Varis PhotoMedia Tutorials

Welcome

This tutorial has been prepared for the photographer who is striving to learn digital imaging. I make an effort to supply current information about digital imaging techniques and general information about computer technology that is pertinent for today's professional photographer. This information is based on my personal experience down in the trenches at the front lines of the digital revolution that is sweeping the photographic industry.

One thing is certain: all of the information contained herein will be obsolete in a fairly short time - how short, I can't say. Be forewarned that things are changing very rapidly and the only way to stay competitive is to keep learning. I devote a good percentage of my time learning new things and I am attempting to share what I learn with you but this information will go out of date so you should be flexible and not take this tutorial to be the ultimate statement on the subject.

I maintain a web site where I post additional information, examples and tutorials. You are invited to browse various portfolios as well as download free material and purchase additional tutorials at:

http://www.varis.com

I hope you find the information contained in this tutorial helpful. Please let me know if you find any errors or ommissions - I'm always trying to improve these materials! You may contatct me via email at:

varis@varis.com

best regards, Lee Varis 2002

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These files are compressed in a Binhex archive. To use these files you must first extract them from the archive using a file compression utility. You can download the excellent free “Stuffit Expander” utility from Aladin Software by clicking below:

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Blue Sky Projects

What do you do if the weather just won't cooperate and you need to shoot out doors on location? Well... if you're a Photoshop expert you have no worries! We are going to repair some dull gray outdoor action shots by Frank Hoppen, a moto-sports action photographer who often finds that the events he has to cover do not always occur on sunny days.

The next several pages examine three images from such events. We will learn how to replace dull gray skies and wake up dull colors. There are limits of course to how far you can go but I think that you'll find that, with these techniques, you can go far enough to put the sizzle back into some lackluster scenes.

These projects involve a combination of techniques. We will look at:

- Waking up dull colors with LAB colorspace corrections
- Hue/Saturation adjustments to colorize skies
- Building masks from RGB channels
- Utilizing Blending Options to combine layers
- Layer masks and Layer Sets for extra control
- Layer Apply Modes to blend elements and affect contrast

These images illustrate typical problems faced by photographers shooting under less than ideal lighting situations and the techniques used here can be applied to a wide range of conditions and subject matter. Try to think how you might apply these ideas to your own work with outdoor locations.

Fixing an Overcast Day

A gray day is a gray day... or is it? Your mission, should you choose to accept it, is to transform this gray but otherwise exciting shot into a sunny beach promotional for a resort brochure! What is gray has to become blue and vibrant! You can see what we're aiming for in the final image at the lower right! But how to get there?

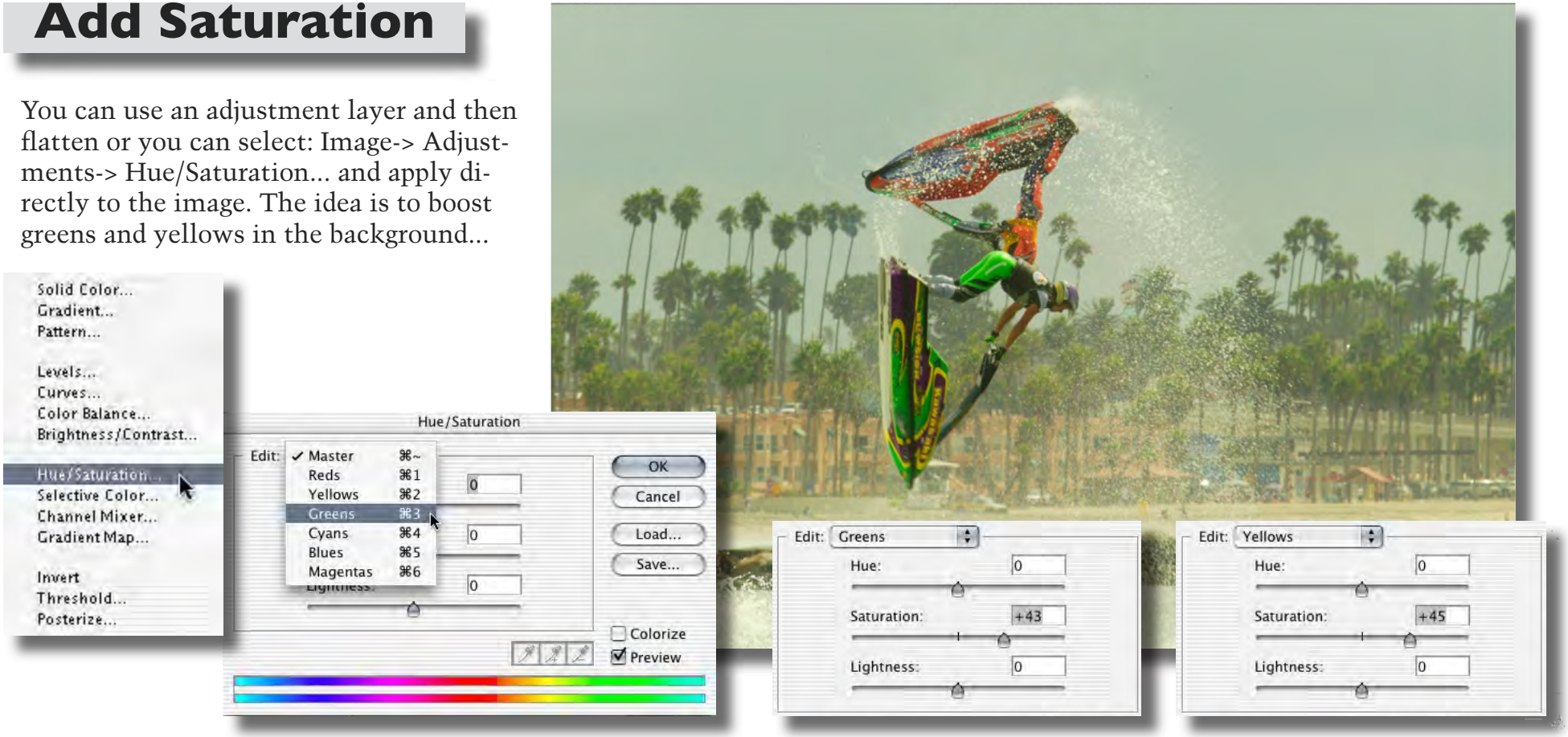
A sunny day would have rendered much more saturated colors! So the first order of business is to wake up the generally lifeless color in this image. The figures are not too bad, but the background... ugh...

Normally we'd like to have a 16 bit RGB Tiff file to work with but this time we are going to start with the file already converted into 8 bits.

In order to get the look of some sunlight, we are going to do a little hue shifting using Hue/Saturation to perk up the green in the background trees. Again, normally we would do this as an adjustment layer - this time, because we need the saturation in multiple layers, we will run Hue/Saturation directly on the background as a first step...

Add Saturation

You can use an adjustment layer and then flatten or you can select: Image-> Adjustments-> Hue/Saturation... and apply directly to the image. The idea is to boost greens and yellows in the background...



An overcast day has a bluer, cooler color temperature that will have a tendency to kill yellow in the image. The palm trees in the background are looking particularly gray. We don't need to boost the red/orange tones in the rider at the rear and we can tolerate some boost in the green rider in front so...

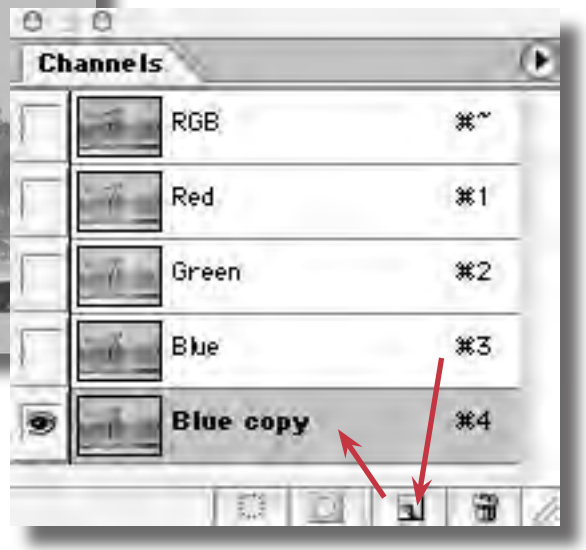
Once the Hue/Saturation dialog is up, select Greens from the Edit drop down. Move the saturation slider to the right to boost the saturation in greens. You don't want to go so far that colors look posterized so watch the pants on the foreground rider. Next select Yellows and move the slider again boosting the warm colors that have been killed by the blue overcast lighting. The sky will take on a bit of a green cast but we are going to replace it later anyway. Watch the bright clothing– these aren't memory colors so its ok to exaggerate them somewhat, just don't overdo it. We can't do "Master" saturation move because the orange outfit the rear rider is wearing will become radioactive right away. We're more interested in the background right now.

