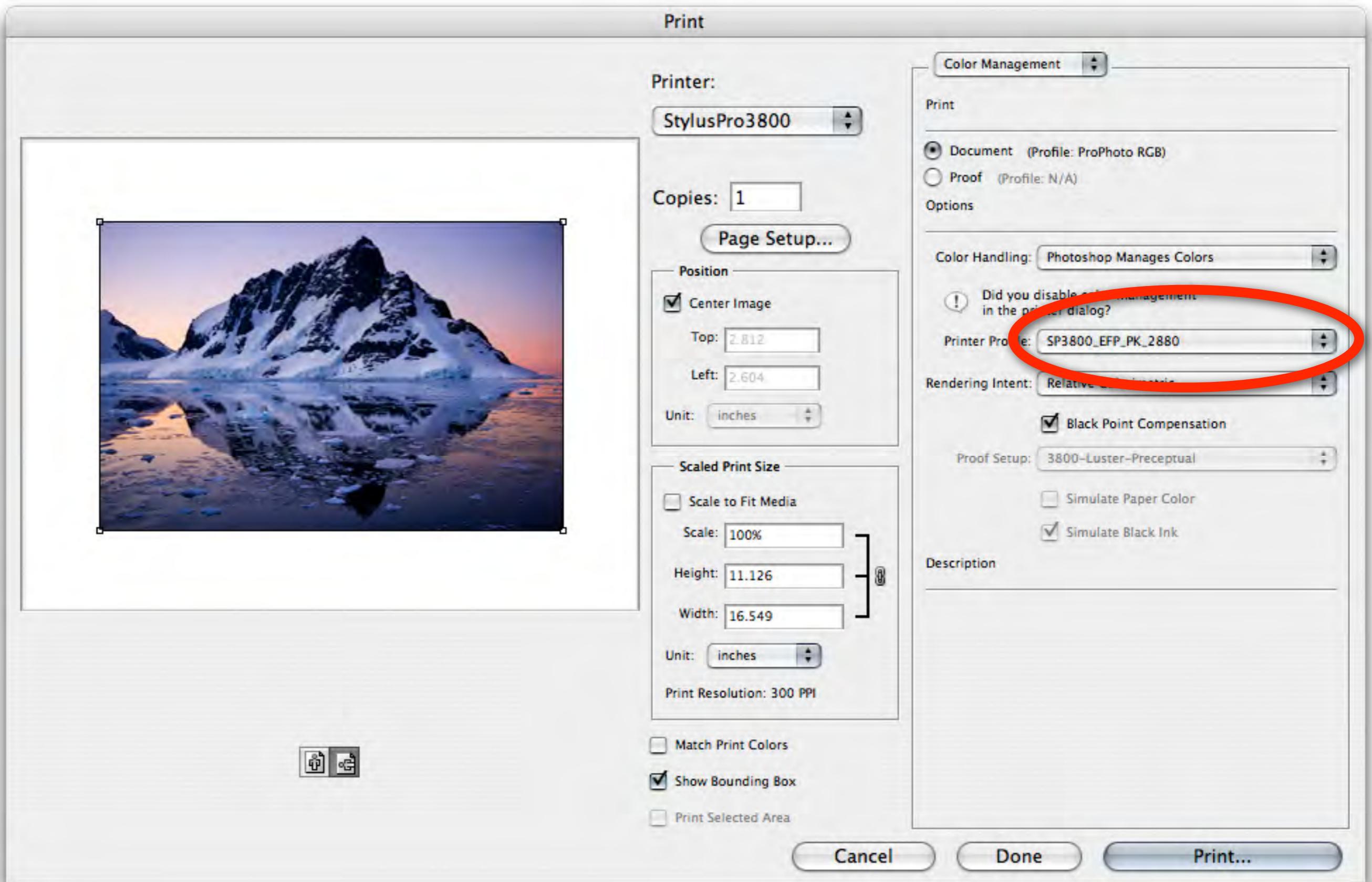
Printing in Photoshop

Mac

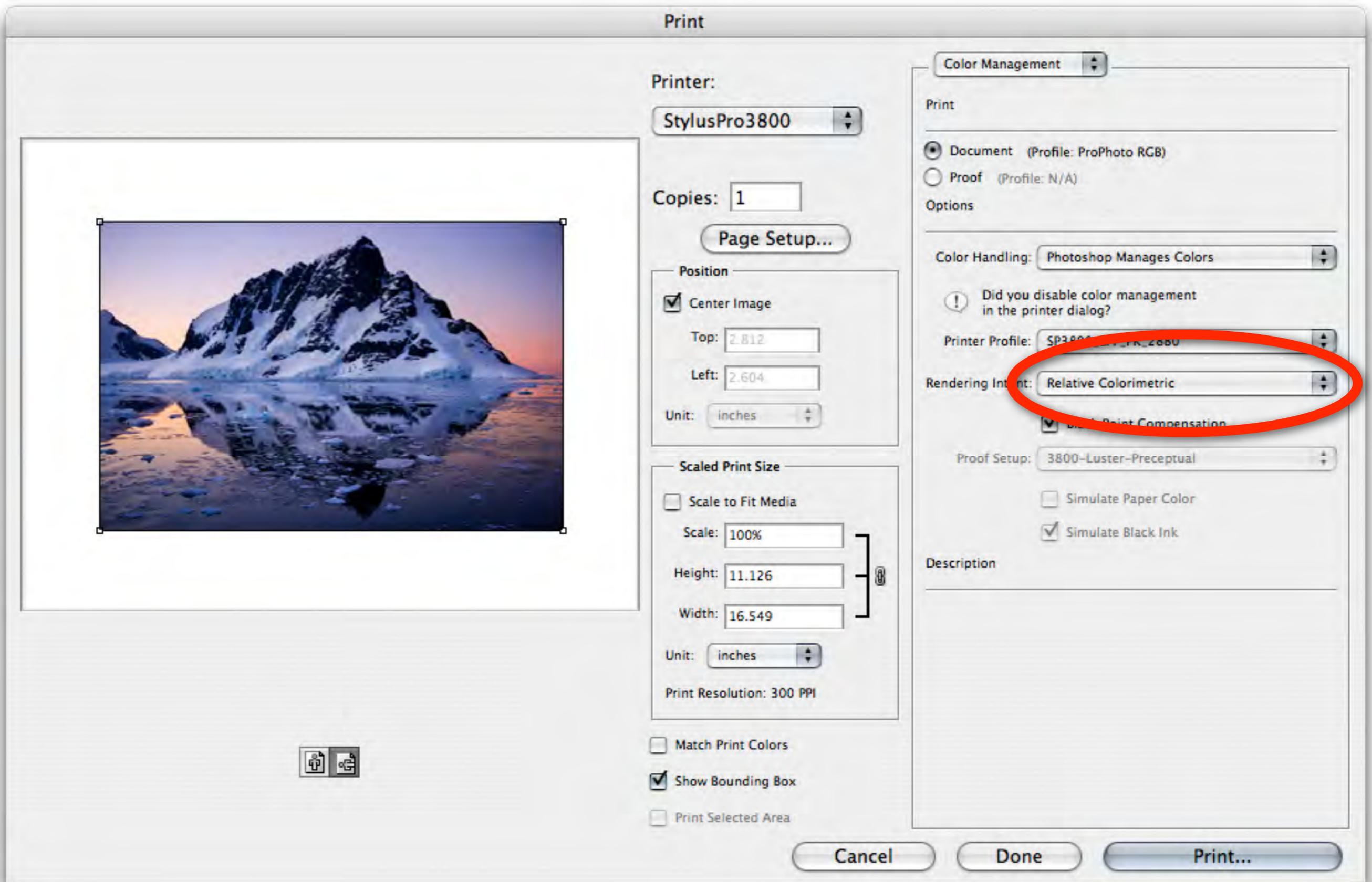
os X



Photoshop CS3 Print—**Let Photoshop Determine Colors**

