



## Conference Poster Development

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Designing an attractive, organized, informative poster is a necessary skill in today's academic and professional worlds. This presentation will give you the technical and design skills necessary to develop professional, high-quality posters to enhance your next poster presentation.

# Topics to be discussed

- **Technical tips:** High-quality graphics make all the difference!
- **Graphic design tips:** Let's make it look great!
- **Poster content:** How much is too much?
- **Copyright and fair use:** When in doubt, ask for permission!

# Technical Tips

- Why is resolution so important?
- Image file formats and quality
- How to set up your own poster in PowerPoint
- When to brand your poster

# Technical Tips

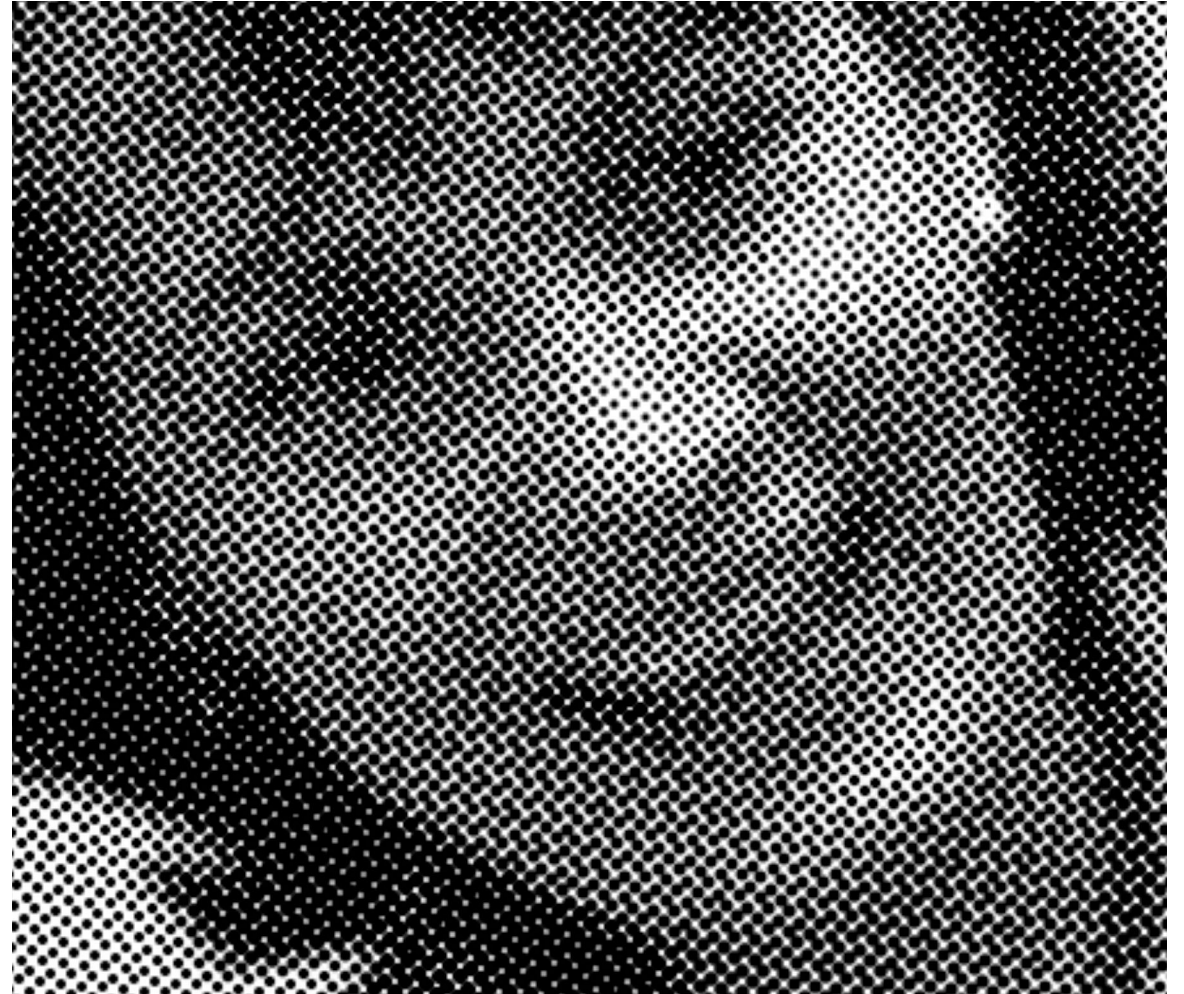
## Resolution

- The amount of information or pixels contained in an image.
- Resolution is measured in DPI (**dots per inch**) or PPI (**pixels per inch**). These are literally the number of dots or pixels that can be placed side by side in a line one inch long. The more dots or pixels, the better the clarity – the higher the resolution – of the image.

# Technical Tips

## Dots Per Inch (DPI)

The image on the right shows you the actual DOTS that are used to print a photograph on a printing press.





# Technical Tips

## Why is resolution SO important for printing?

The higher the resolution of a graphic file, the more **clearly** it will print.