Mask the Foreground Figures

Red

Green

Blue

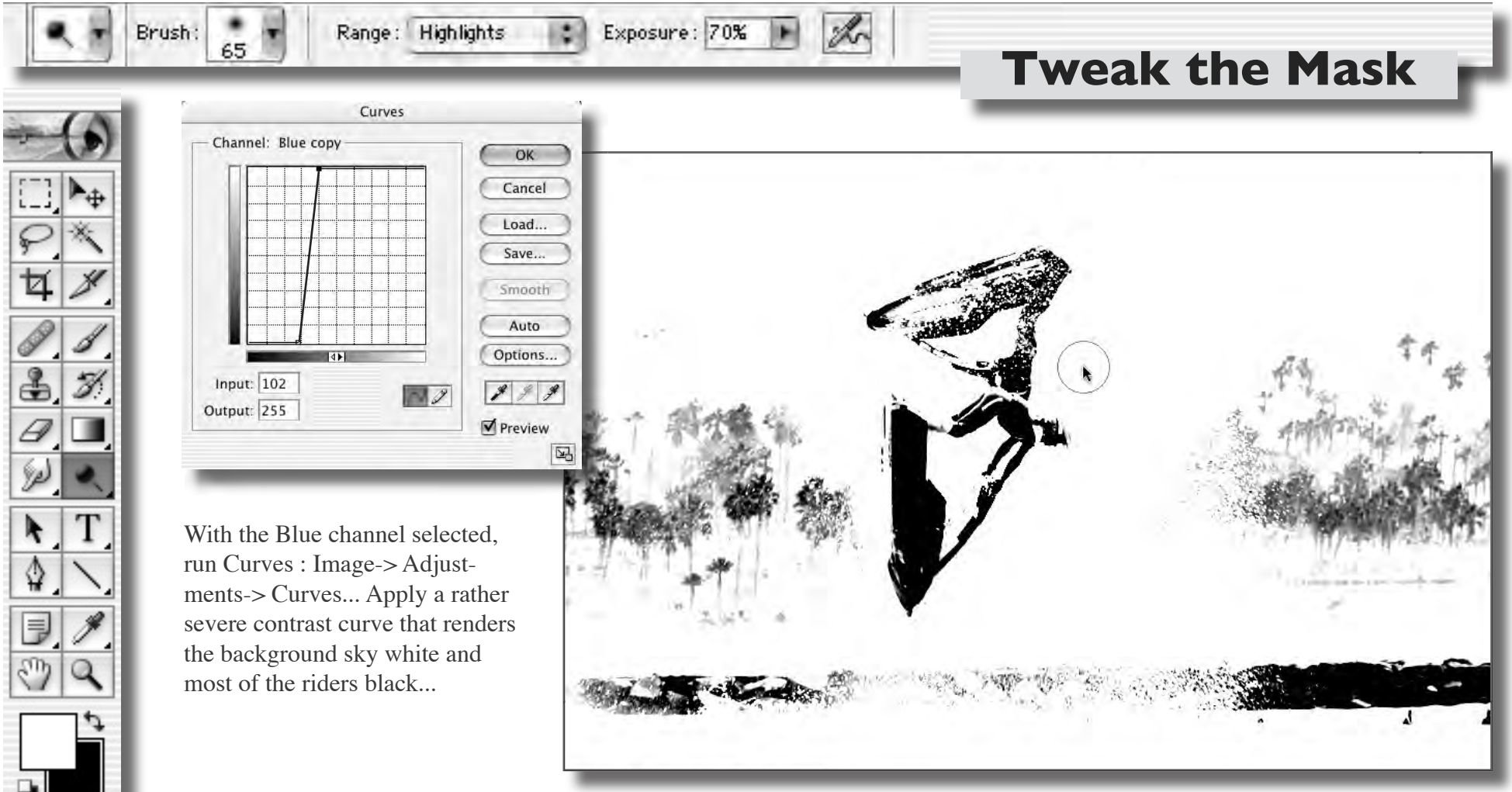


The background still needs some contrast but the riders are vivid enough. We need to come up with a way to isolate the riders from the background so we can adjust the contrast of the background separately.

Look at the separate channels in the image by clicking on them in the channels palette. We are looking for the channel that has the most separation between the riders and the background. The Blue channel seems to be the most likely candidate.

Copy the Blue channel by dragging it to the new channel icon (red arrows) at the bottom of the Channels palette. We will use this Blue copy as the basis for a mask to protect the riders. All we need to do now is apply a contrast enhancing curve to this extra channel....

Tweak the Mask



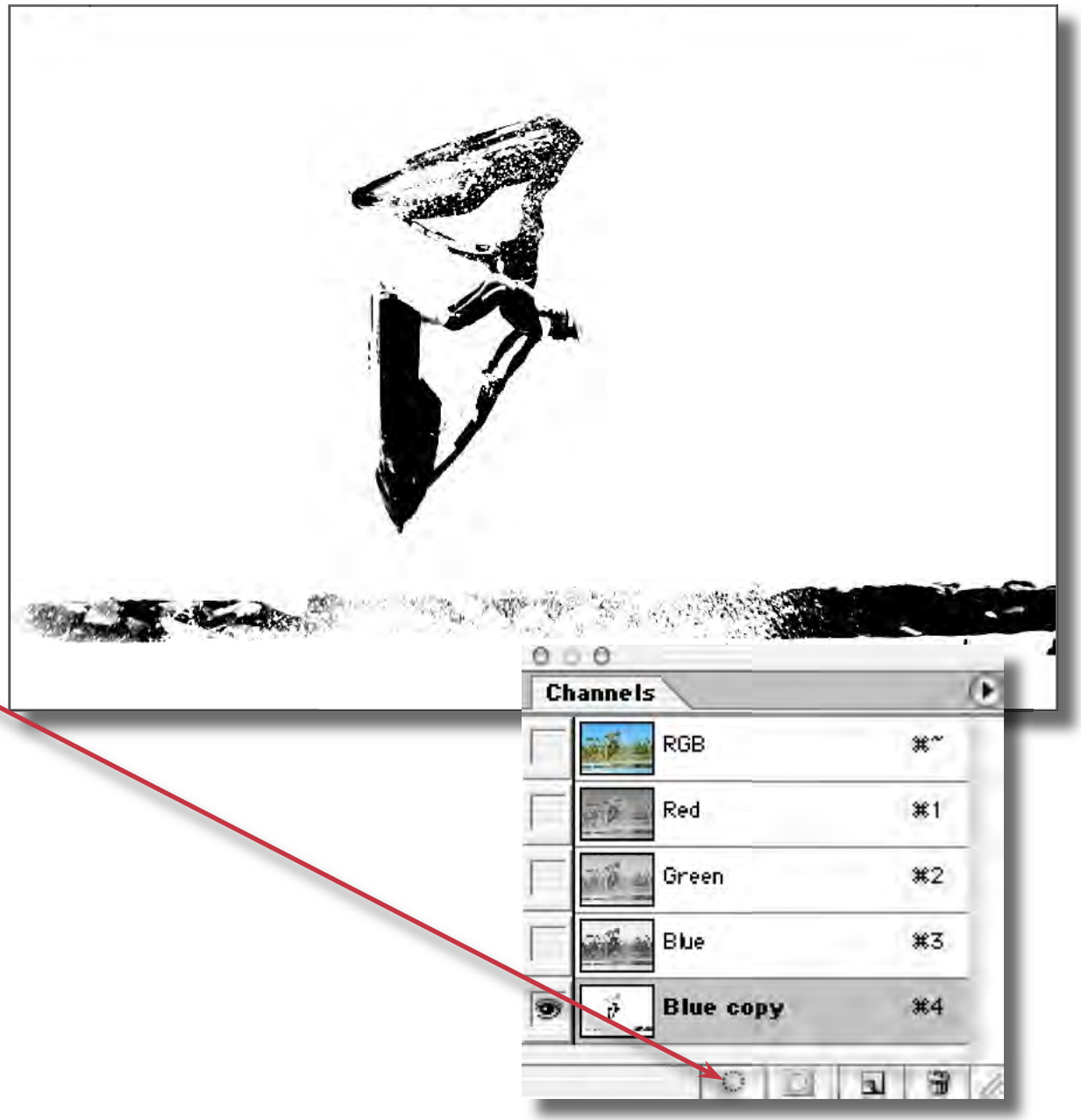
With the Blue channel selected, run Curves : Image-> Adjustments-> Curves... Apply a rather severe contrast curve that renders the background sky white and most of the riders black...

We need to clean up this mask a bit. Use the Dodge tool to force the trees right behind the riders to white. We can leave the rocks at the bottom alone but the rest of the trees can be painted out to white with a large brush. We would like the trees and sky to be all white and the riders to be black. There's no need to get super critical at this point though, just clean things up in the background...

High Contrast Mask

When you're done cleaning up the mask you should have something that looks like this. This mask can be used for various things and its often a first step in any color control strategy. We will utilize this mask in combination with "Advanced Blending" options for the operations in the following pages.

Activate the mask as a selection by clicking on the selection icon at the bottom of the Channels palette when you have the "Blue copy" channel highlighted...