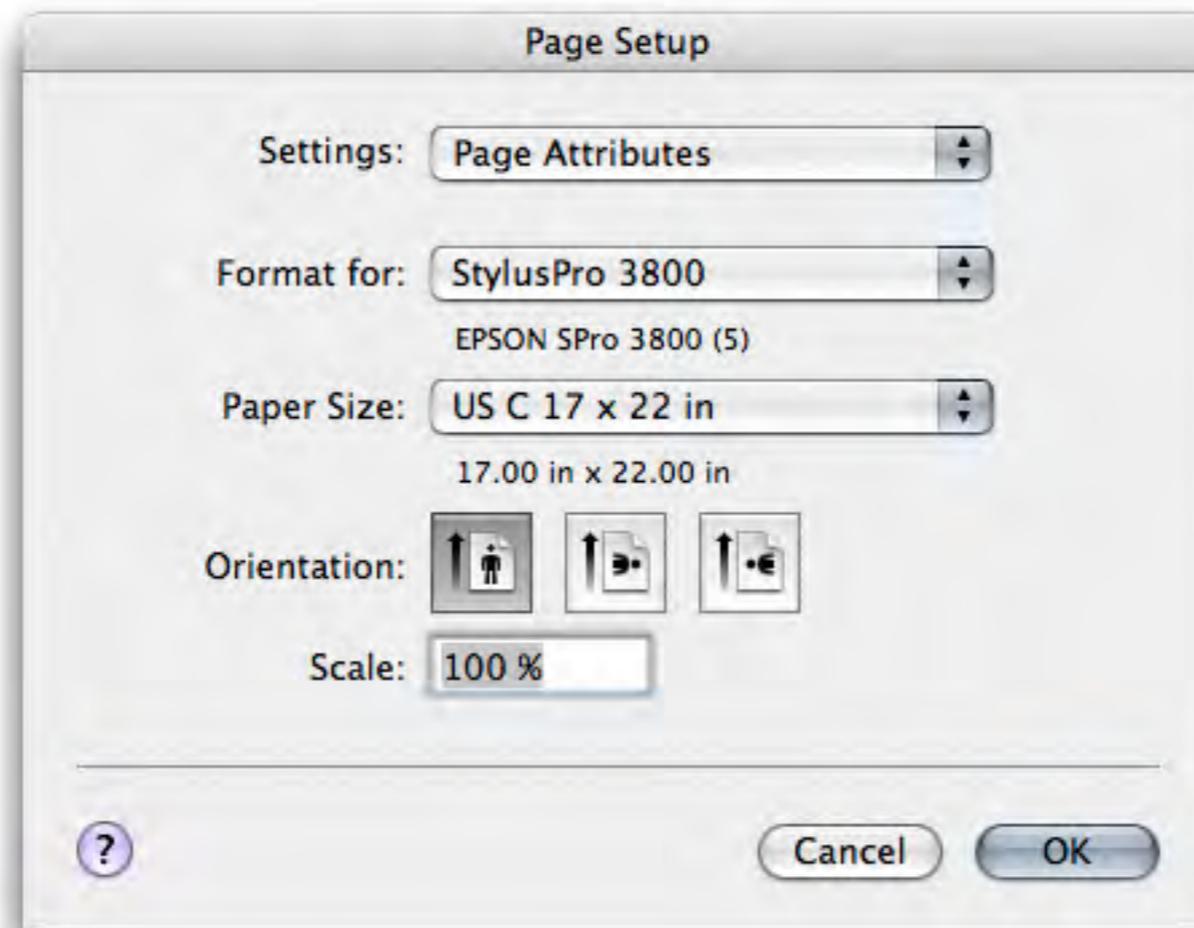


Photoshop CS3 Print—**Use the Correct Profile**



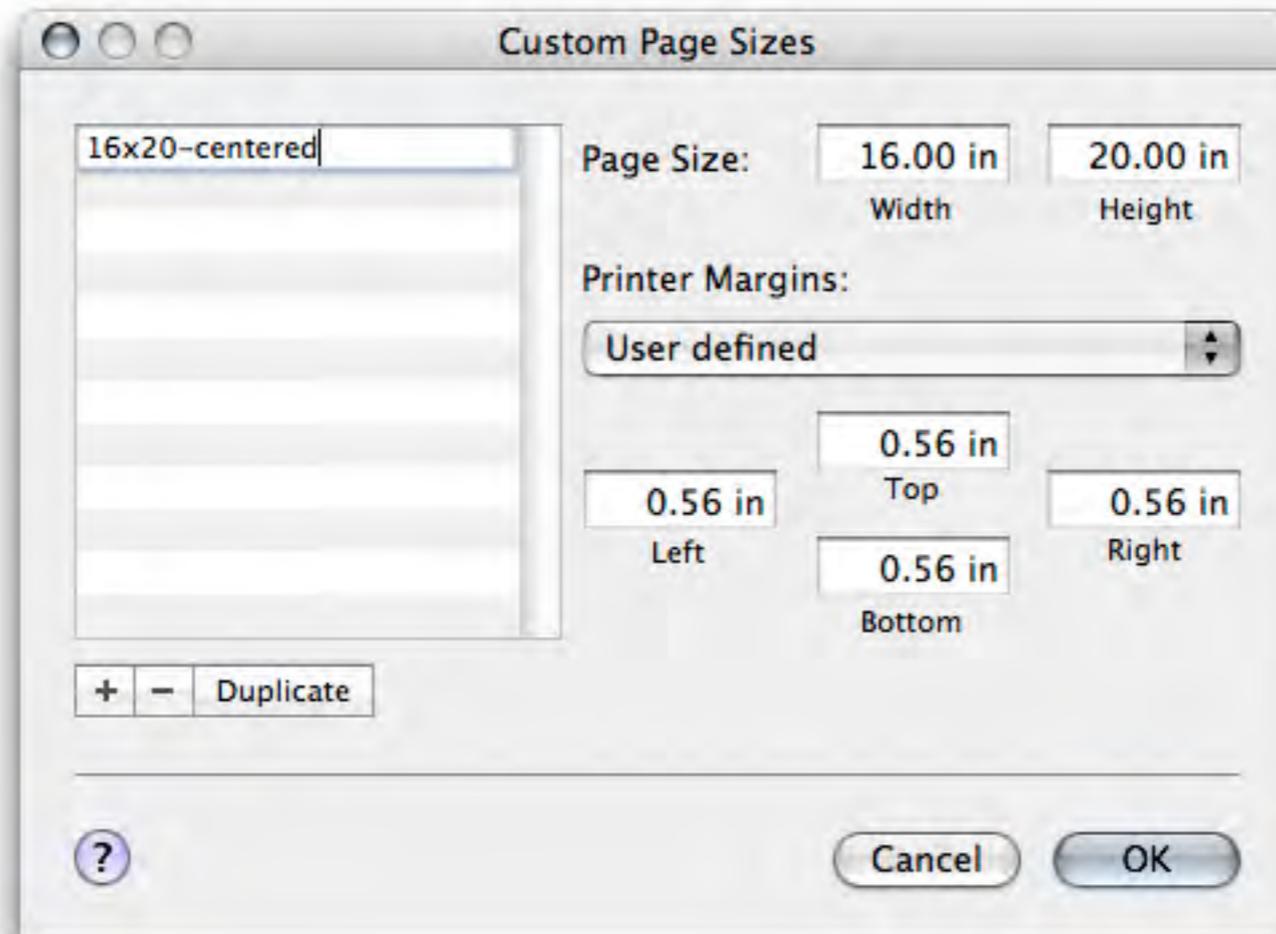
Photoshop CS3 Print—**Use the Best Rendering Intent**