If an image looks **pixelated or blurry** on your screen, **don't use it!**



high resolution

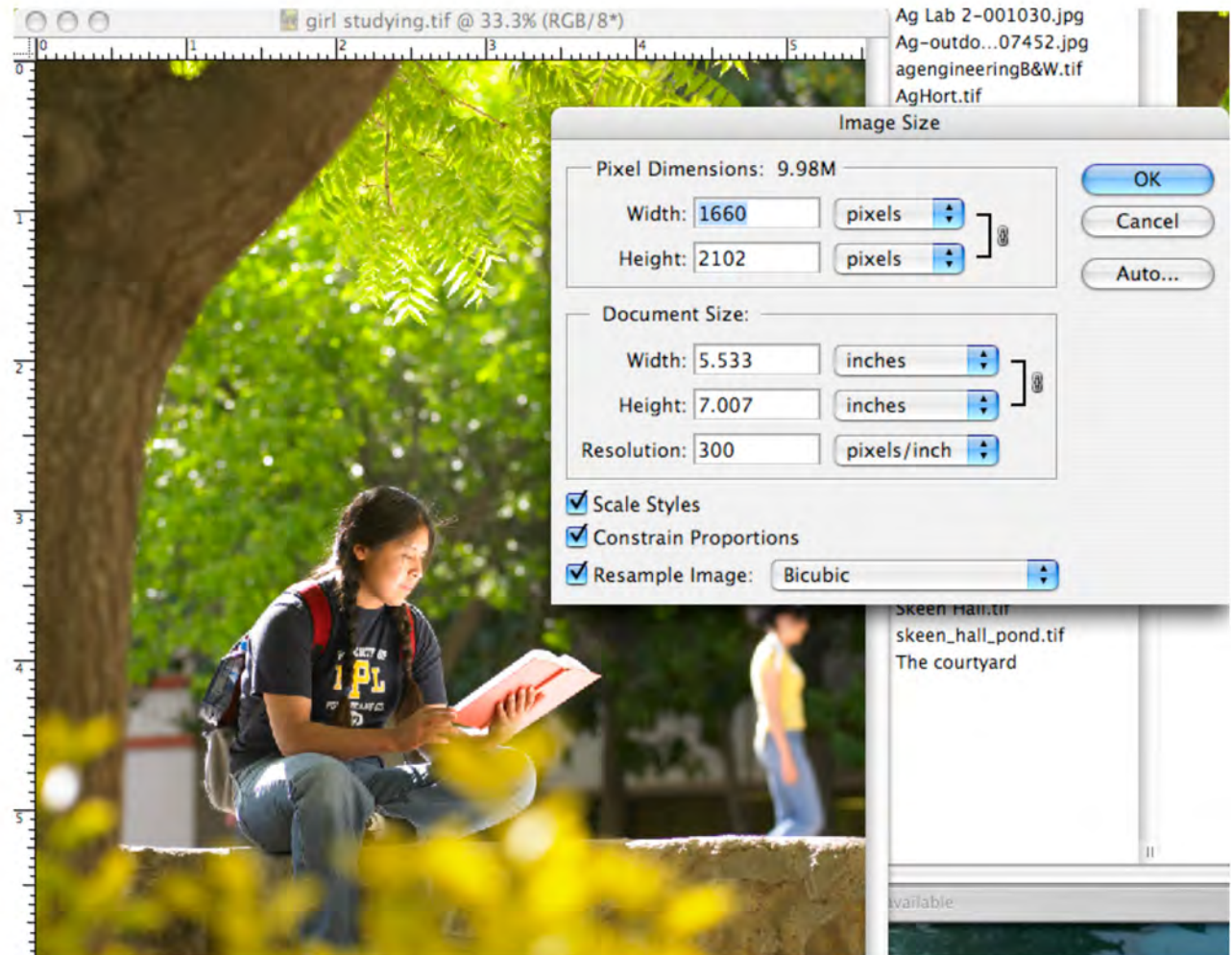


low resolution

# Technical Tips

How do you know when an image has high resolution?

**Tip 1: Photoshop**, a photo editing software, allows you to open the image file and look up the resolution. It should be 300 dpi or higher.





# Technical Tips

## What if you don't have Photoshop?

### **Tip 2: Image is probably low-resolution:**

- if the placed or inserted image is SO small you have to enlarge it
- if the image's file size is smaller than 500KB (kilobyte)

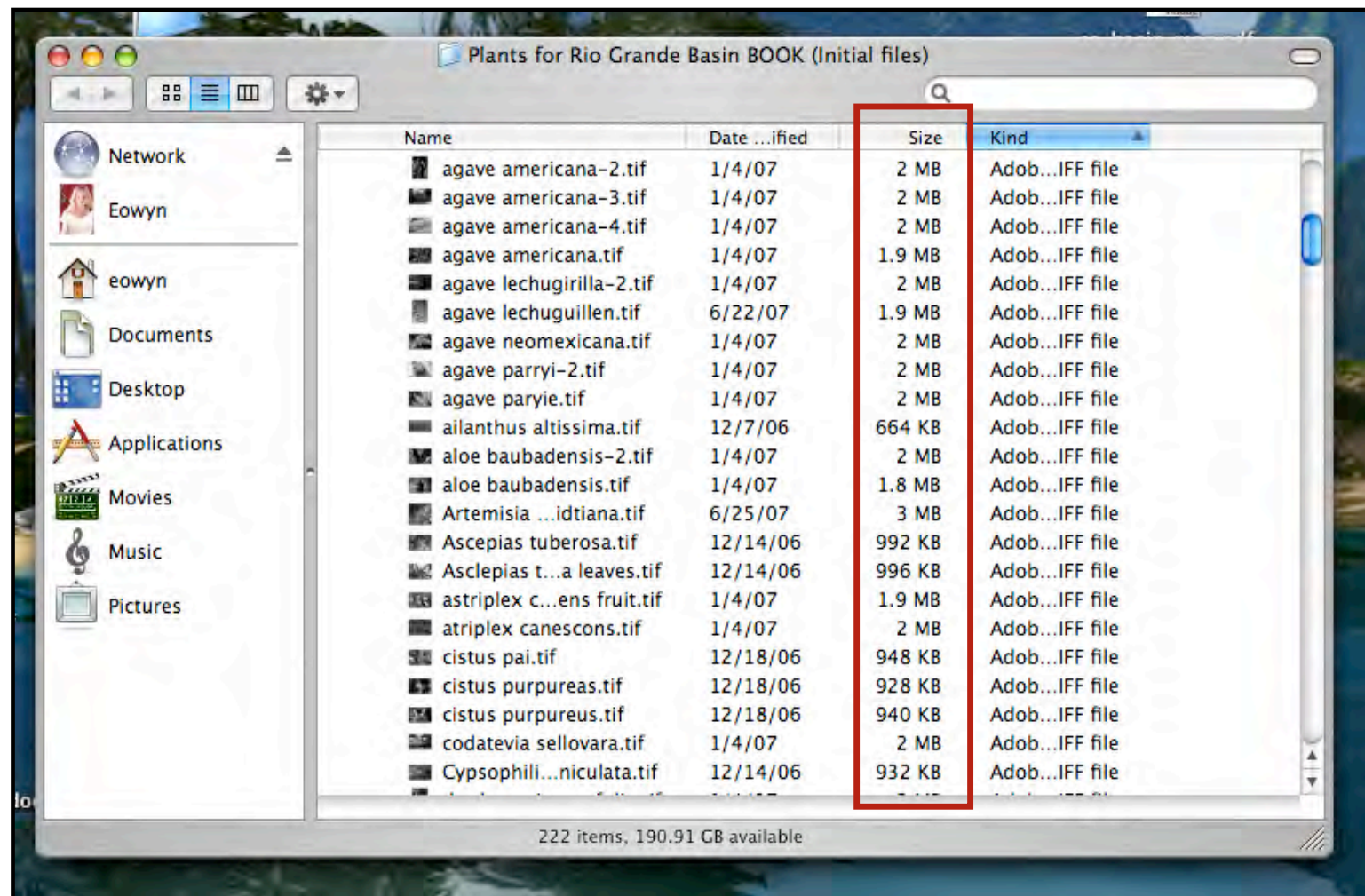
### **Tip 3: Image is probably high-resolution:**

- if the placed or inserted image fills the page
- if image is at least 1MB (megabyte)

### **Tip 4: PC users can right-click an image and then choose “properties” to see resolution**

# Technical Tips

**Where can you find file size? I've highlighted the image sizes in a red box. Each photo is 300 dpi and the size needed. Even though some are less than 1MB in size, they will print clearly because they are 300 dpi!**



# Technical Tips

## Image files: good sources


- **Digital camera images** set at the highest resolution setting.
- **Slides or photos that you can scan yourself.**

(Tip: Scan at 300 dpi and scale [enlarge] images to final desired size during scanning stage.)

- **Downloadable high-resolution images.**

High-quality photos are now available free of charge at the NMSU Photo Archive website: <http://photo.nmsu.edu/>


# NMSU Photo Archive website

 **BE BOLD. Shape the Future.**  
**New Mexico State University**

Search Photos

Home Search Browse Photos Popular Photos News Photos Keywords Your Order

## NMSU Photo Archive



The University Communications Photography Services division maintains an electronic archive of photographs and images recording the work, architecture, life, and activities of New Mexico State University.

The archive is available to the NMSU community for general use. High-resolution versions of the images may be obtained free of charge.


You may search the archive for specific images by outline or **keyword**, or you may browse the entire collection.

For more information about university photography and related services, please visit **Photography Services**.


*All images in the archive are property of the New Mexico State University Board of Regents, and may be used for official university purposes only.*

Search: Search Photos

### Newest Photos




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### Most Popular Photos




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☐ Details  
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☐ Preview  
☐ Details  
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### News Release Photos



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☐ Details  
☐ Download



☐ Preview  
☐ Details  
☐ Download



# Technical Tips

## Scanning

- When scanning line art or text, set your scanner to black/white, NOT grayscale. Image will print much more clearly.
- Scan photos/slides at 300 dpi and line art at 900 dpi (like image to the right).