Overlay Duplicate

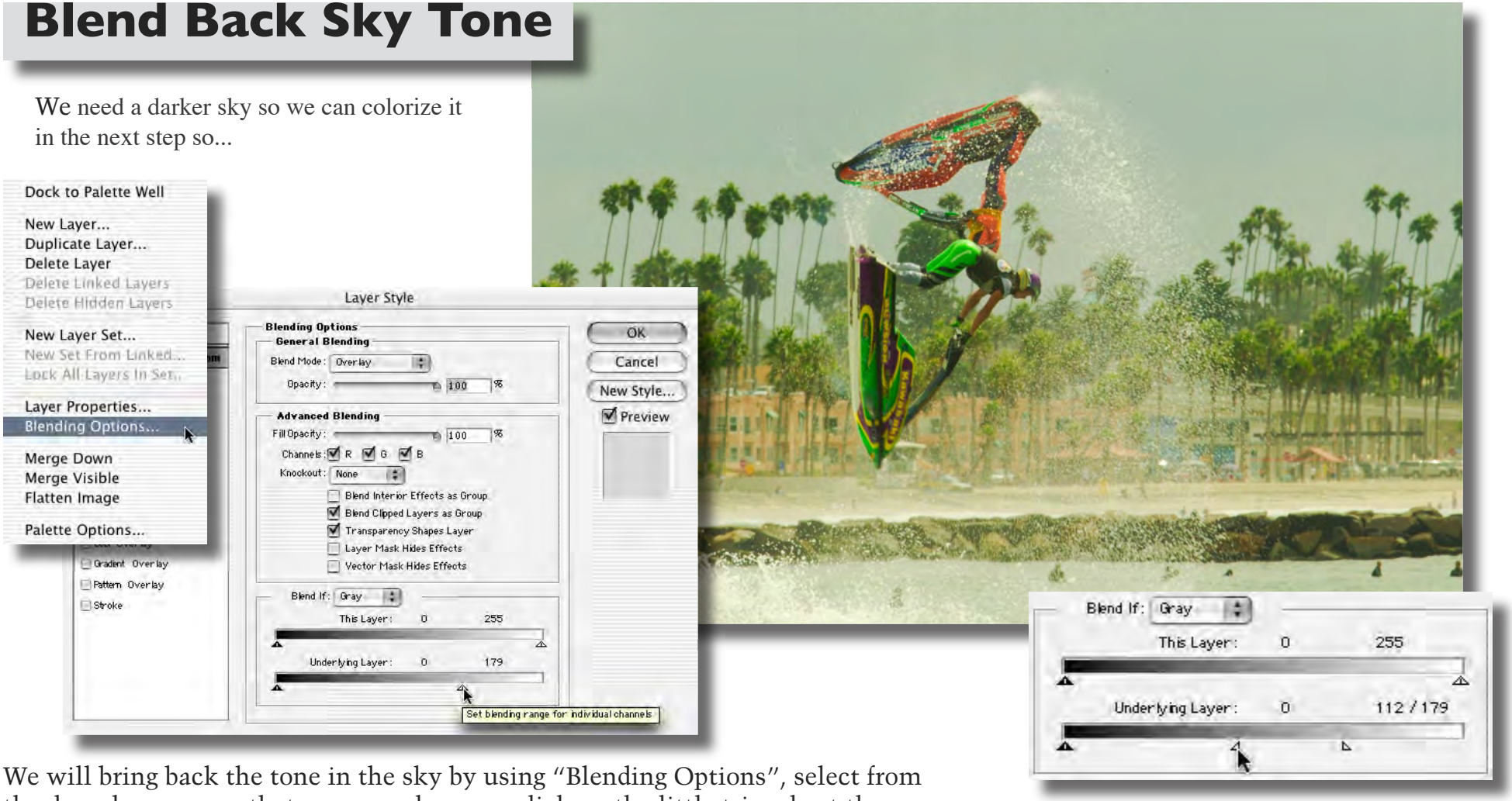
To put some "snap" back into the image you can apply the image back over itself in Overlay or Hard Light mode. The simplest way to do this is to duplicate the background layer by dragging it to the "new Layer" icon at the bottom of the Layers palette (see red arrow). Then change the apply mode to "Overlay" by selecting from the drop down menu...

Now we need to protect the riders from the extra contrast because they get too dark! Remember the selection we activated from our new mask channel? We can put that into a layer mask by clicking on the layer mask icon at the bottom of the Layers palette.

The riders are now back to normal and the background trees look more like they are in direct sunlight...

Blend Back Sky Tone

We need a darker sky so we can colorize it in the next step so...

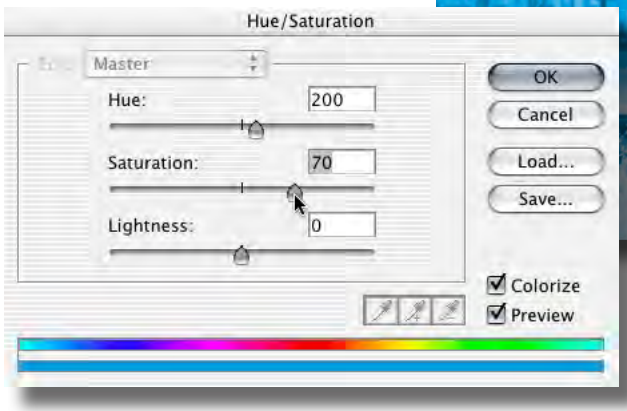


We will bring back the tone in the sky by using "Blending Options", select from the drop down menu that appears when you click on the little triangle at the upper right in the "Layers" palette. Once you do this the Layer Styles dialog opens. We are concerned only with the "Blend If" section at the lower part of the dialog window. To bring back the darker sky move the "Underlying Layer" white slider towards the left. The dark sky will suddenly appear when you reach the appropriate value in the slider's gradient. To soften the abrupt transition "split" the slider by holding down the "option/Alt" key and pushing the two halves of the slider apart. This is a short-cut method for using the image luminance to mask the Overlay layer effect- we are blending back the original layers sky (which is still a higher value - hence the use of the light slider) and using the layer mask to protect the darker riders. The trees still receive the contrast bump from the Overlay layer.

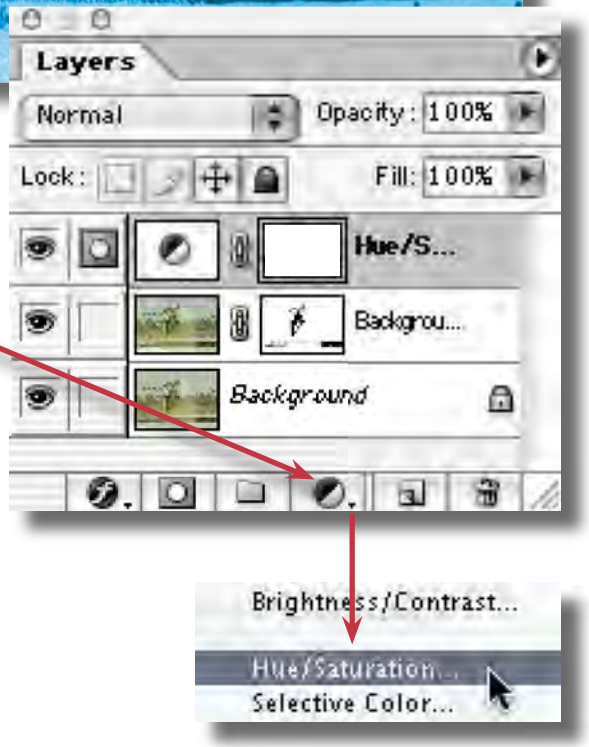
Now we need to make the sky blue...

Colorize

Create a "Hue/Saturation" adjustment layer to colorize everything as a first step to creating the blue sky.