Page Setup



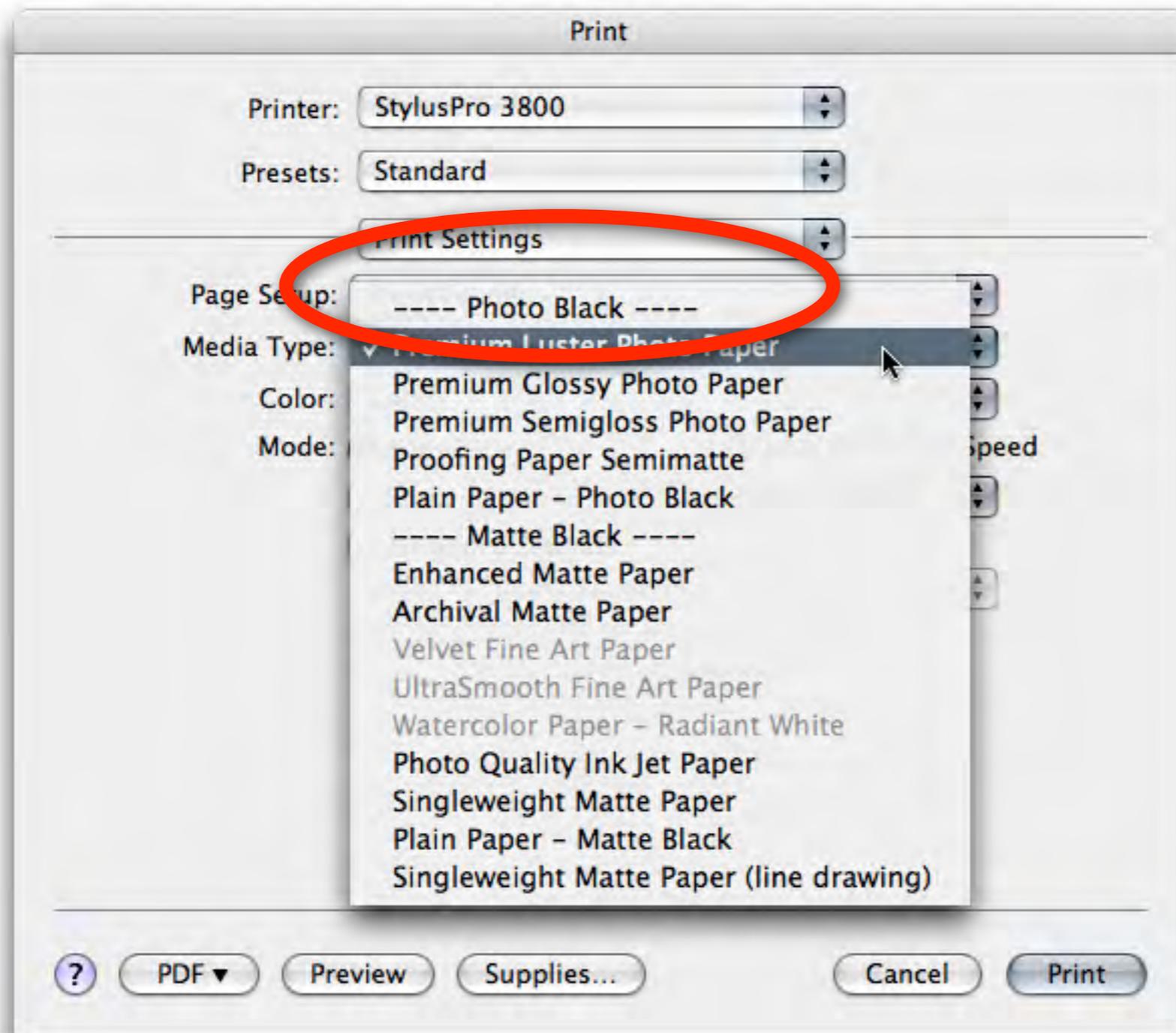
Page Setup-Choose your print & paper size.

Page Setup Centering



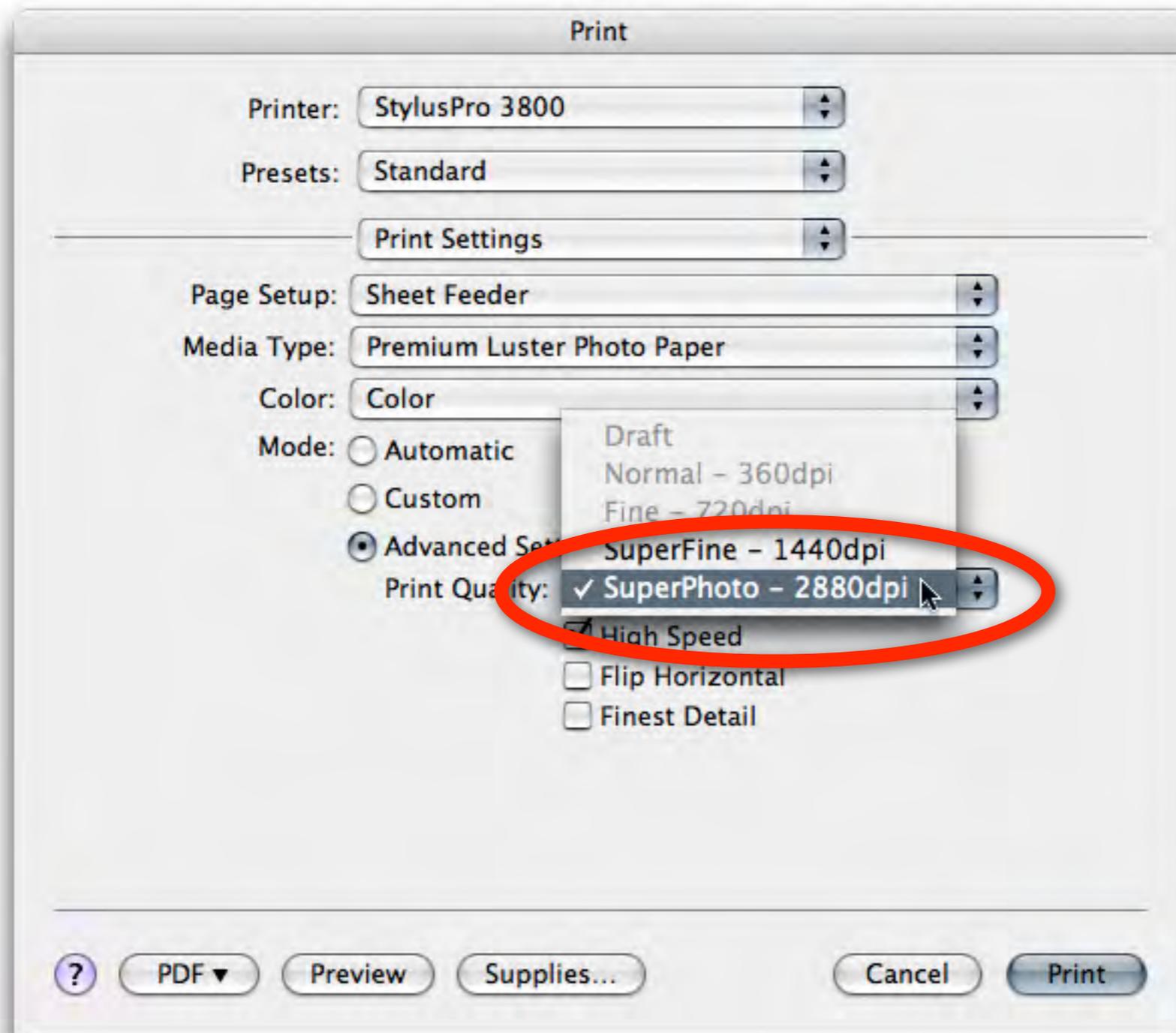
Page Setup-Create a Custom Paper Size
Create equal margins to print in exact center.