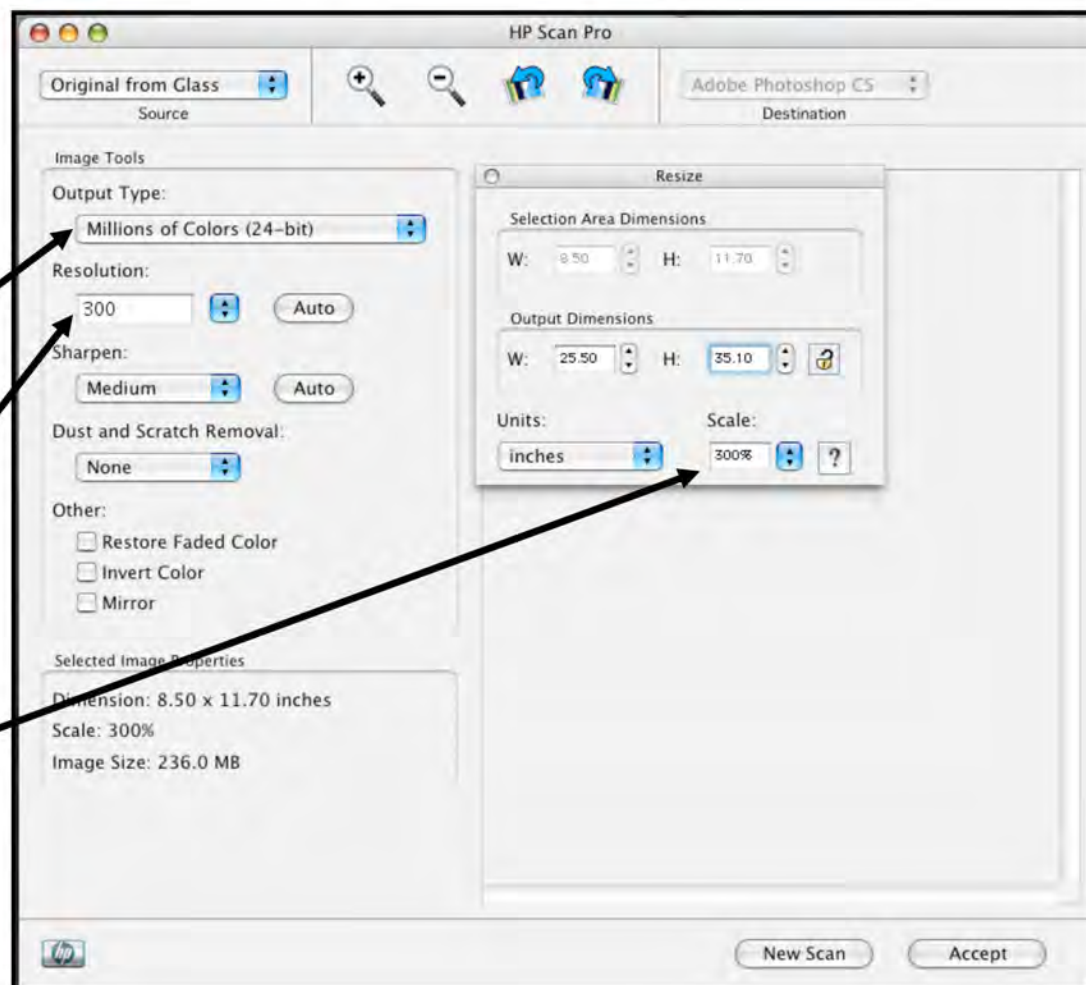
# Technical Tips

## Scanning Setup

Output type

Resolution (dpi)

Scale



**Scale (enlarge) your images at this stage.** In this example, an 8.5 in. x 11 in. image was enlarged by a 300% scale at 300 dpi. The final size will be 25 in. x 35 in. So the image will be **BOTH** clear and larger.

# Technical Tips

## Bad sources of image files

- **Screen captures**

- Images on the web are only 72 dpi. (Find out about copyright before using any online image, and be careful to not use images with watermarks—like this image.)



- **Cut, copied-and-pasted, or clipart images**

- Resolution is usually VERY low

# Technical Tips

## Image formats

**Raster images** (TIFF, JPEG, GIF, PNG, PICT, BMP): These types of images are composed of pixels and are dependent on resolution for clarity (photos, line art, etc.).

**Vector images** (EPS): These types are images are not dependent on resolution and can be enlarged without distortion.



# Technical Tips



**Vector image with  
anchor points**



## **Vector Image**

This example shows you how you can modify a vector file by extending some of the anchor points.

# Technical Tips

## **Which image formats are best for commercial printing?**

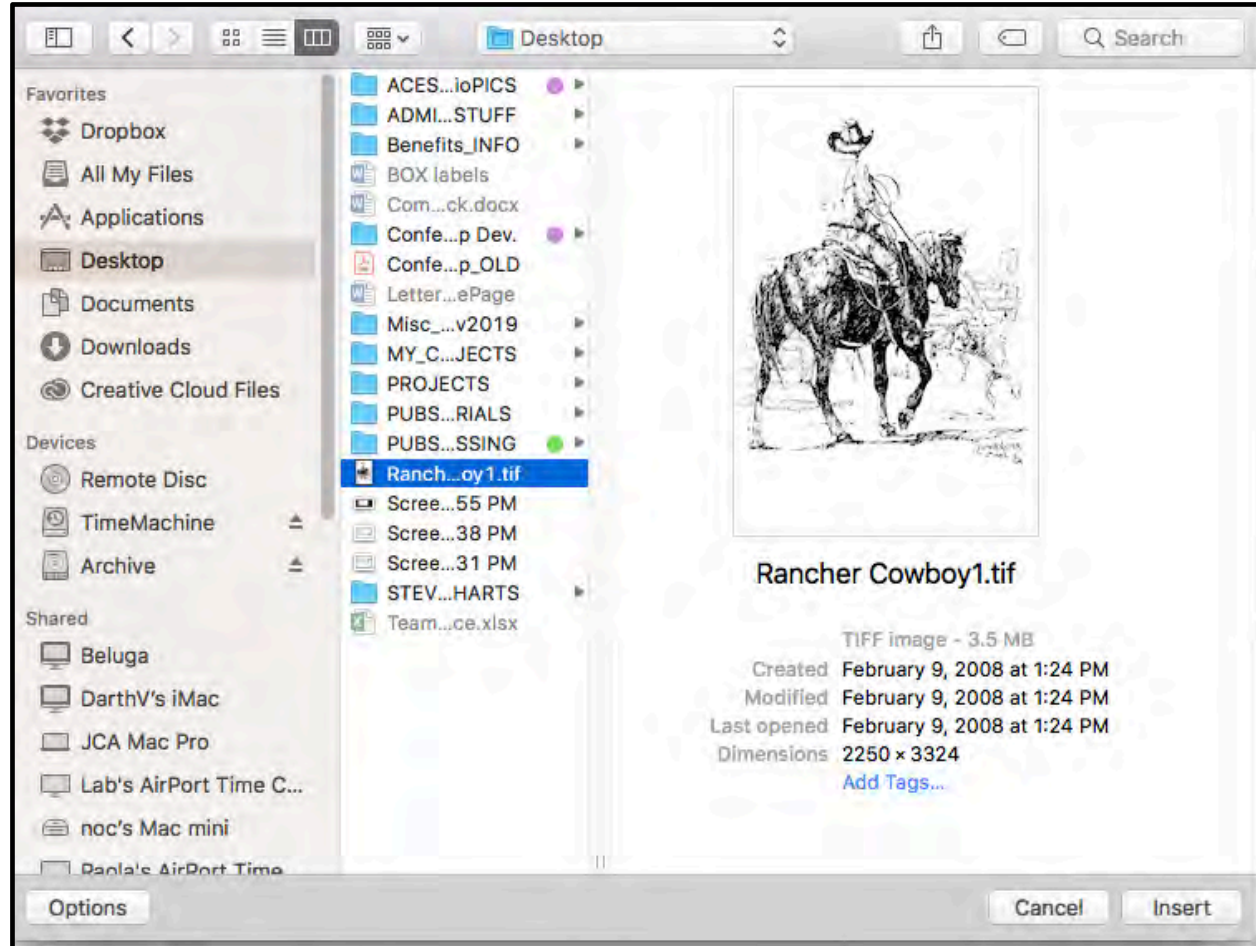
- **TIFF format** is preferred by the print industry for photos.
- **EPS, AI format** is preferred for illustrations.

