ANR CS
Designers' Guide to Print

*T*ips for creating a design file that prints well

University *of* California
Agriculture and Natural Resources

Communication Services and Information Technology

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Getting started

We recommend using Adobe InDesign CS, the industry standard design software. Some designers still prefer to use QuarkXpress. When in doubt about whether your software is compatible with your commercial print vendor's, check with your print representative or the Communication Services publication manager. Please do not submit print-ready files in Microsoft Word or PowerPoint.

Page bleed

Running graphics or color out beyond the edge of the page is referred to as a "bleed." A commercial print vendor will print the bleed job on an oversized sheet and then trim it down to its final size. Commonly, people design artwork to fit a publication's final trim size. This is fine if your design has a plain white background, but if the design requires edge-to-edge printing your background image must include a bleed. When print quantities will be over 1500 copies, it becomes economically feasible to have a bleed. If you use bleeds, make sure they run $\frac{1}{8}$" off the edge of the page.

Master pages

In InDesign, master pages allow you to create standard page templates you can apply throughout your layout. Master pages are an excellent way to ensure consistency throughout your file and they allow you to make design changes globally. Page numbers, headers, footers, and background screens are just some of the elements you should try putting on master pages.

Styles

Learn to use styles. They will save time and ensure design consistency throughout the text in your files. Styles allow you to adjust a text attribute by means of a style that will apply to that kind of text element (subhead, running text, etc.) throughout the layout file. You can change the text size, weight, line spacing, and other characteristics globally using paragraph and character styles.

Fonts

Use OS OpenType or Postscript Type 1 fonts when creating your project. For bold or italic, select the named font with that attribute from the font menu rather than clicking the "bold" or "italic" button.

Illustrations

Create your illustrations at final size to keep the line weights and label text sizes consistent. Any resizing of artwork in the page layout software will also resize the line weights and text. Avoid placing large high-resolution scans in your illustration files; instead, integrate the scan and the artwork by placing them separately in the page layout program. You can use the "Convert to Paths" feature in your software to outline the text, eliminating the fonts used in the illustration, but it is a good idea to keep an archive copy of the illustration file with the fonts so that future text edits can be made.

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Preparing photos and graphics for print

Photos and graphics rarely print well unless they've been adjusted specifically for use in print. While the following instructions will help you, we highly recommend that you consult with Communication Services staff on how to get the best print quality from your photos and graphics.

Scanning

We suggest placing scanned images at 100% of size, and no more than 120%. When resizing an image in a layout program, be aware that resizing will affect the image's effective resolution. An image scanned at 300 dpi and placed at 200% has an effective resolution of 150 dpi. Resizing below 50% or above 120% should be done in Photoshop, not InDesign.

Your computer screen does not display accurate color

Unless you have calibrated your monitor using monitor calibration software and hardware, it is unlikely that photos and graphics will print with the same color and density that you see on screen. Don't make crucial color adjustments unless you are confident of your monitor's accuracy. Please consult with Communication Services staff about how to get the best print quality from your photos and graphics.

Use grayscale photos and graphics in black and white publications

Color images can look muddy when printed in black and white. They also require three times the disk space needed for grayscale photos. To get cleaner-looking images with a smaller file size in your black and white print pieces, convert color photos and graphics to grayscale.

File types

EPS is better than WMF

Graphics, clip art, and logos often come in EPS, TIFF, and Windows Metafile (WMF) formats. The best of these is EPS, with TIFF as second best. WMF is good for your office printers but can produce unpredictable output on professional press equipment. Opening a WMF in CorelDraw or Adobe Illustrator and resaving it as an EPS can help eliminate any potential problems. However, you may need to do a little editing to correct problems introduced in the conversion.

Don't use JPEGs or GIFs—first save them to TIFF

Most images come as JPEG so more photos will fit on a disk. However, if you plan on opening the file to edit the photo or set the clipping path, save it as a TIFF before you do that work. The JPEG format throws out image data (and reduces image quality) every time you resave the photo as JPEG. That's how it gets those small file sizes!

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Use the TIFF format for photos with clipping paths rather than EPS

TIFFs can handle clipping paths just as well as EPS, but a tiff is easier to handle and are smaller in file size. The file size can be considerably smaller if you check the LZW compression option in the second dialog box of PhotoShop's Save As process. Unlike JPEG, LZW compression is safe to use since it preserves all of the photo's information and throws nothing away.

Image specifications

Grayscale and color images

300 dpi recommended for the final printed size.

Bitmapped images

600 dpi minimum; 1000 to1800 dpi recommended.

Color space

Use CMYK color space. Files should be saved as CMYK or grayscale (not RGB). Remove any unused colors from drawing and/or layout applications before you send the file to the print vendor. Names of colors should match exactly in your layout, drawing, and image manipulation applications.

Transparency

The use of transparency in electronic files is something designers appreciate. Before an image with transparency can be printed, though, it needs to be flattened. Flattening is the merging of transparent elements into one image layer. When exporting to PDF, use the high-resolution flattening settings. When working with transparency it is critical that all colors be defined correctly as CMYK. Colors that are defined as "spot colors" when they should be CMYK leave white boxes (a common error) in these areas of the printed image.

Gathering files for output

QuarkXpress and Adobe InDesign offer file and font collection features to prepare your files for a print vendor. Please use these features, as this will reduce problems with missing components when you output your project. InDesign calls this feature "Package for Output"; QuarkXpress calls it "Collect for Output."

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Print-ready PDFs

When exporting PDF files for commercial printing it is very important that you select the appropriate PDF Job Options. Acrobat installations come with a number of pre-installed Job Options that you can select based upon your intended use for the resulting PDF file. In Acrobat Distiller, these setting are referred to as Adobe PDF Settings (or Job Options), but depending upon your software program they may also be called Adobe PDF Preset (InDesign), Conversion Settings (located in the Adobe PDF menu item added by Acrobat PDFMaker to many applications), or PDF Default Options (QuarkXPress). Commercial printers often supply their own preferred preset settings, eliminating the guesswork. Please check with your print vendor.

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