Printer Driver



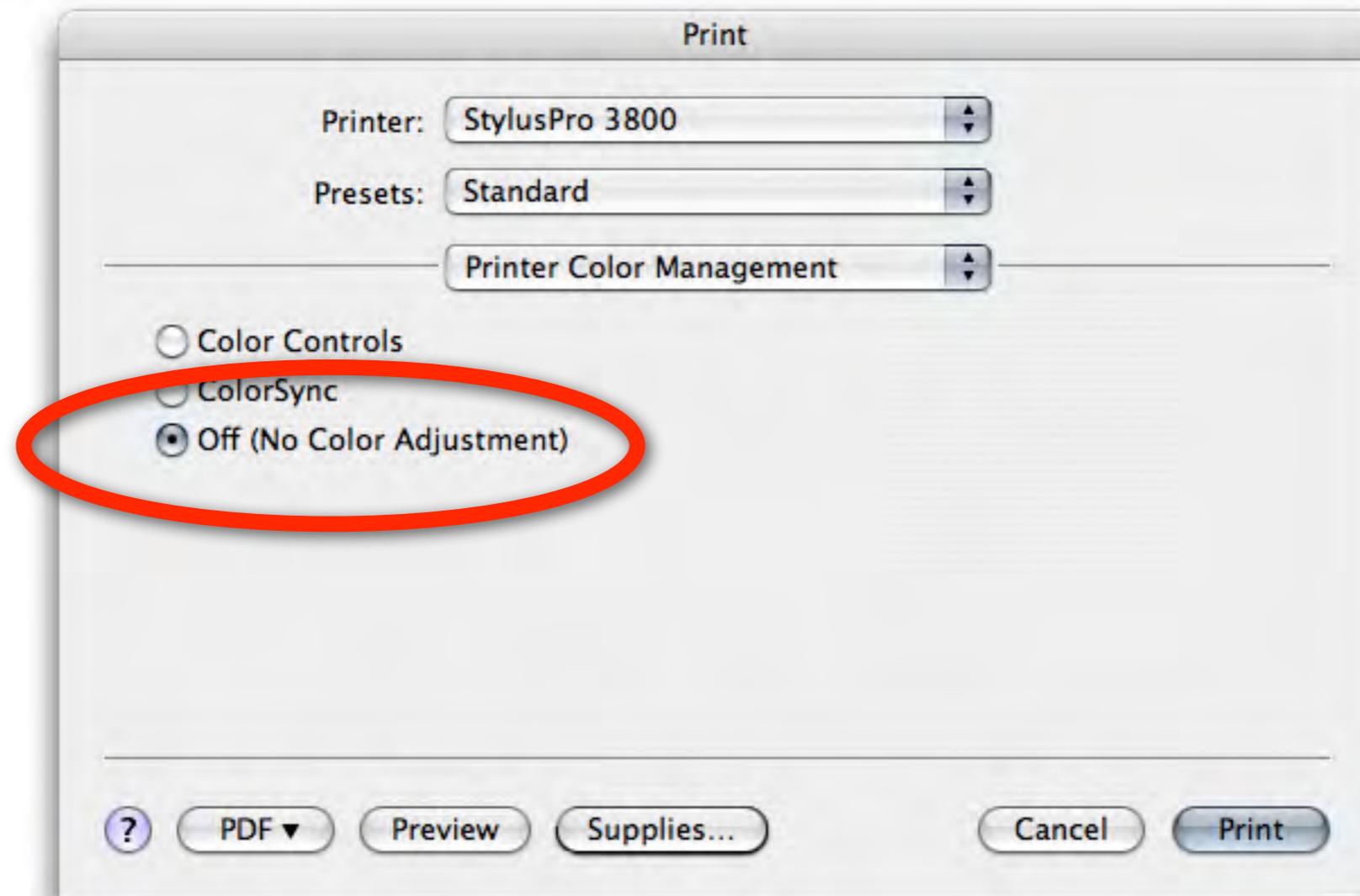
Print Settings-Selecting correct media.

Printer Driver



Print Settings Advanced-Selecting Print Quality.