**These image formats work in PowerPoint, but it is better to use TIFF images whenever possible.**

- TIFF, JPEG, PNG, GIF, BMP, PICT, PDF



# Technical Tips

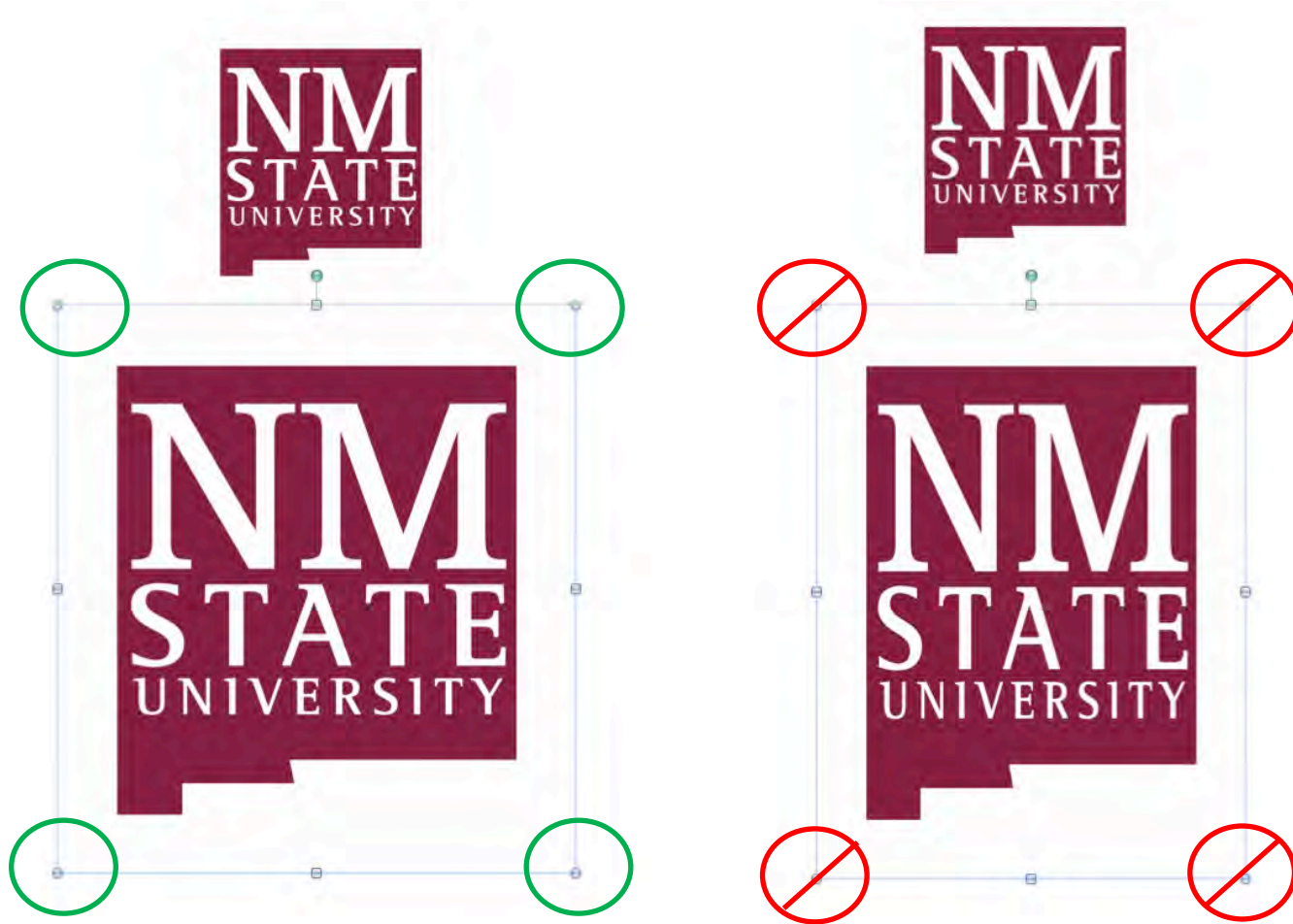


## PowerPoint Tip

**Inserting graphics:** Click **INSERT** from the pull down menu, then **PICTURE** (locate your graphic on your hard drive), then click **INSERT** again.

**REMEMBER: DO NOT COPY AND PASTE IMAGES FROM OTHER FILES!**

# Technical Tips



## General Rule of Thumb for Resizing Graphics

- You CAN manually reduce the size of a graphic, but you shouldn't enlarge!
- Always hold the shift key as you resize your image. **Only use the anchor points at the the four corners! This will resize your images proportionally.**

# Technical Tips

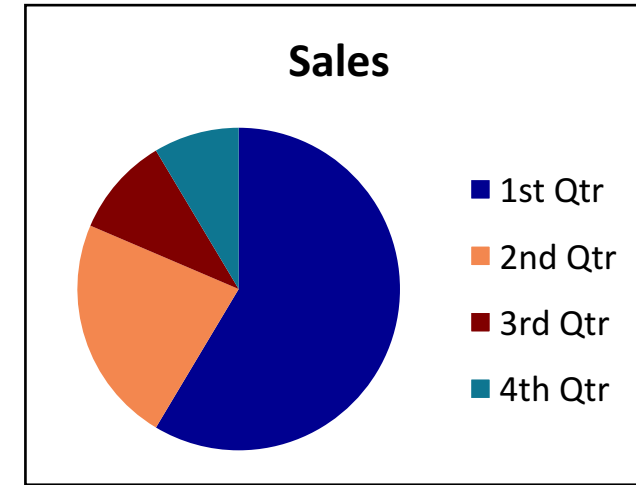
**You CAN break the resizing rule for posters and ENLARGE your graphics manually ONLY when your graphics have a very HIGH resolution!** I would recommend only enlarging them to twice their original size. The moment you start to see pixilation, you've enlarged it too much!

You should STILL always hold the shift key as you resize your images to keep them proportional.