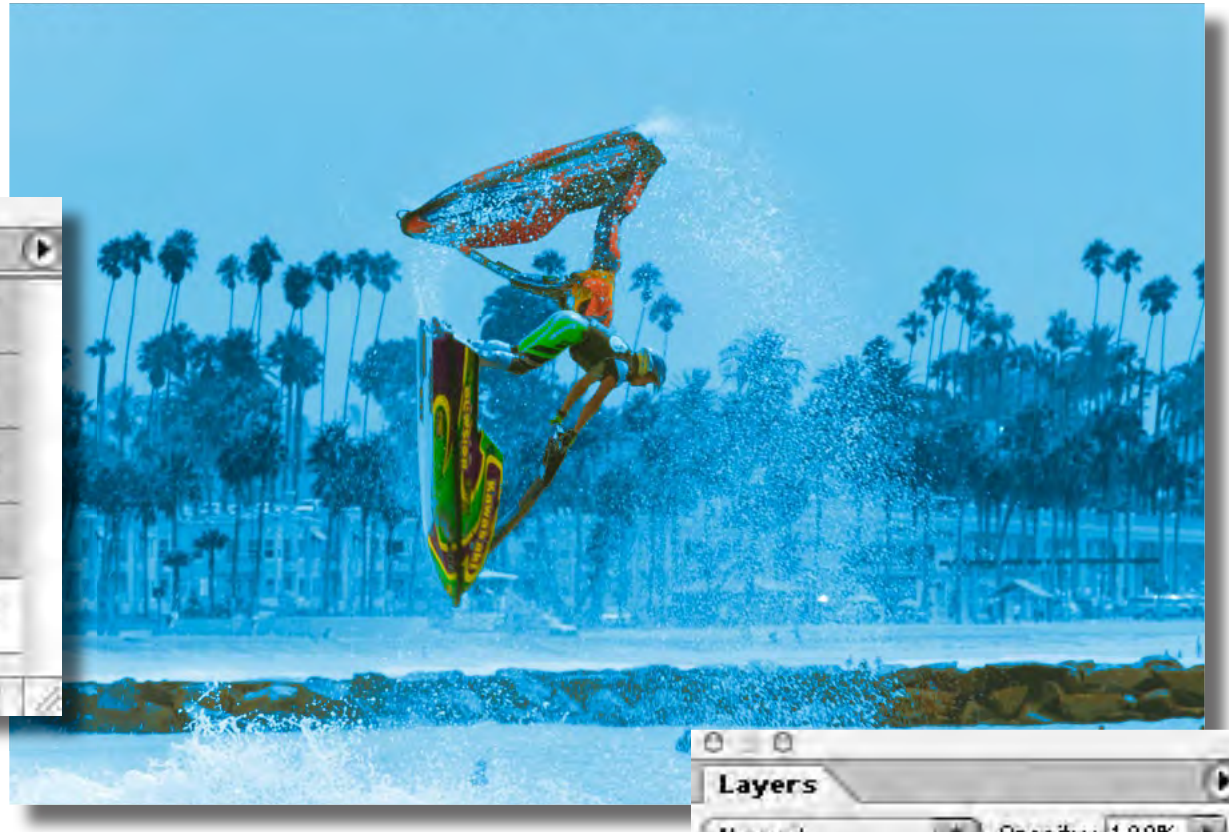


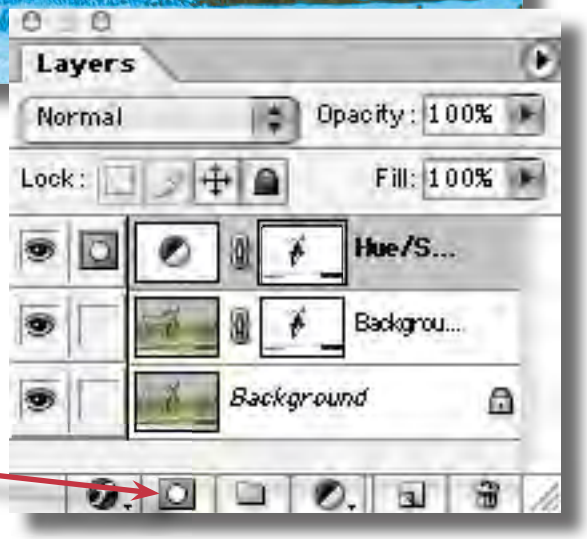
Select "Hue/Saturation" from the Adjustment Layer icon at the bottom of the Layers palette.



Check the "Colorize" checkbox in the Hue/Saturation dialog and move the Hue slider to just right of center into the blue region and the saturation slider to the right until you get the intensity of blue we need in the sky. This type of colorizing will help us get the subtle edge transitions between the palm fronds and the clear sky once we blend back the color of the non-sky elements in the image. Again the combination of Blending Options and Layer masks will be the key to making this work...

Duplicate Mask



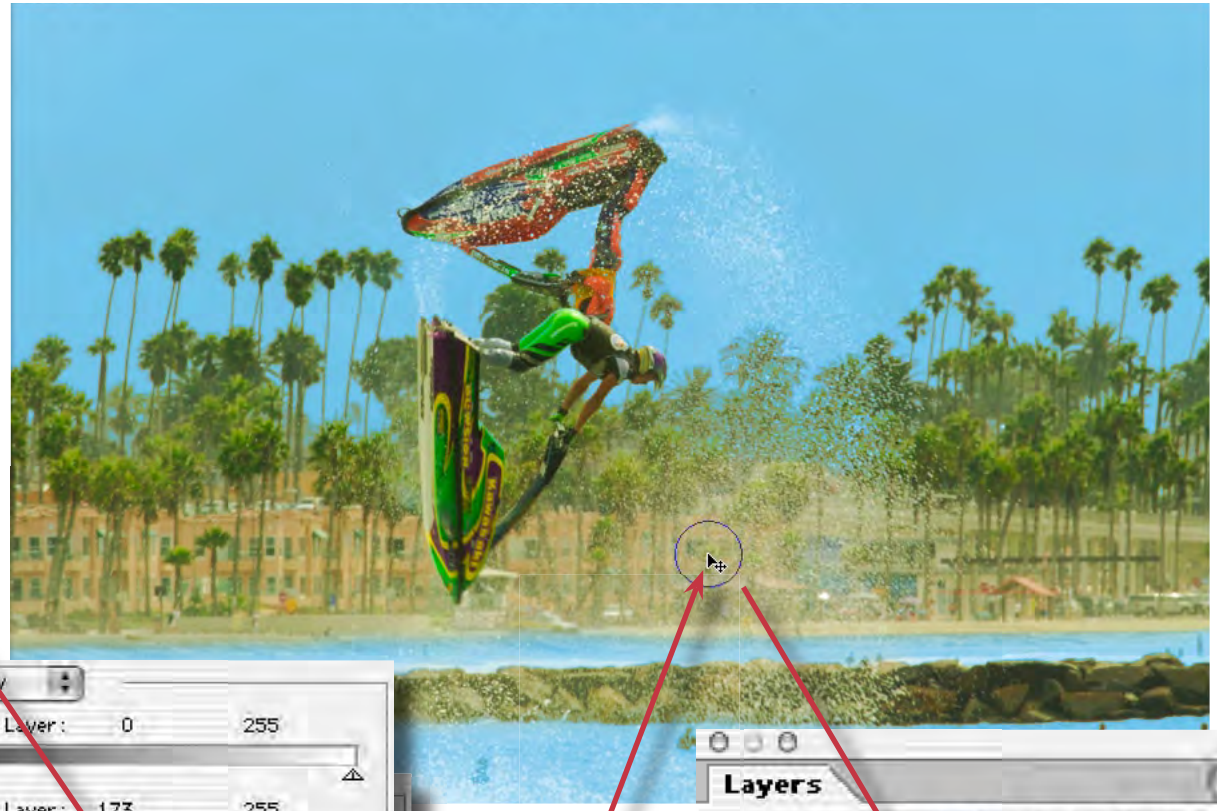


Lets start by copying our channel mask into the layer mask for the "colorize" layer. First, drag the current layer mask to the trash icon at the bottom of the Layers palette. You'll be asked whether you want to apply or discard the mask – pick "Discard" and click "OK". Now select the Blue copy channel and click on the selection icon or simply "Cmd/option" click on the Blue copy channel. With this selection loaded, click on the layer mask icon at the bottom of the Layers palette.

The selection is put into the layer mask for the adjustment layer and the riders are mostly protected from the colorizing effect - this doesn't quite go far enough but it puts something into the layer mask that will help us when we edit the mask a bit later. Next we'll take another trip into Blending Options to bring back the trees...

Blend Back Trees

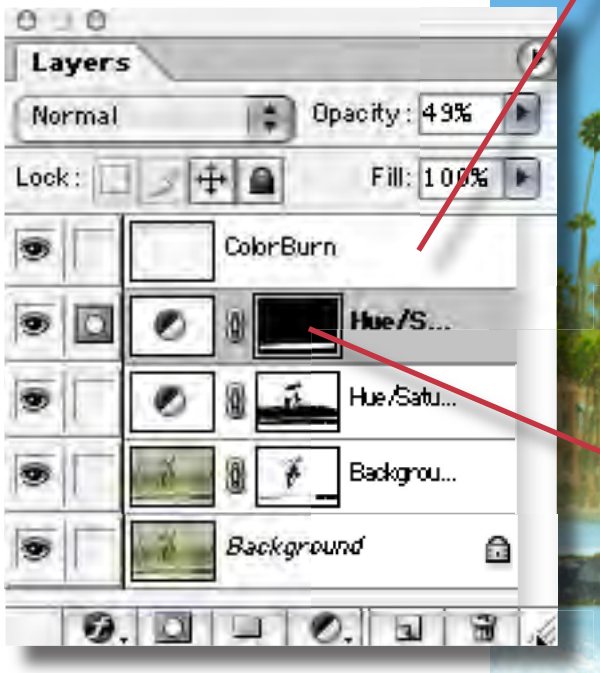
Select "Blending Options" from the palette options drop down, accessed from the little triangle at the upper right corner of the Layers palette. Move the black "Underlying Layer" slider to the right until the trees show up. We need to soften the transition again so... "split" the slider triangle by holding down "option/Alt" and pushing the halves apart.

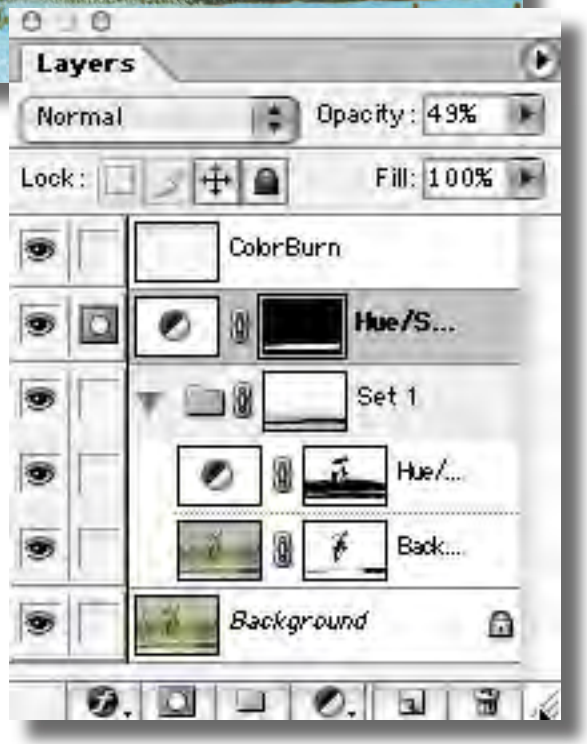


There are still some areas that need to be brought back – paint into the layer mask with black and completely hide the colorize effect from the underlying layer. You can get a pretty seamless composite this way!