Printer Driver

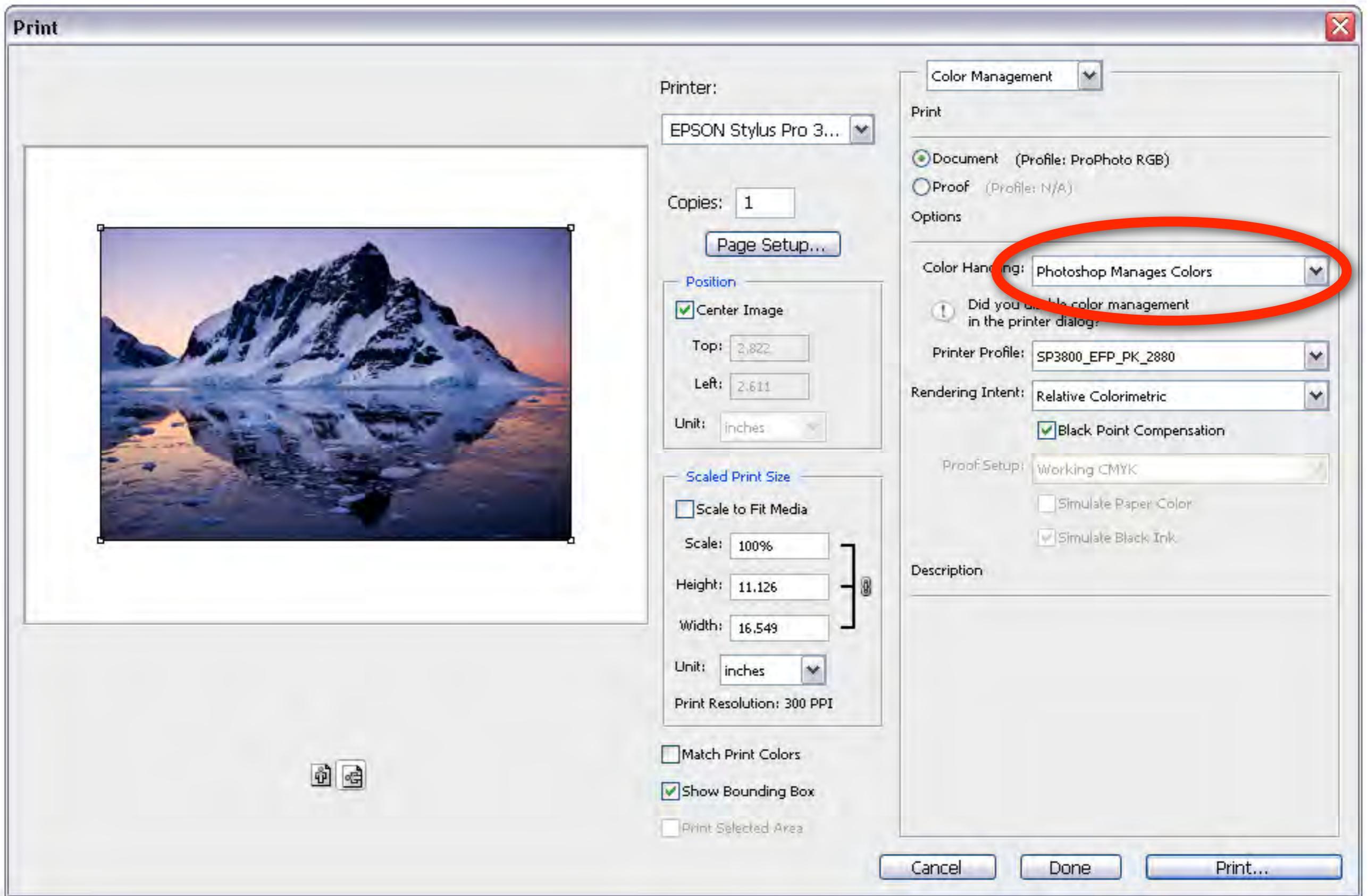


Printer Color Printer Color Management?
Color Management **OFF**

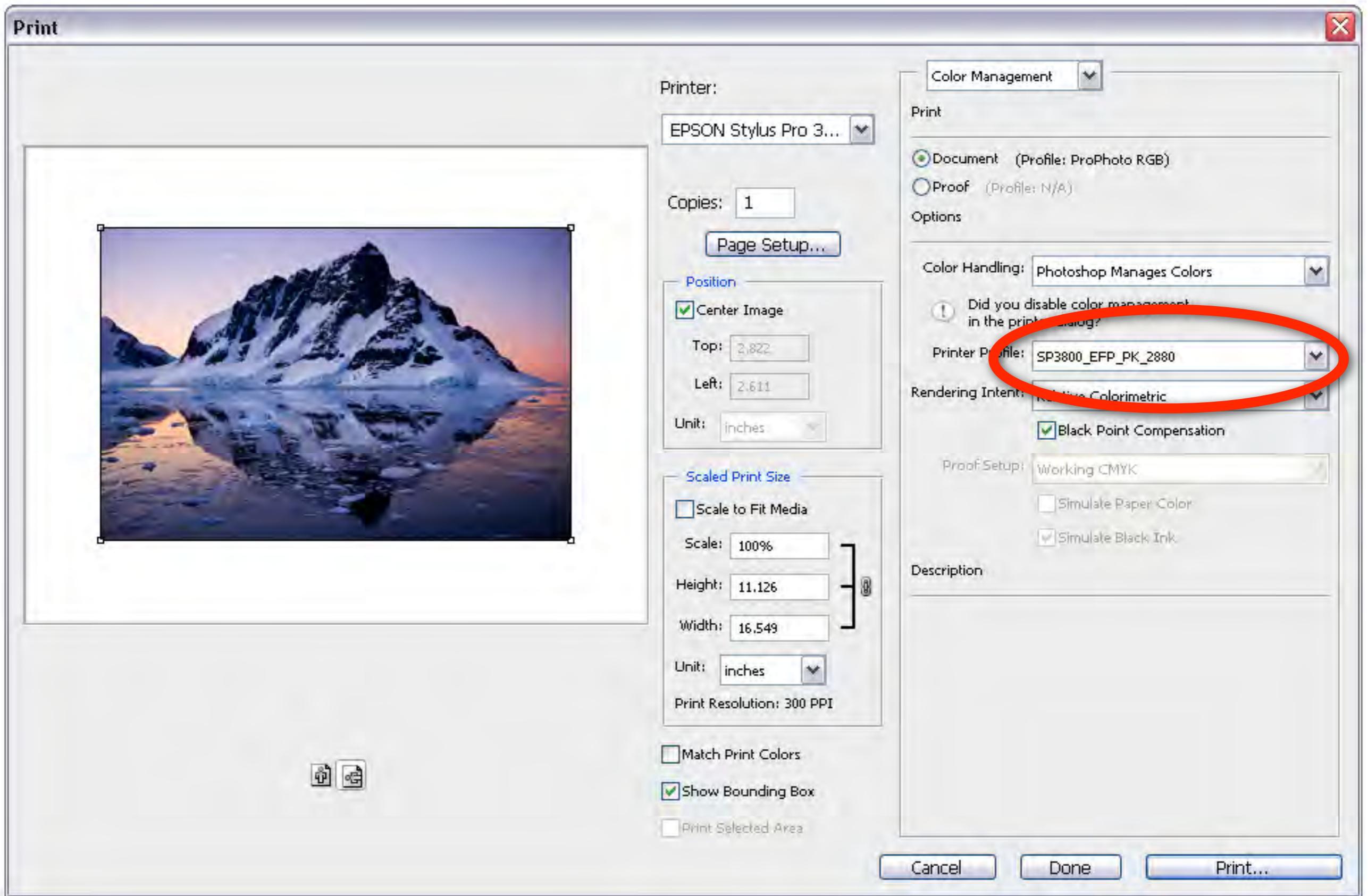
Printing in Photoshop

wwin

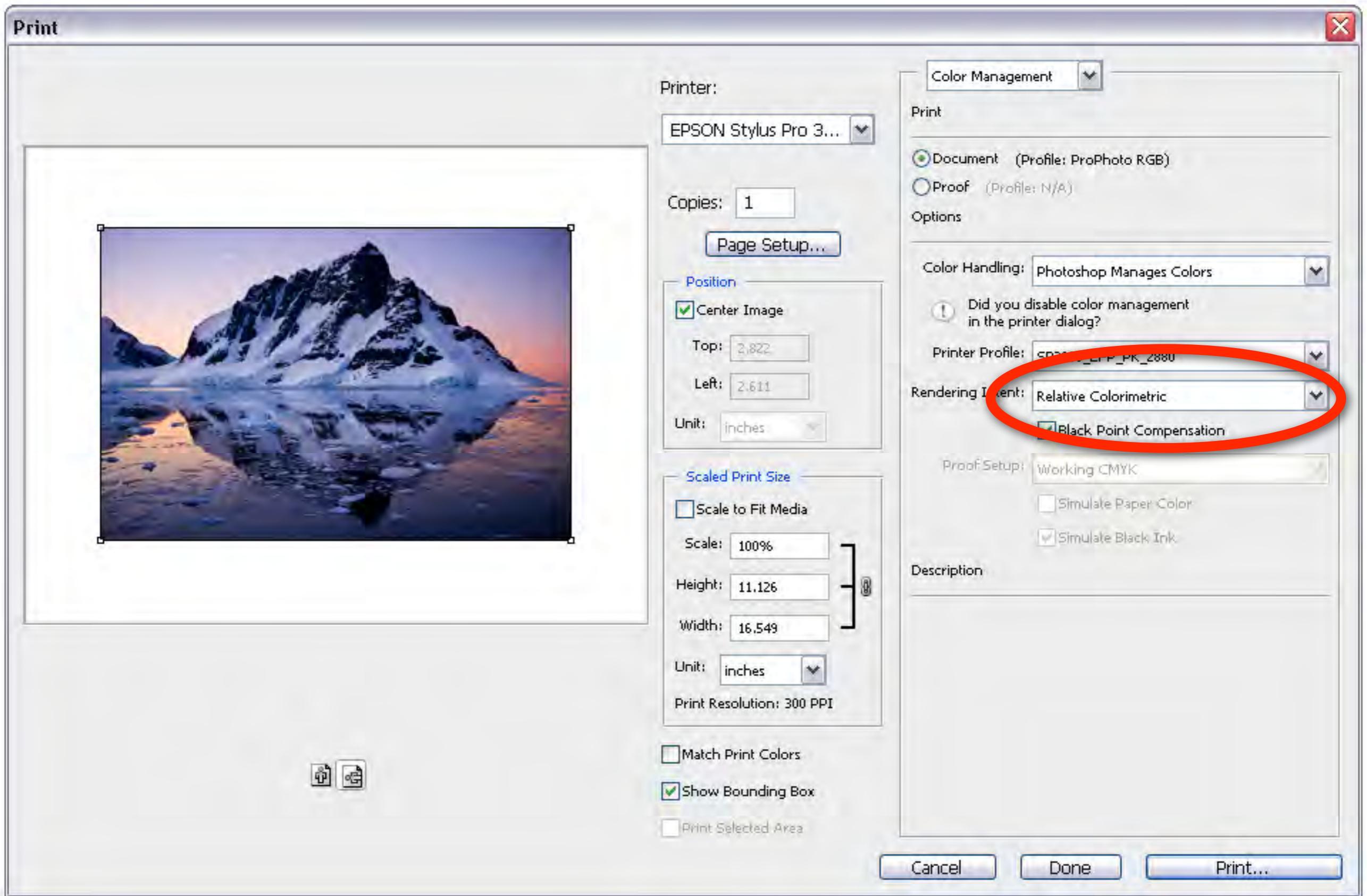
xp