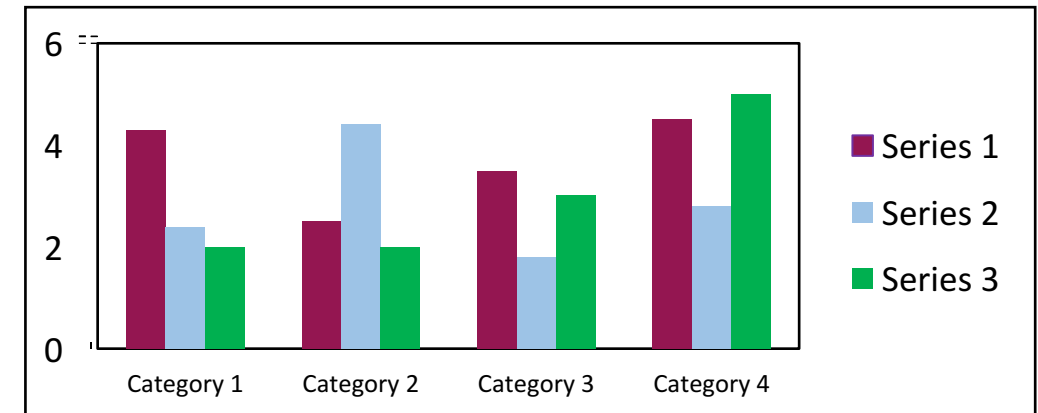
# Technical Tips

## Charts and graphs

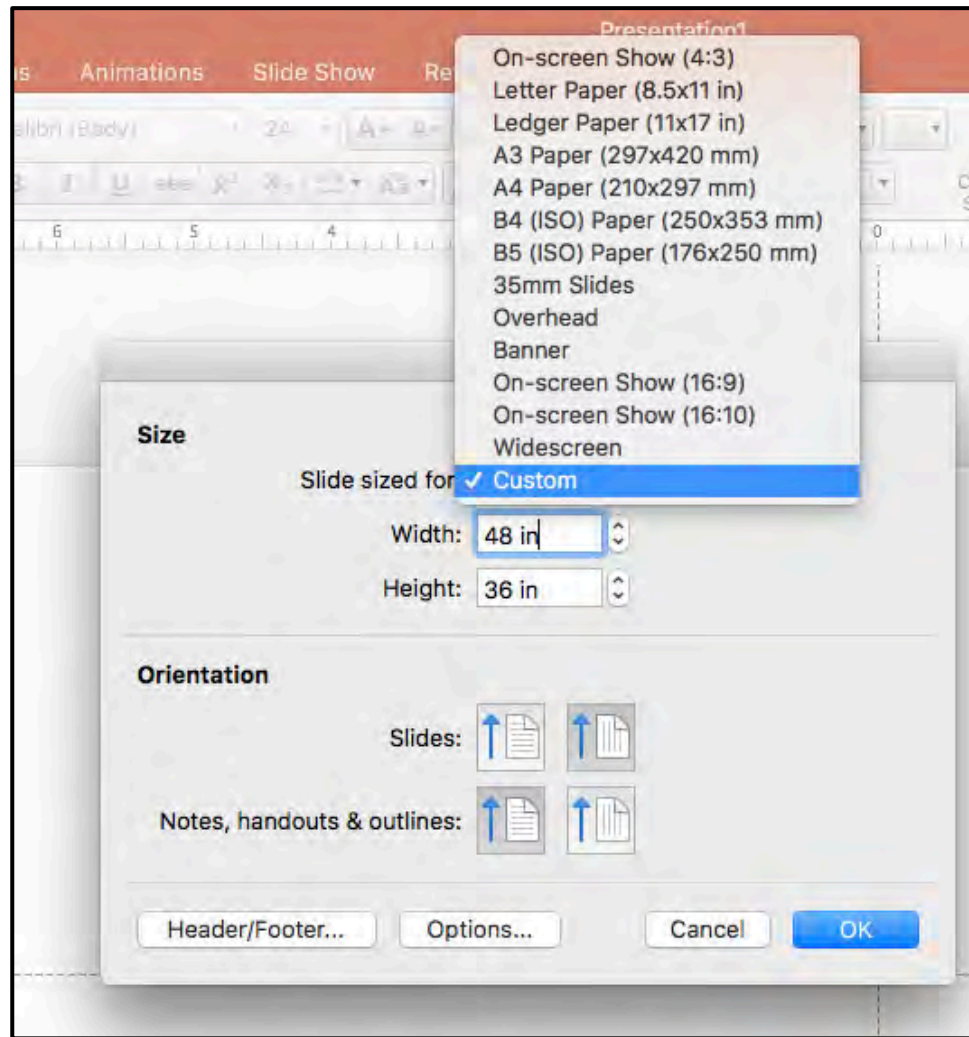
- It is always a good idea to build your charts and graphs within PowerPoint itself because they will print sharply no matter how big they are!
- Often, charts and graphs that are created in other software (like Excel) don't print very well. It is usually because the image is manually enlarged for the poster, which causes a great deal of pixelation.



**Basic Examples  
of PowerPoint  
Charts/Graphs**



# Technical Tips



**Customize the size of your poster**  
PowerPoint provides you with size options, but it is best to size it yourself. If you choose a size smaller than the final size you need, when the poster is enlarged and printed there is a good chance the images and text will be pixalated!

**Once this is done, you can start building your poster!**

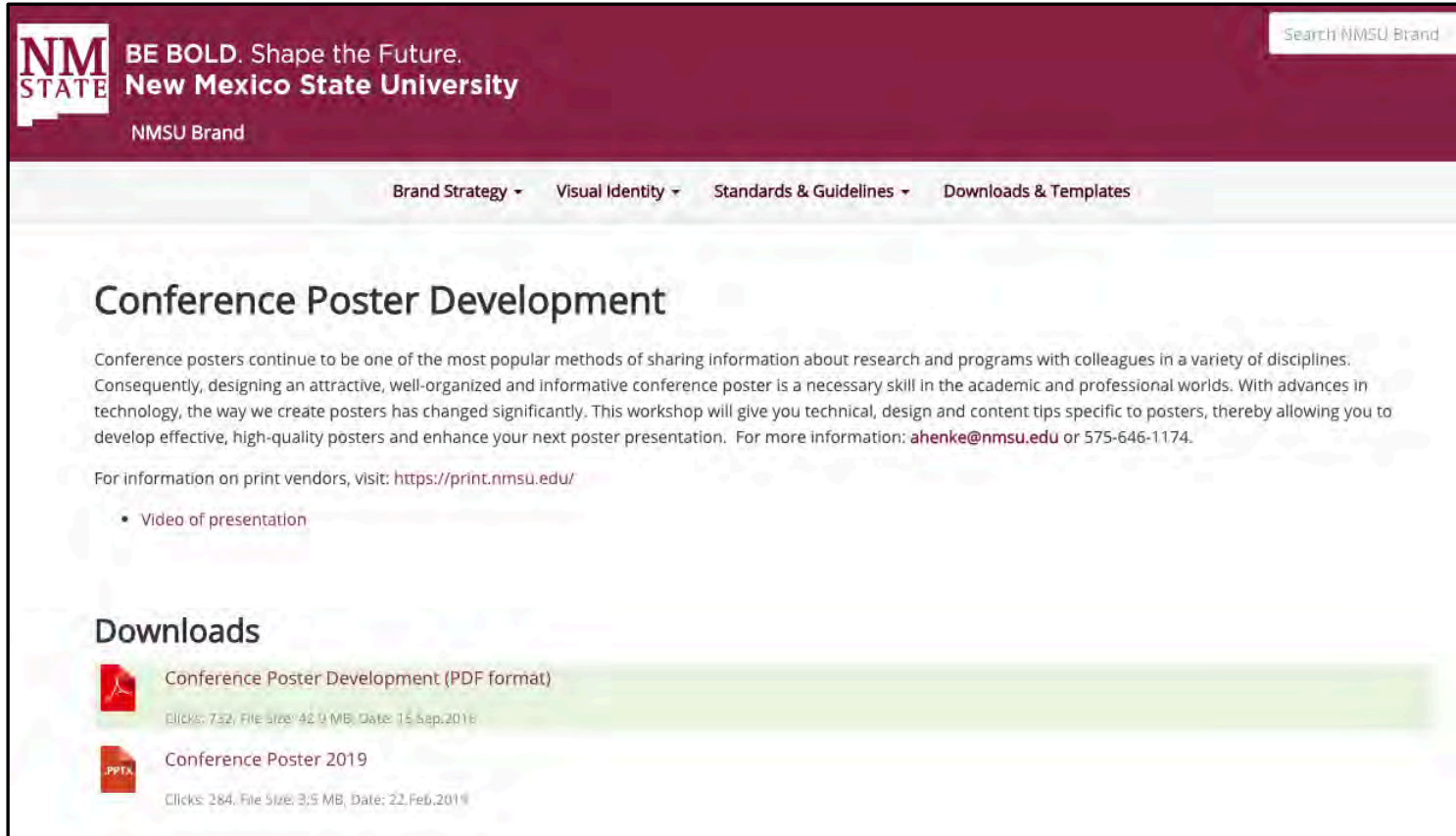


# Technical Tips

**NOTE:** Keep in mind that PowerPoint has a maximum poster width of 56 in. In general, most posters fall within that range. If you need to print a poster larger than this, you can always build it to exactly half its size and then it can be enlarged at the printing stage to the final desired size.