We're not quite done yet... the sky and water are a little too uniformly "blue" and it looks just a little fake – like one of those tourist postcards...

Final Touches





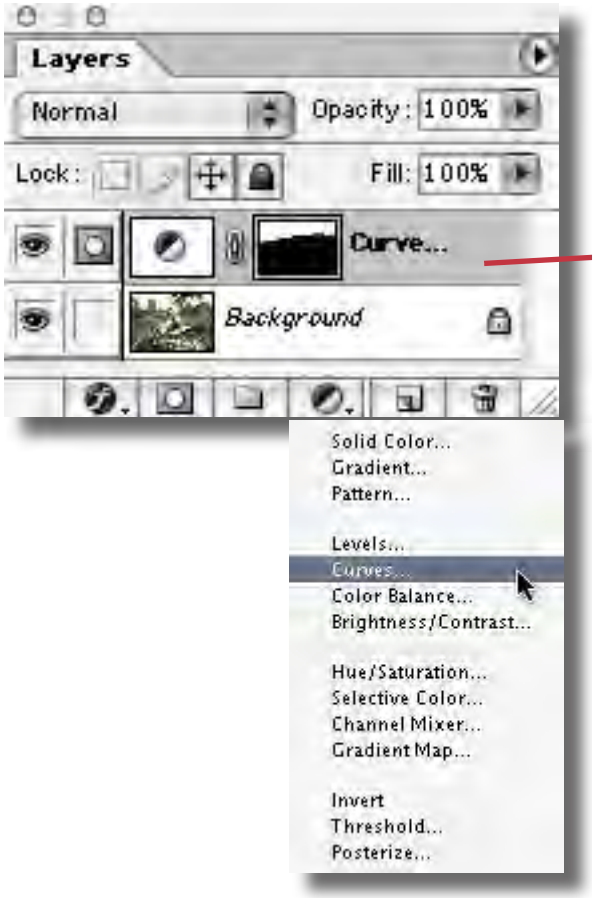
There are a number of fine tuning options we might want to explore at this point. We can put a gradient into the sky to give it a little more variety – make a new layer, change the apply mode to "Color Burn" and drag a black "foreground to transparent" gradient into the top edge at maybe 20% opacity. You can further adjust the effect by using the opacity slider in the layers palette. The rocks look a little too close to the same green hue as the other background elements and this also makes it look a little colorized. We can put a "Hue/Saturation" adjustment layer in to de-saturate just the rocks – hold down option/Alt when you select the new Adjustment layer from the adjustment layer icon and you'll get a black layer mask, move the "Saturation" slider all the way to the left and then paint into the layer mask with white in the area of the rocks. You'll notice that in the Layers palette to the right I've placed the "contrast" and "colorize" layers into a "Layer Set" so that I could knock back both layers with one mask. The easiest way to do this is to select the "Hue/Sat" colorize layer, then link it to the "contrast" layer by clicking in the empty spot to the left of the layer thumbnail– then select "New Set from Linked" in the layer options drop down.

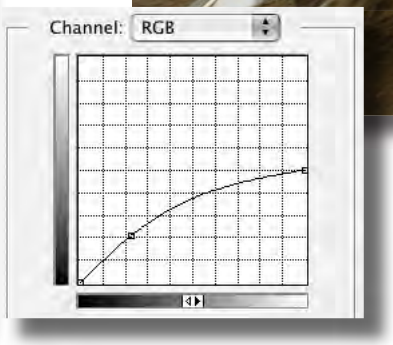
Fix a White Sky

In the previous example we fixed a gray sky - this time lets see what we can do with a white "blown out" sky! This one is tricky because the trees in the background are just a little fuzzy and getting the blurry edges to blend in with a new sky requires some trickiness on our part. We can forgive Frank for this oh so slight lack of focus because its pretty clear that his feet had to be right next to the motorcycles rear tire - practically in the path- as the bike rushed past him! A very dynamic shot like this deserves a little more dynamic sky!

Despite what looks like a complex composite job this image is actually easier with a simpler layer structure! Layer apply modes and Blending Options come to our rescue again as we shall see in the next few pages...

Adjust Sky to Gray

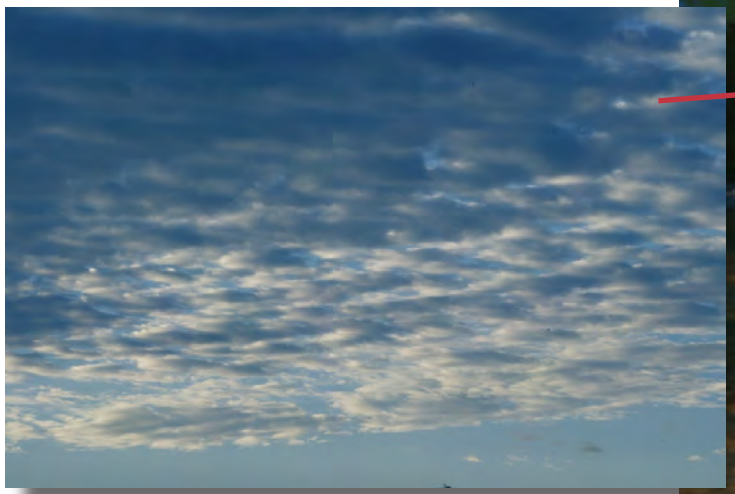




The first little trick is to turn the white of the sky into medium gray.

Make a new curves adjustment layer by clicking on the adjustment layer icon and selecting "Curves" from the resulting drop down menu. Set the curve as shown to the left - now simply paint out the effect from the whole foreground by painting into the layer mask with black. Leave the trees and the top of the frame alone.

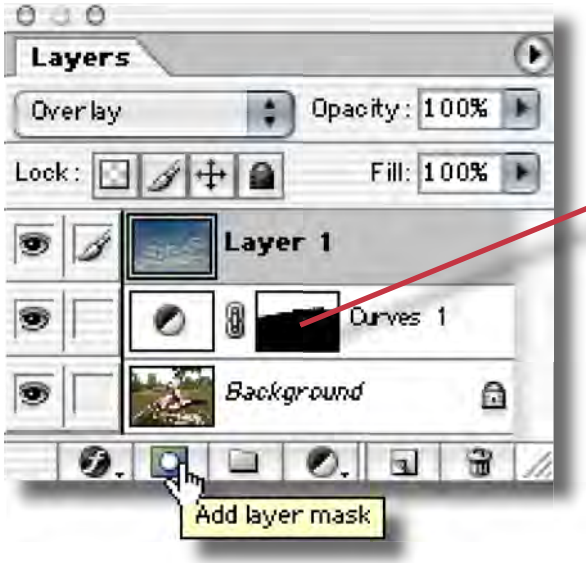
Drag in Clouds



Open the "Dark Clouds" image and, using the "move" tool drag it onto the MX Rider. Change the layer apply mode to Overlay.

The darks and lights of the "clouds' are blended everywhere into the image but they are most strongly blended into the medium gray of the formerly white sky. We will copy the mask from our adjustment layer to confine the blended clouds to the tress and sky region of the image...