Photoshop CS3 Print—**Let Photoshop Determine Colors**

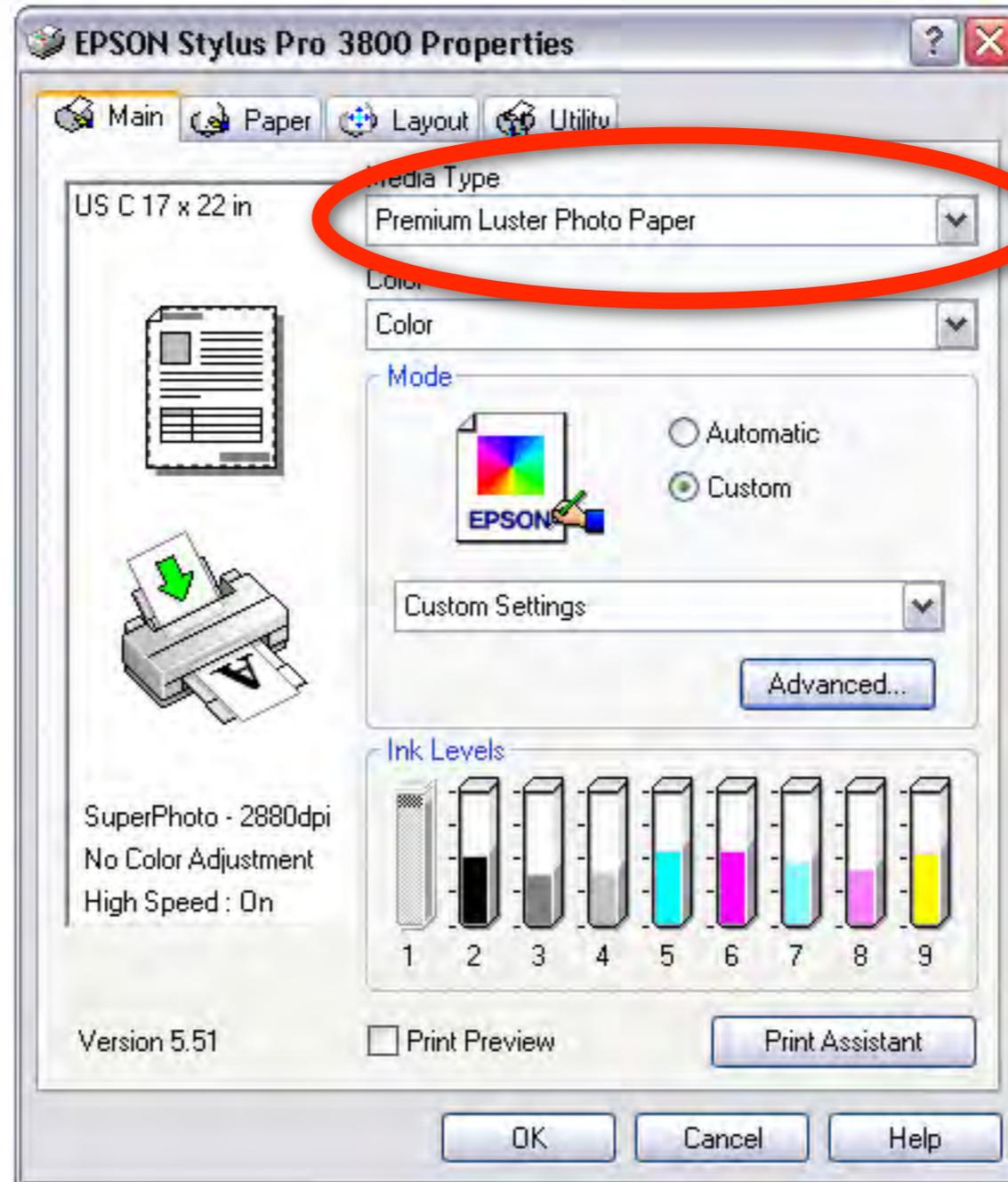


Photoshop CS3 Print—**Use the Correct Profile**



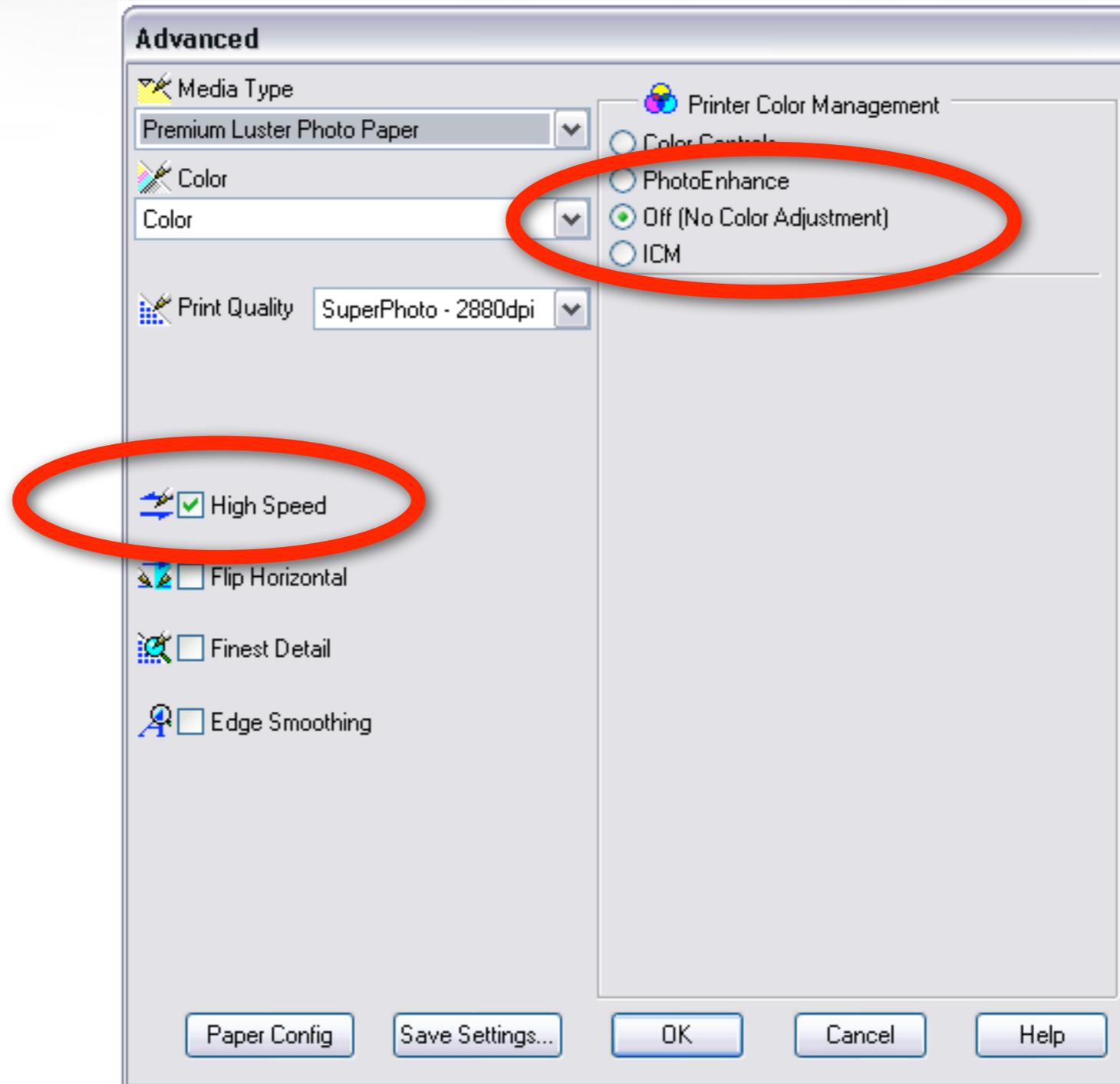
Photoshop CS3 Print—Use the Best Rendering Intent