**EXAMPLE:** If you need a poster 40 in. x 80 in., you would set it up for 20 in. x 40 in. **(Again, if images are not high-resolution, they might be pixelated when printed.)**

# Technical Tips



The screenshot shows the NMSU Brand website. The header includes the NMSU logo, the tagline "BE BOLD. Shape the Future. New Mexico State University", and a search bar. The navigation menu has links for Brand Strategy, Visual Identity, Standards & Guidelines, and Downloads & Templates. The main content area is titled "Conference Poster Development" and contains a paragraph about the importance of conference posters, a link to print vendors, and a video of the presentation. Below this is a "Downloads" section with two items: "Conference Poster Development (PDF format)" and "Conference Poster 2019".

**NMSU** BE BOLD. Shape the Future.  
**New Mexico State University**  
NMSU Brand

Search NMSU Brand

Brand Strategy ▾ Visual Identity ▾ Standards & Guidelines ▾ Downloads & Templates ▾


## Conference Poster Development


Conference posters continue to be one of the most popular methods of sharing information about research and programs with colleagues in a variety of disciplines. Consequently, designing an attractive, well-organized and informative conference poster is a necessary skill in the academic and professional worlds. With advances in technology, the way we create posters has changed significantly. This workshop will give you technical, design and content tips specific to posters, thereby allowing you to develop effective, high-quality posters and enhance your next poster presentation. For more information: [ahenke@nmsu.edu](mailto:ahenke@nmsu.edu) or 575-646-1174.

For information on print vendors, visit: <https://print.nmsu.edu/>

- Video of presentation

## Downloads

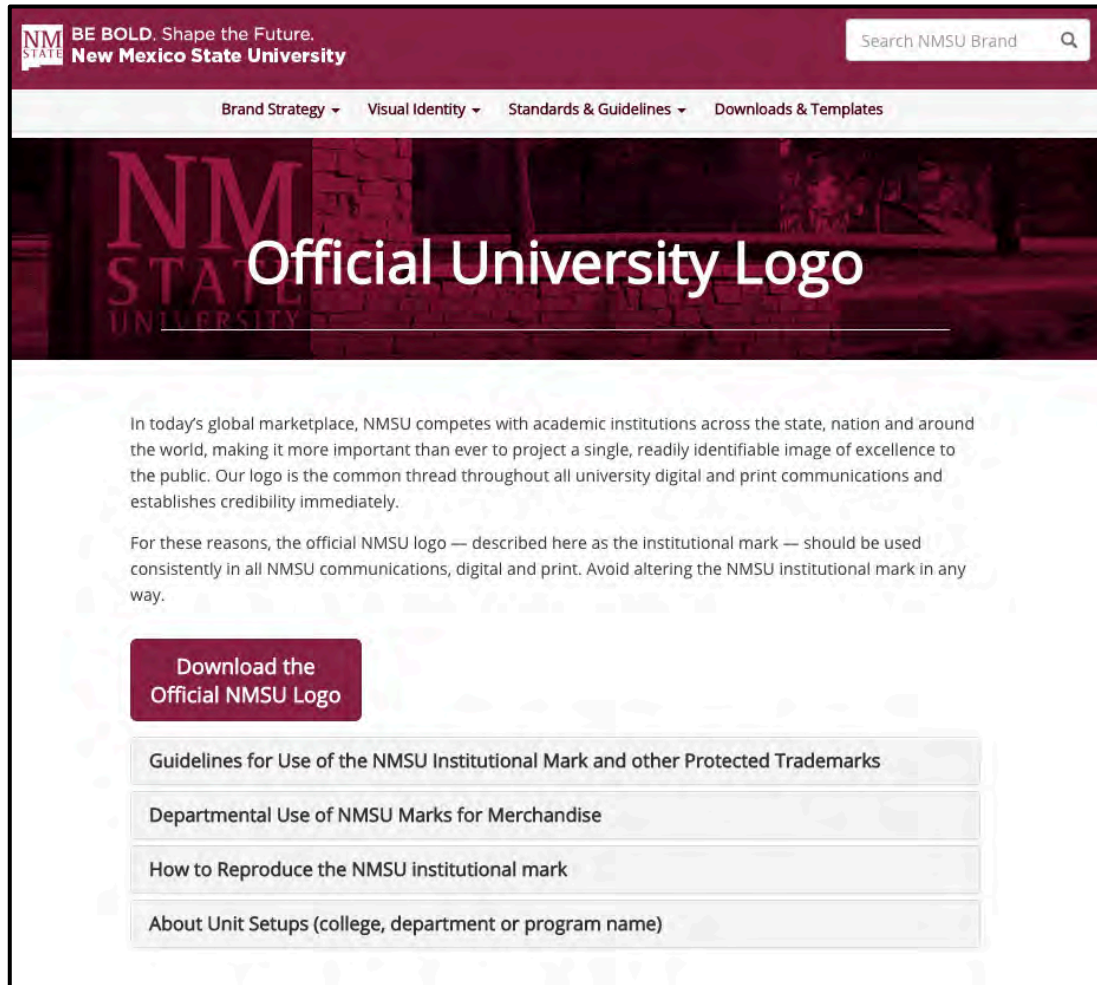
 Conference Poster Development (PDF format)  
Clicks: 732, File Size: 42.9 MB, Date: 15 Sep. 2016

 Conference Poster 2019  
Clicks: 284, File Size: 3.5 MB, Date: 22 Feb. 2016

You can download this resource and the latest conference poster template in PowerPoint on this page:

<https://brand.nmsu.edu/print-guidelines/conference-poster-development/>

# Technical Tips



**Download a copy  
of the NMSU Logo at  
<https://brand.nmsu.edu/logo/>**

## When to “brand” your conference poster?

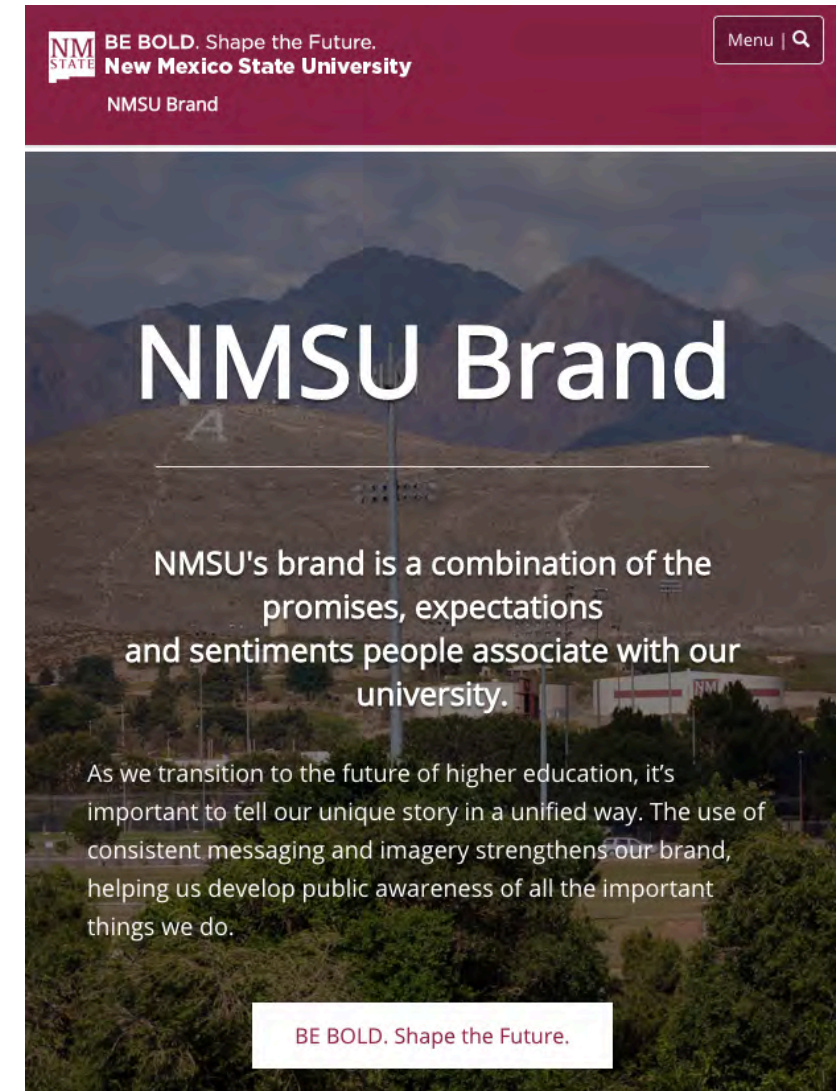
- **Faculty and staff:** You are not obligated to use this particular template, but please keep the branded look in mind as you design your poster. (**Note:** If the research or program you are discussing is a joint venture with other institutions, you do not need to brand your poster—but please include the NMSU logo.)
- **Students:** You don’t need to brand your posters. It is only requested that you include the NMSU logo on your posters.

# Technical Tips

## NMSU Branding

To learn about NMSU's visual identity—logo, slogan, color palette, typeface, and photography—visit the NMSU brand website for details:

<https://brand.nmsu.edu/>



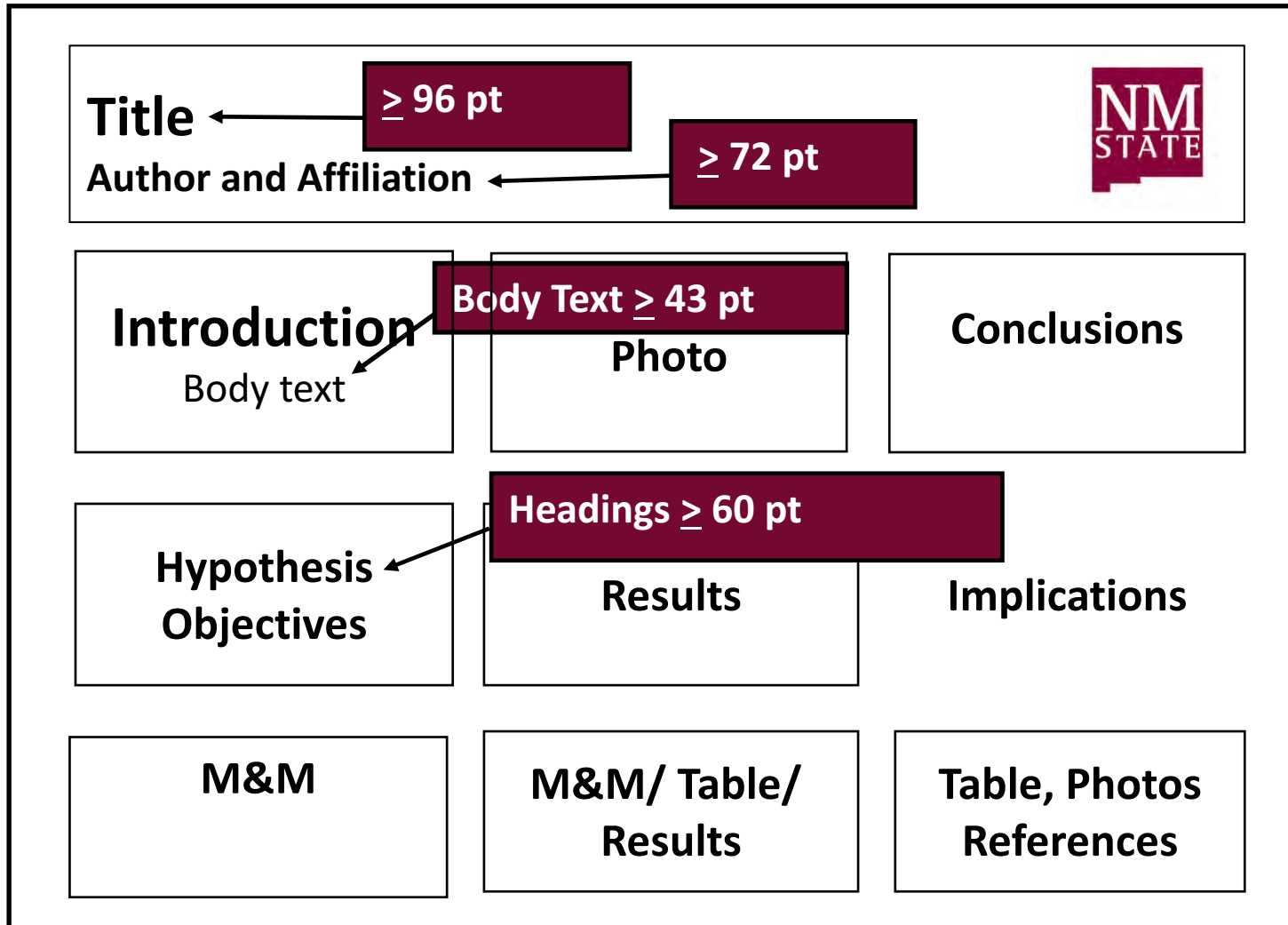


# Graphic Design Tips

## Basic Design Tips for Posters

- **Legibility:** If you can't read it, what's the point?
- **Alignment:** Headings, photos, column content, etc.
- **Repetition:** Use ONLY two fonts, one for your headings and one for your body text; use the same color palette throughout; use the same size for photos, charts, and graphs.
- **Contrast:** Font headings should be larger than text font; contrast in text color and background enhances legibility!
- **Use high-quality images, charts, or graphs.**

# Graphic Design Tips: Legibility



**Font size is crucial to legibility!** These size recommendations will ensure that the text is large enough to read. It will also affect the amount of text you can have in your poster. Being concise should be a rule of thumb!

# Graphic Design Tips: Legibility

**How to check your font size without having to print your poster at the final size:** Set the scale of your poster to 100% and step back from your monitor about 6 feet. If you can read the text easily, you're on track.

# Graphic Design Tips: Capitalization

**HURRICANE KARL BATTERS  
MEXICO AS IT NEARS  
LANDFALL: POWERFUL  
HURRICANE KARL BATTERED  
THE CARIBBEAN COAST OF  
MEXICO ON FRIDAY, BRINGING  
TORRENTS OF RAIN AND  
FIERCE WINDS SEVERAL HOURS  
BEFORE ITS CENTER WAS  
EXPECTED TO MAKE LANDFALL**

**Hurricane Karl batters  
Mexico as it nears landfall**  
Powerful Hurricane Karl battered  
the Caribbean coast of Mexico  
on Friday, bringing torrents of  
rain and fierce winds several  
hours before its center was  
expected to make landfall.

**Which is easier to read?**

# Graphic Design Tips: Contrast

## Background photos

The more vibrant the color or dynamic the background photo is, the more difficult it will be to read the text.