Load Selection



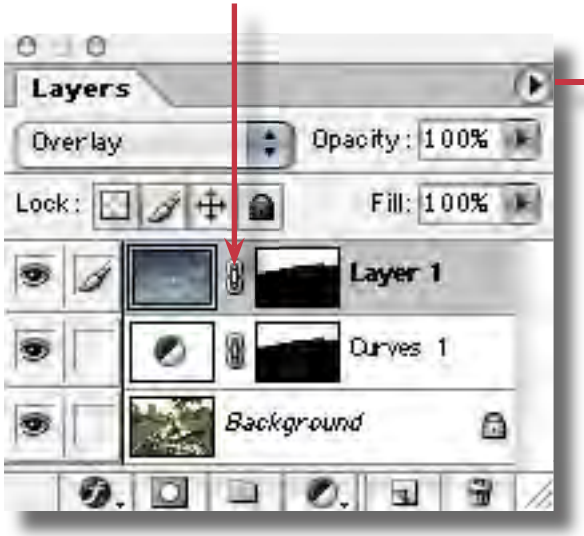
Cmd/option click

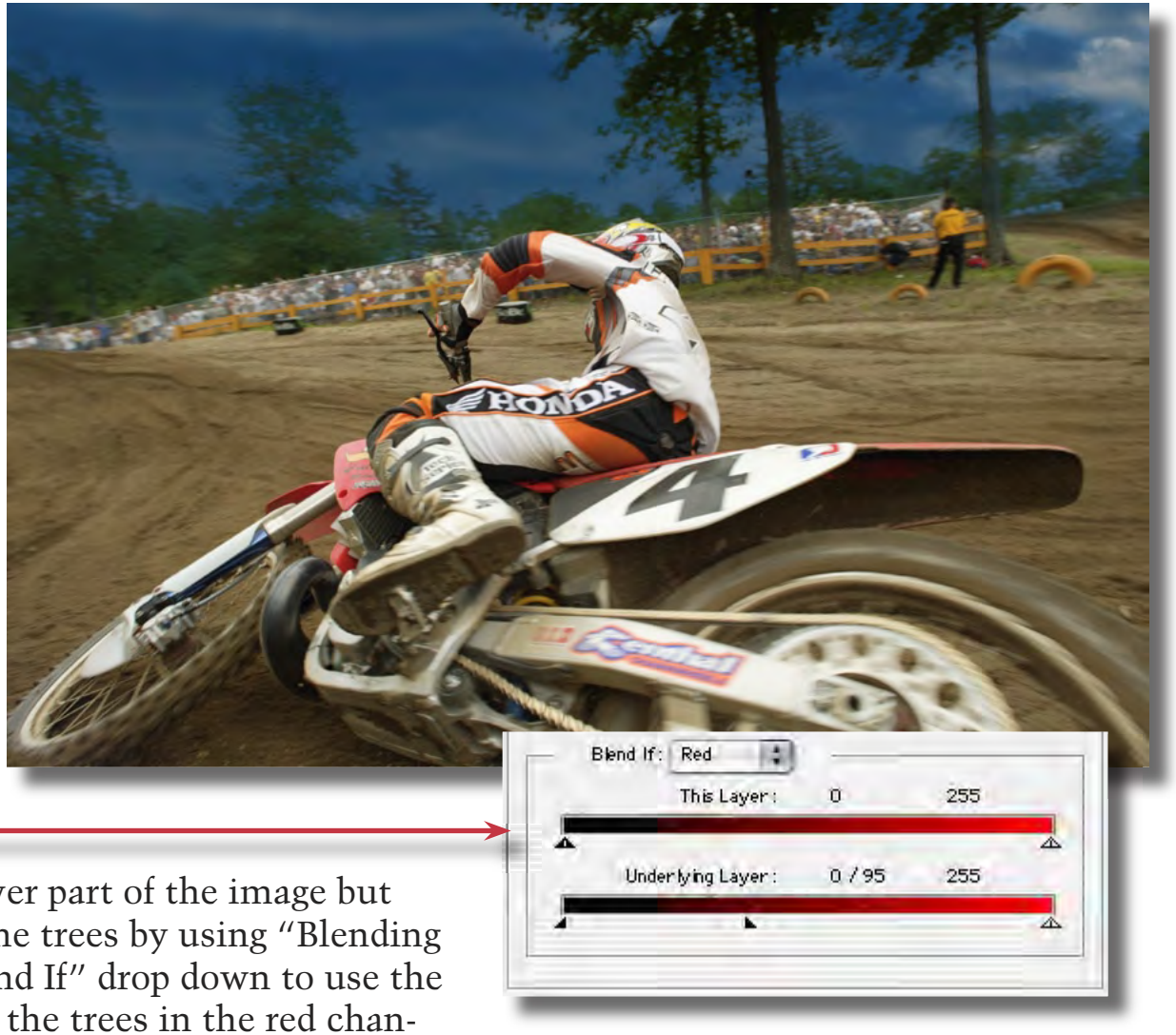
There are a couple of methods of copying the mask. The first you are already familiar with – Cmd/option click on the adjustment layer mask to load the selection, then click on the mask icon at the bottom of the Layers palette while the top "Clouds" layer is highlighted.

Another, one step, method is to simply drag the adjustment layer mask onto the layer mask icon while the top "Clouds" layer is highlighted. Either way the mask is copied into the top layer ...

Blend Back Trees

We'll prepare for positioning the clouds by unlinking the layer mask to the image – click on the little link icon to disable linking.

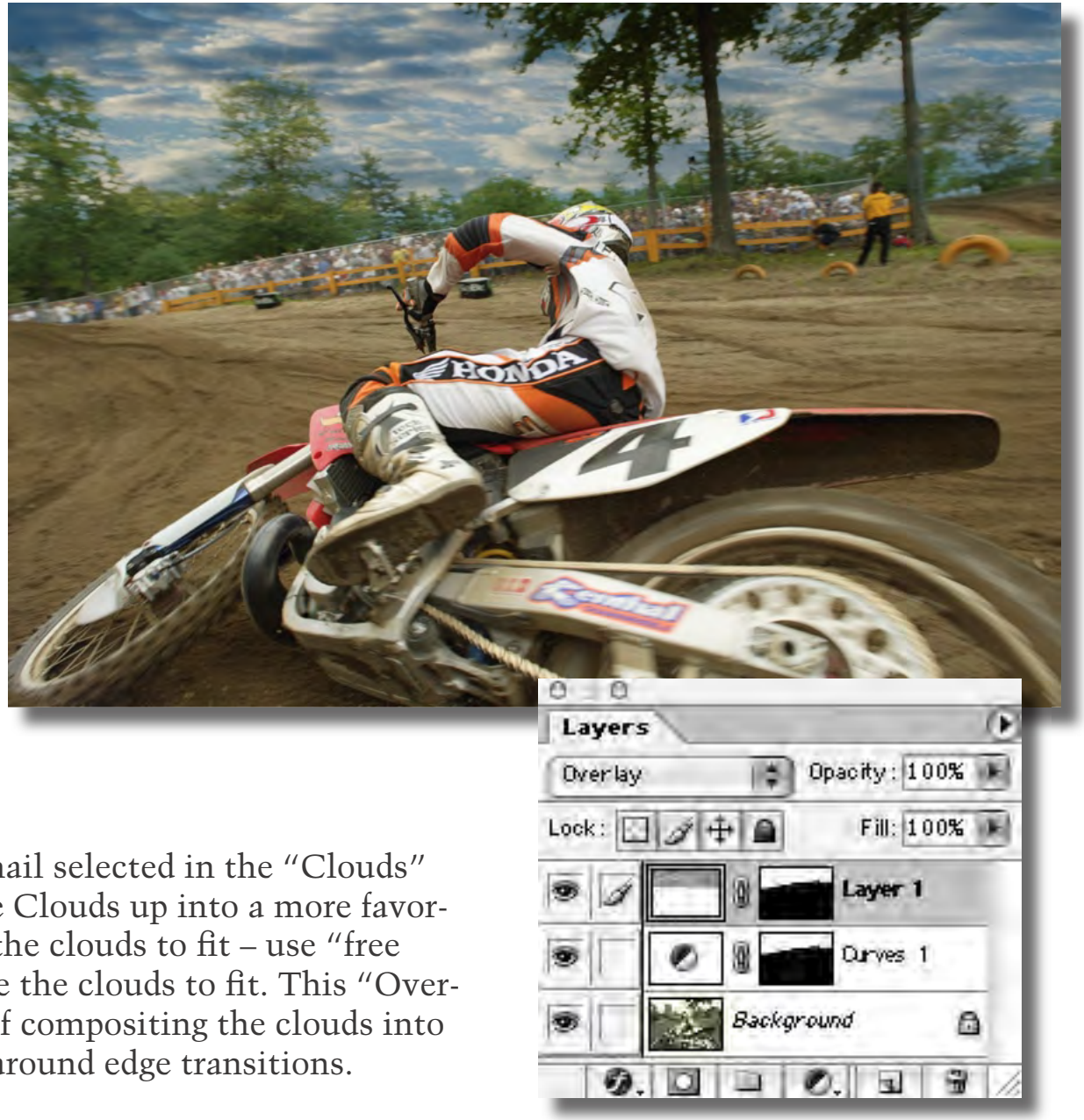




The layer mask is now protecting the lower part of the image but we can blend back much of the color of the trees by using "Blending Options". This time lets change the "Blend If" drop down to use the "Red" channel– there is more contrast in the trees in the red channel and this helps us in the blend. Set the black triangle slider as shown with a wide split. We want to avoid seeing any halos around the tree edges.

Next we will move the clouds into position...

Position Sky



Make sure you have the "image" thumbnail selected in the "Clouds" layer and use the "Move" tool to drag the Clouds up into a more favorable position. You might want to re-size the clouds to fit – use "free Transform" (Cmd/option - "T") to change the clouds to fit. This "Overlay" blending is the most seamless way of compositing the clouds into this white sky and avoiding white halos around edge transitions.

Another Gray Day

Here is yet another action shot from Frank! This one looks like it was shot in the fog!

We have to wake up the colors in this shot quite a bit and while we're at it we will add in a nice new sky that has some cirrus clouds to match the direction of the action. This transformation combines some of the techniques of the previous 2 images.

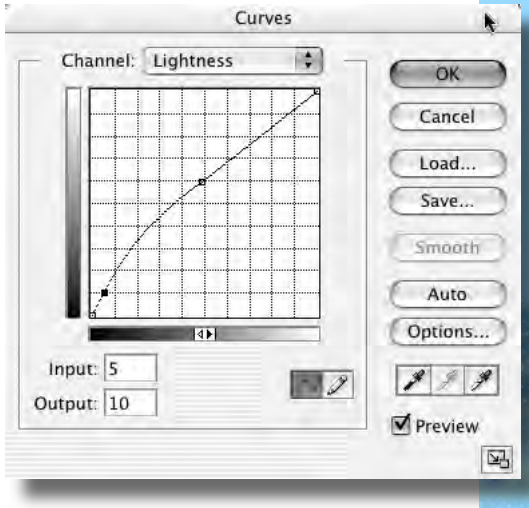
We can see here that, as far as the capabilities of Photoshop go, there are no bad originals – only bad Photoshop operators!