Printer Driver



Print Settings-Select Properties
Setting Media and Advanced Settings

Printer Driver



Printer Color Management-Color Management **OFF**
If you wish to use your own profiles.

Top Printing Errors

No Color Management

If your printed image is darker than expected and has a strong greenish cast, you probably turned off color management in both Photoshop and the Epson printer driver.

Double Color Management

If your printed image is lighter than expected and has a strong red/magenta cast, you probably turned on color management in both Photoshop and the Epson printer driver.

Top Printing Errors

Wrong Profile Selected

Make sure you select the correct ICC profile for your media.

Top Printing Errors

Wrong Media Settings

Make sure you select both the correct media
AND
output resolution for your intended output.

Top Printing Errors

Optimum Final Resolution for ink jet:

Based on 720/1440/2880 DPI

180 ppi.

240 ppi.

288 ppi.

360 ppi.

480 ppi.

Top Printing Errors

Optimum Resolution for ink jet:

8x10 prints or smaller:

Image resolution: 360-480 ppi.

Printer resolution: 2880 dpi.

11x14 - 13x19:

Image resolution: 240-360 ppi.

Printer resolution: 1440-2880 dpi.

16x20 and bigger:

Image Resolution: 180-240 ppi.

Printer Resolution: 720-1440 dpi.

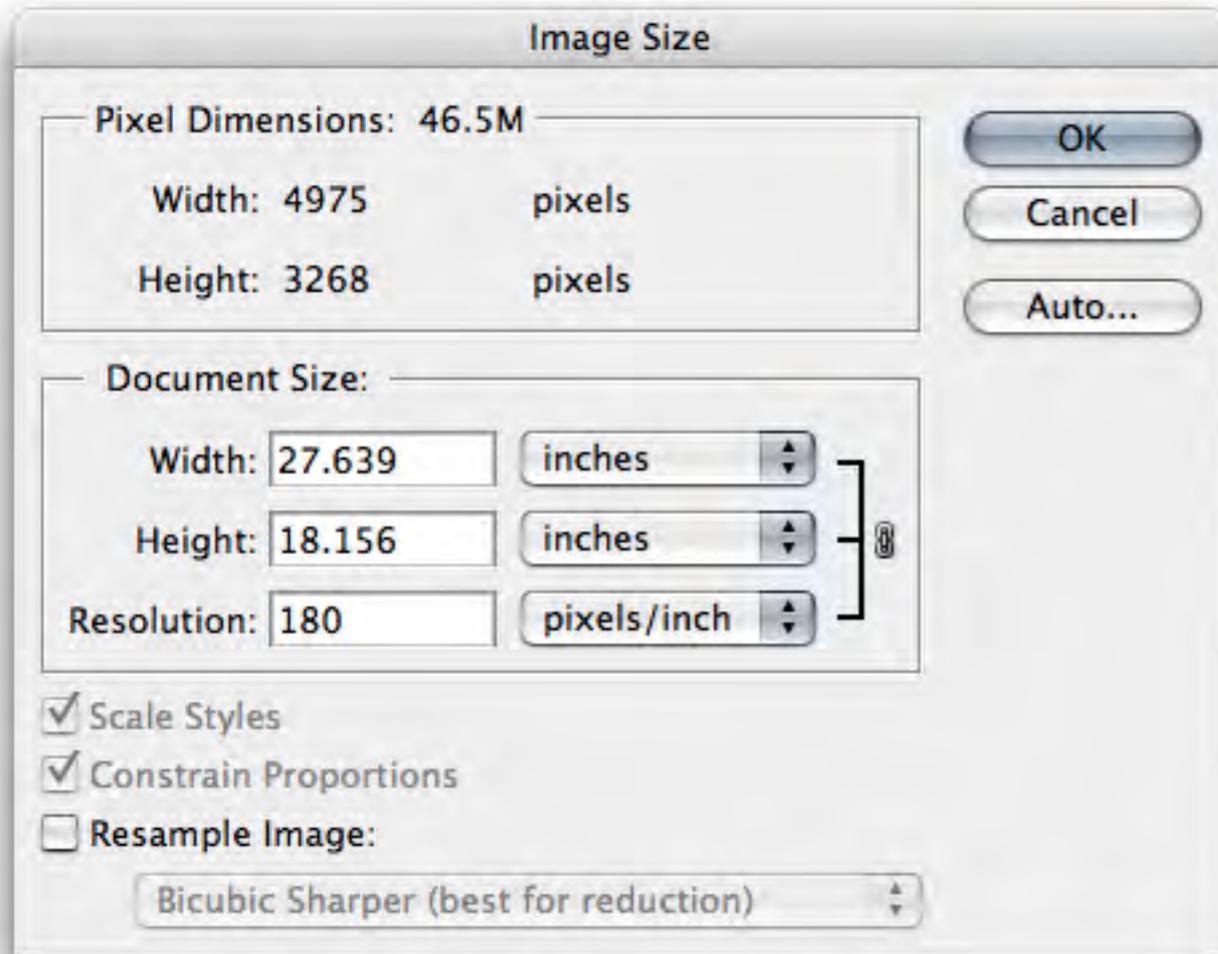
Top Printing Errors

But Don't Resample!