Toggle to the Final Version

Lab Color Adjust

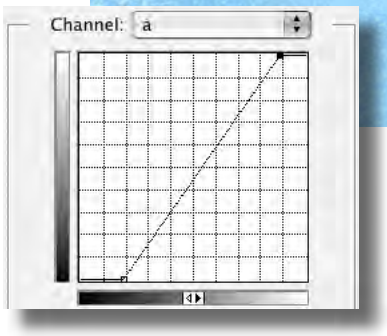
Frank does all his digital captures with a Canon D30 using "Raw" mode. This allows him to process out a 16 bit RGB file for maximum quality and flexibility. This image is saved here as a 16 bit Tiff – our initial color correction moves can be accomplished in 16 bits to insure maximum quality.

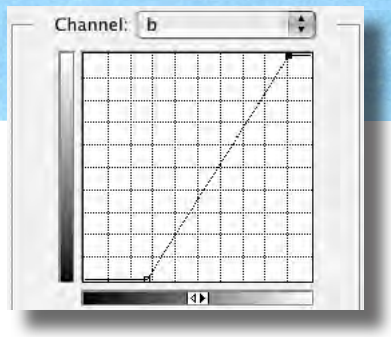
Whenever we have dull colors that need to "wake up" we can utilize LAB to increase saturation and color variation more effectively than doing Hue rotations in Hue/Saturation. First, convert the RGB file to LAB : Image->Mode-> Lab Color, then we will call up Curves and apply directly to the image (we have no layer capability in 16 bit mode so we can't use an adjustment layer) - do: Image-> Adjustments-> Curves...



LAB Curves are quite a bit different than RGB or CMYK curves. The "L" or "Lightness" channel can be treated similarly to increase brightness and contrast but color is separated into the A & B channels in a very different way. The "A" channel contains red-green color variation. The "B" channel contains the blue-yellow color variation. The brightness in A runs from the extreme outer limits of color along a red-green vector passing through gray (neither red nor green) at the middle of the curve. The same for the B channel with the vector along the blue yellow spectrum.

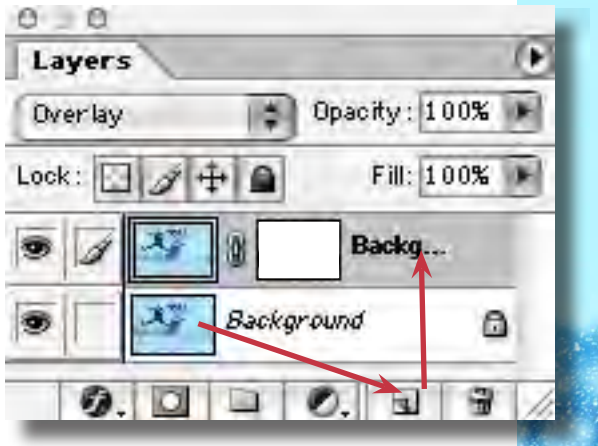
Editing color in LAB is extremely tricky BUT increasing the saturation and color variation is easy without affecting brightness or contrast. We accomplish this simply by moving the end points in a straight line curve to make the line more vertical. Moving this new line right to left will shift or introduce a cast along the color vector for that channel. In other words, a more vertical line in the "A" channel has greater color variation/saturation in reds and greens with the position of that line right or left of center determining whether you get a red bias or green bias in the image.





Set the lines in the A & B channels as shown above and you can get some decent saturation and turn the gray into blue. We still need more contrast in our subject – its hard to get enough contrast using a curve in the "Lightness" channel because we end up creating a white sky and we need that tone there for the color. We'll use another trick to put some snap into the rider...

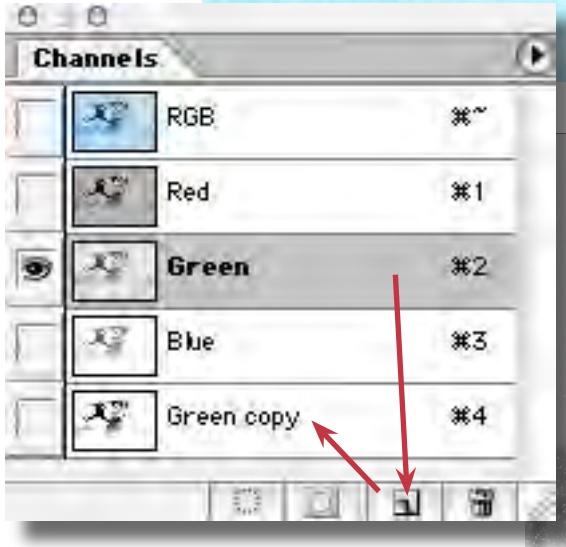
8 Bits & Overlay



After the LAB correction, change back to RGB and 8 bits: Image-> Mode-> RGB, *then*: Image-> Mode-> 8 bits/Channel

Now we can use layers and layer masks. Duplicate the background layer and change the layer apply mode to overlay! Contrast galore – but we don't need so much in the dark parts of the figure nor in the sky!

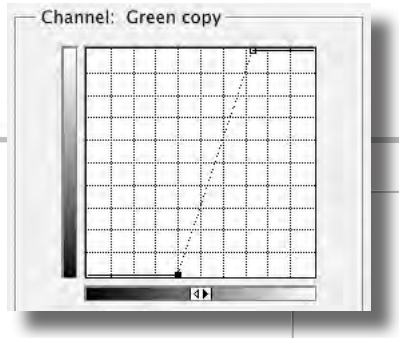
Let's look to see if we can't use a channel to build a mask that protects the figure from the Overlay induced contrast. The green channel looks to have the best mix of tones for what we need so – copy the green channel by dragging it to the new channel icon at the bottom of the Channels palette...



Edit the Mask

Now we go to work on this green copy to create our mask.

Pull up the "Curves" dialog and force tones to black and white to build contrast. The pier behind the rider could use a little snap in the image so lets remove the dark spots in that area – use the Dodge tool or paint white into the mask until it starts to look like the example at the lower right

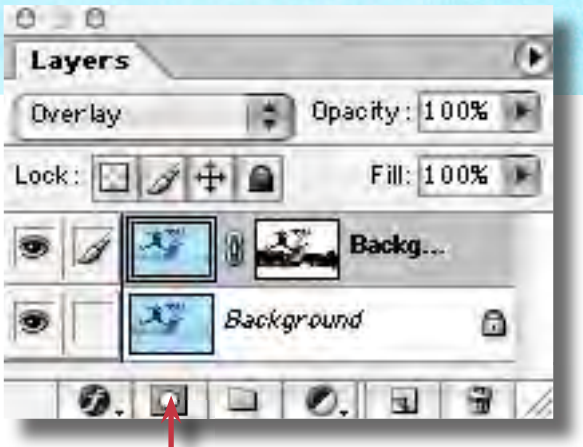


Copy Mask to Layer

Load a selection from the newly edited "Green copy" mask channel by clicking on the selection icon at the bottom if the Channels palette. Return to the top layer and make sure that its highlighted. Now create a new layer mask based on the active selection by clicking on the mask icon at the bottom of the layers palette. Now we've protected the dark tones of the rider and the orange strips of the Jet Ski but we still have added contrast in the green and white areas of the Jet Ski.

Now we need to retrieve the tonality in the sky and water...

load selection from channel



new layer mask from selection

Blend Back Sky

If you haven't guessed by now this is a job for the "Blending Options" accessible from the little triangle at the upper right corner of the Layers palette.

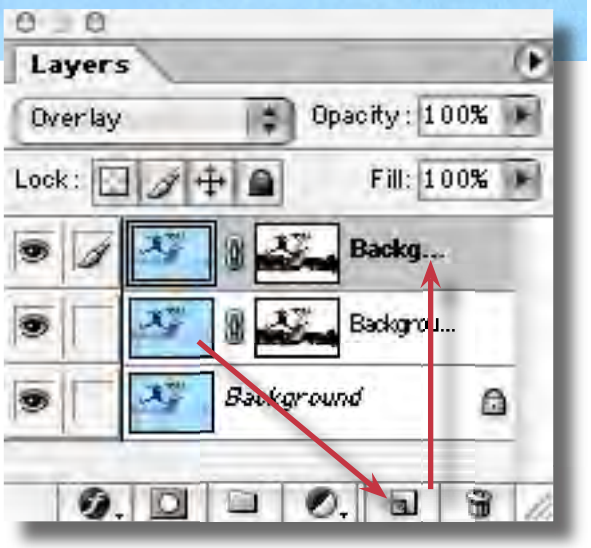
This time we're going to use the Blue channels as our "Blend If" source. It doesn't really matter if you use "This Layer " or the "Underlying Layer" to do the blend. We want to move the white slider just enough to blend back the sky but not so far that we lose the contrast in the white part of the Jet Ski completely. Remember to "split" the slider to feather the transition...