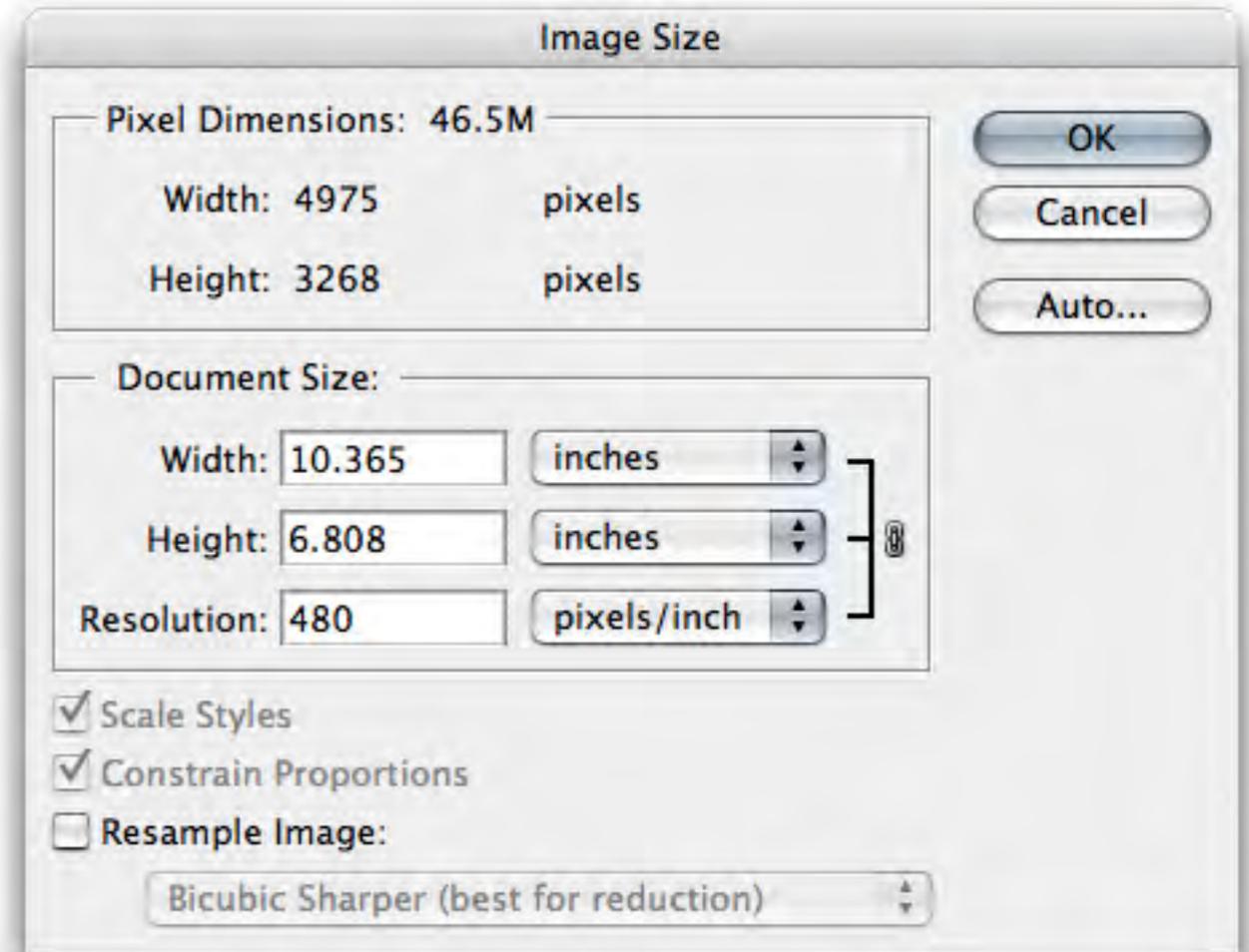
If your image is between
180PPI - 480PPI

Use the “Native Resolution”
and “Resize”

Top Printing Errors



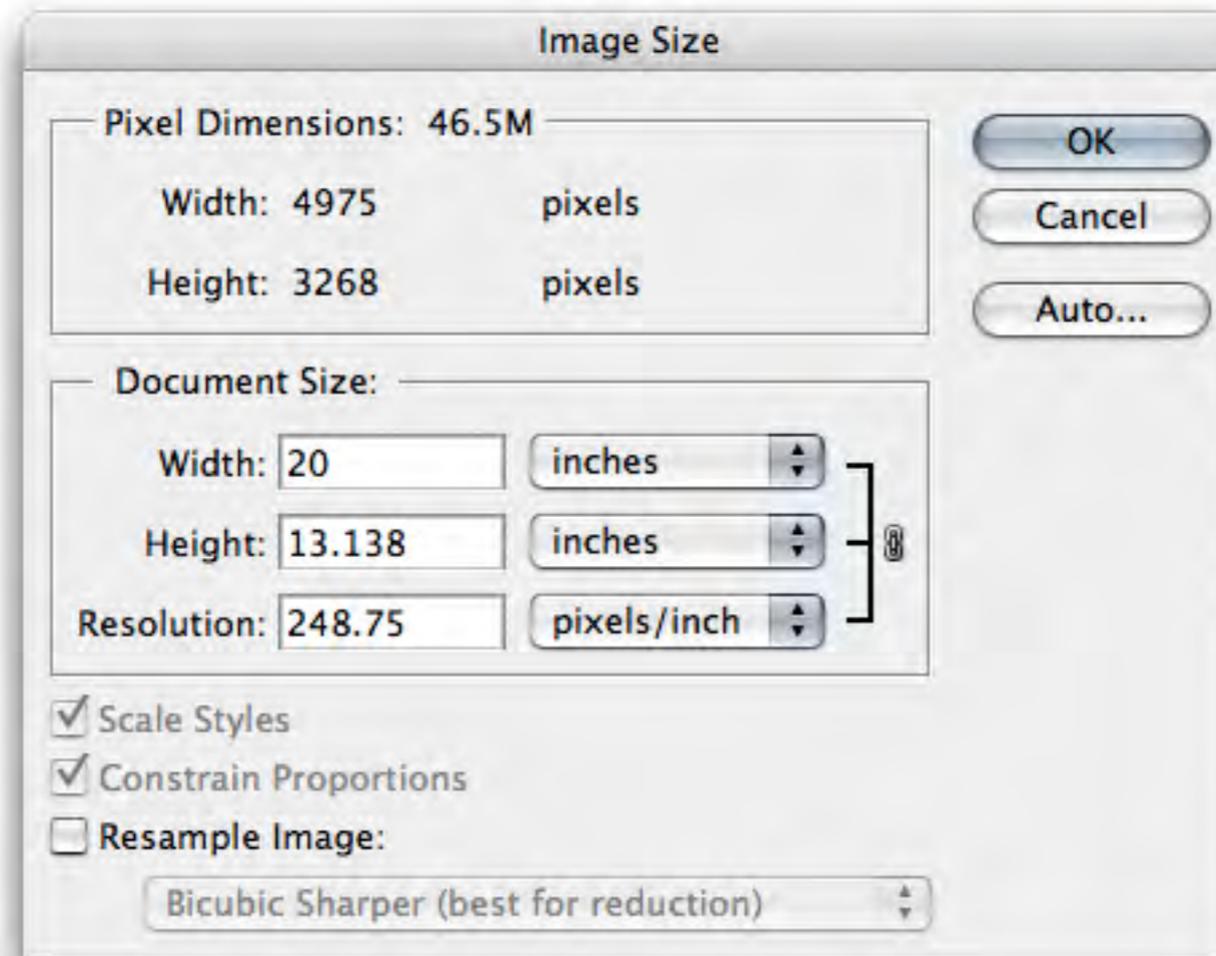
27.63" x 18.15
@ 180PPI



10.35" x 6.8
@ 480PPI

Top Printing Errors

If you Need a Specific Size, Set It...



**...and let the PPI Resolution fall where it will.
Don't Resample just to hit some number!
Then sharpen for that resolution.**

From Camera To Print

Fine Art Printing Tutorial

with Michael Reichmann & Jeff Schewe



\$34.95



24 movies
6 hours 40 minutes

10% Discount Code: JKJavits

www.luminous-landscape.com

From Camera To Print

Fine Art Printing Tutorial

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