Double the Overlay

We can build a little more snap into the highlights by doubling up on the Overlay layer. Drag the top layer onto the layer icon at the bottom of the Layers palette. You can step back and forth to the previous page to see the difference. If you need more, repeat this procedure.

I found that I didn't like the contrast build up in the background pier so I ended up painting that out in the layer mask. Using the combination of layer mask and blending options you can isolate the contrast enhancing effect to the Jet Ski and the riders logo patch - it really helps to pop him off the background and gives the impression of a more contrasty sunlight scene.

Now its time to add the new sky...



Drag in a Sky

Open the "Sky.Tiff" image and use the Move tool to drag it onto the Jet-Ski Freestyle document. It will show up as the top layer covering up the image. Change the apply mode to "Overlay" – now you can see through to the image below. Re size and position the sky so the clouds appear above the level of the pier.

We can see that the blue sky has increased the saturation of the blue and the contrast in the clouds needs a little help. We can fix this by turning the sky into a B+W image and increasing its contrast. We will use the Channel Mixer to do the conversion...

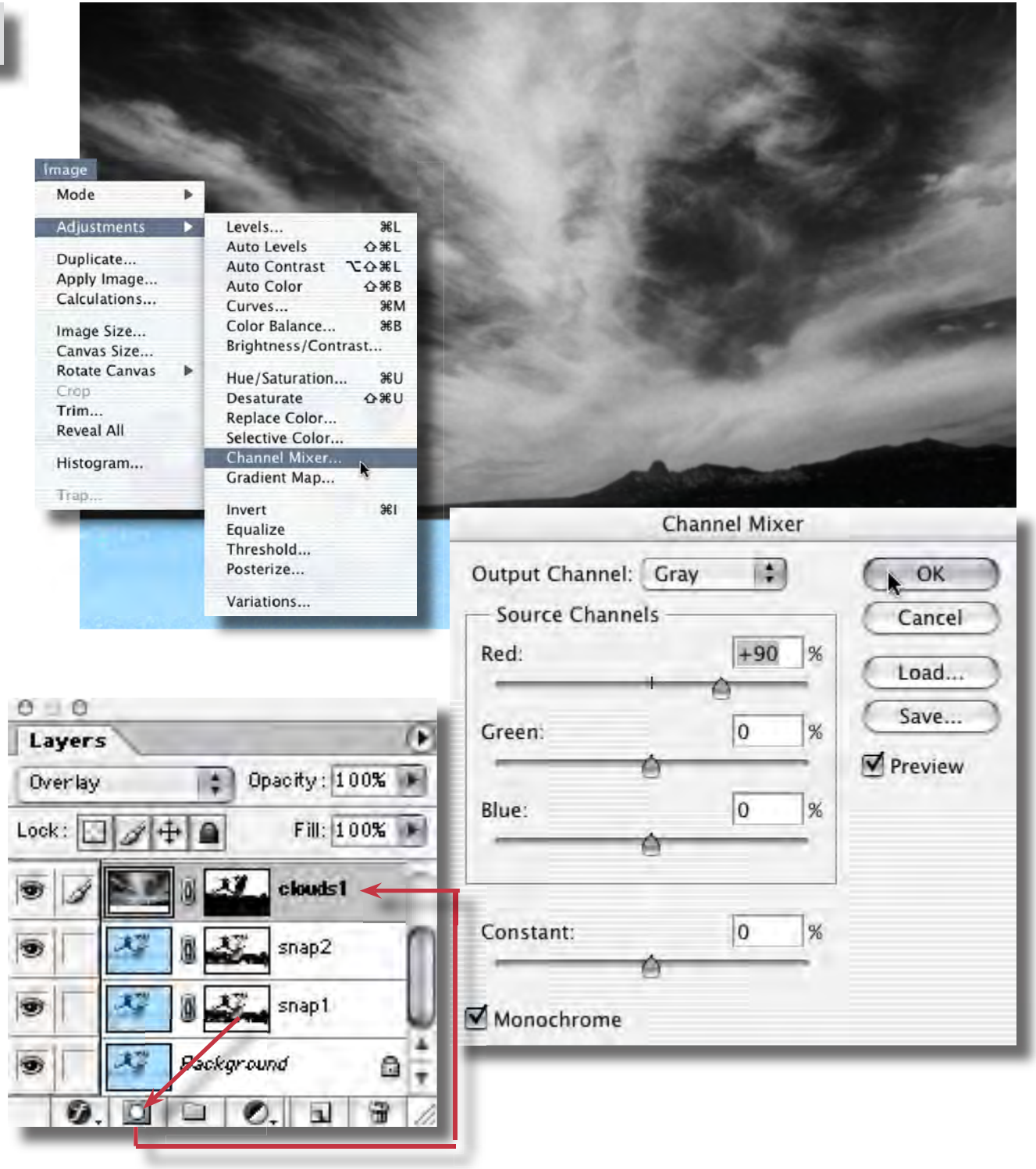
Channel Mixer

The Channel Mixer offers a great way to create a B+W image by "mixing" the channels - check the "Monochrome" checkbox at the bottom of the dialog and you can adjust the sliders for Red Green and Blue to blend the different grayscale channels into a monochrome version of the image. The red channel has the most contrast in the sky so we will use that.

We can preview the effect while the layer is in Overlay mode -- I'm showing the normal layer here to illustrate the monochrome conversion. The black sky will deliver more contrast to the underlying image in Overlay mode as well as more detail in the clouds.

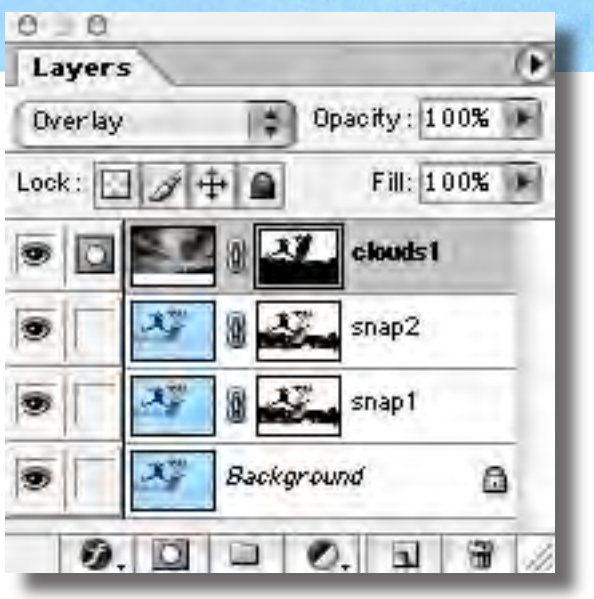
Next we need to copy the layer mask from the other layers into this one. Drag one of the layer masks from the rider layers onto the mask icon while the top layer is highlighted. The top layer will now have a duplicate of the mask that protects the rider and Jet-Ski. You'll need to paint out the lower half of the mask to hide the mountains.

Next we'll use the familiar "Blend Options" to finesse the composite...



Final Blend

The sky is currently blending into the orange stripe and darkening a little bit of the water "spray". We'll use the "Blend Options" with "Red" in the "Blend If" drop down to bring back the full strength orange and reveal more of the white water spray.



Our composite is almost complete! We can add a few fine tuning touches though...

Final Touches

I've added a little gradation at the top and bottom to give the scene a little more tonal variation and sense of drama.

Duplicate the Sky Overlay layer and paint a black to transparent gradient into the layer mask so that you darken only the top of the sky. The water is darkened with a simple dark blue gradient layer applied with multiply. We can add a gray overlay layer on top of everything to do little dodge and burn tweaks here and there and finish off by adding a little noise into the dodge and burn layer (not shown here to save space in the image). You might want to blur the sky layer just a little to hide the film grain from the original shot and keep the focus on the rider.

The little finishing touches can help to polish the image to a fine glow...

Toggle to the Original

Varis PhotoMedia Tutorials

Thank you

I hope you enjoyed this tutorial. The techniques outlined here represent just the tip of the iceberg. Photoshop is a very deep application - a person could spend years studying it and there will always be more to learn. If all this seems a little overwhelming, take a break, do what you feel comfortable doing in Photoshop and return to this tutorial again later on. Often, it takes several weeks for a particular technique to sink in so give it time.

I have other tutorials available online (navigate to the methods section), some are free and some are available for a modest charge. See tutorials and some examples of my work at:

http://www.varis.com

There are many learning resourses available on the web - here are a few other sites with good information:

http://www.russellbrown.com

http://www.creativepro.com

http://luminous-landscape.com/

http://www.imaging-resource.com/HOWTO.HTM

http://www.photoworkshop.com/

http://www.adobe.com/misc/training.html

http://studio.adobe.com/expertcenter/photoshop/main.html

http://www.ledet.com/margulis/articles.html

http://www.steves-digicams.com/

http://www.photoshopuser.com/

http://www.handson.nu/

http://photoshopgurus.info/

Thes last two links are typical of the majority of Photoshop tutorial sites - they are focused on cool graphics effects not photography. You might want to look over this material anyway - sometimes you can learn alot about basic functions in Photoshop.

I'm always trying to improve these materials and I'm always open to your feedback. You may contatct me via email at:

varis@varis.com

best regards, Lee Varis 2002