**Full color**



**Watermark**

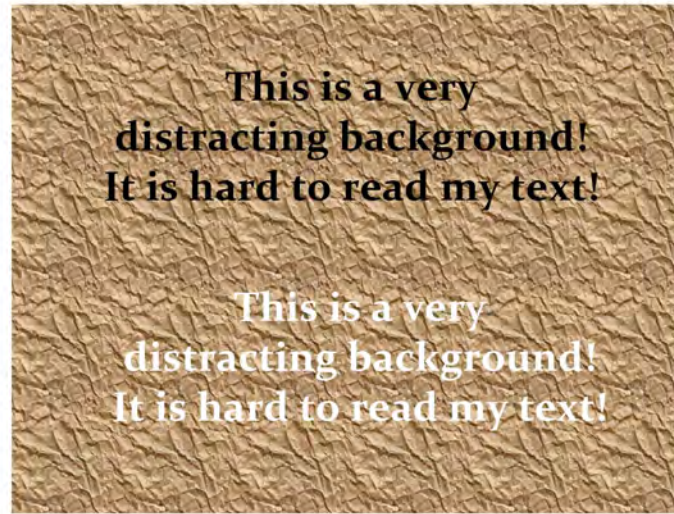


**Grayscale**



# Graphic Design Tips: Contrast

PowerPoint  
themes, textures,  
or background  
colors are options.  
**Choose wisely!**



# Poster Content: Rules of Thumb

- Don't present all of your research in one poster
- Use bullets (this is NOT a journal article)
- 1 to 3 take-home messages
- Use a large font
- Have lots of open space
- Three columns are better than four
- Use graphs instead of tables
- Use photos

# Poster Content: Title

- Active title:
  - “Delivering Agricultural Documents: A Comparison of Suppliers”
  - “Poinsettias Point Students in the Right Direction”
- Avoid “effect,” “affect,” “influence,” “impact”
- Tell the results of your research
- DO NOT USE ALL CAPS
- Short and catchy (this is the “hook”)
- Easy to read

**(NOTE: Poster number is often required.)**

# Poster Content

## Author

- Underline presenter, if not senior author

## Affiliation

- department, city, e-mail address
- logo

# Poster Content

## Abstract

- Omit unless required; repeats “Conclusion:  
If required, substitute “Implications” for “Conclusion”
- Abstract on poster need not be identical to submitted abstract

## Introduction

- Be brief
- Bullets better than text



# Poster Content

## Hypothesis

- What points are you trying to make?

## Objectives

- Be clear
- Present “tricks of the trade”
- Conduct cost/benefit analysis

# Poster Content: Materials and Methods

- Only the “References” are less important
- Be VERY brief
- Use photographs
- There is no need to elaborate extensively on the methods (unless this is a methods poster)

# Poster Content

## Conclusions

- Make sure what you've learned is clearly and easily described. Don't make it so confusing that they don't get it.
- Make sure this section is in a prominent position and is easy to find.

## Implications

- Explain what your discoveries mean to the big picture.

## References/Acknowledgments

- Don't forget to list your research and funding sources.

# Poster Content: Organization of Information

No. 127,993a

Poster Number

**Poster Title**

**Author and Affiliation**



**Abstract  
Introduction**

**Photo**

**Conclusions**

**Hypothesis  
Objectives**

**Results**

**Implications**

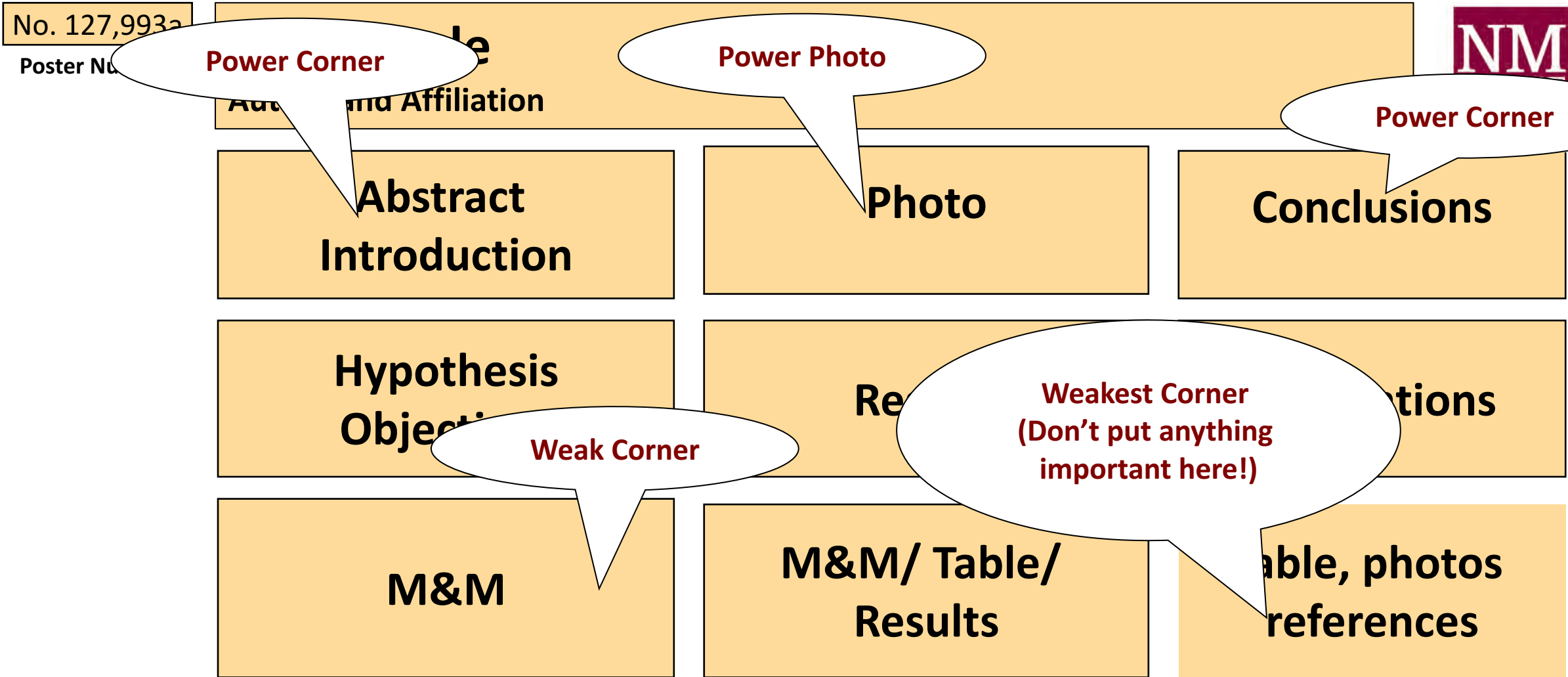
**M&M**

**M&M/Table/  
Results**

**Table, photos,  
references**



# Poster Content: Organization of Information





# Poster Content: Tables

- Brief legend at top
- No more than 20 items
- No more than 4 columns
- No more than 5 rows
- Use >6 mm/24 pt font
- Use significant numbers
- Use statistics
- Number tables (if needed)

# Poster Content: Tables

Table 1. Example of table description.

| Treatment | Horgne | Borch | Keing | Xeros | Blings (Mg/ha) |      |      |              |
|-----------|--------|-------|-------|-------|----------------|------|------|--------------|
|           |        |       |       |       | 1998           | 1999 | 2000 | Mean         |
| 1         | 11.111 | 10    | 100   | 358   | 4.5            | 3.8  | 7.2  | <b>5.2 b</b> |
| 2         | 11.111 | 10    | 100   | 358   | 3.8            | 2.9  | 8.1  | <b>4.9 c</b> |
| 3         | 6.664  | 10    | 100   | 358   | 1.5            | 3.3  | 5.9  | <b>3.6 d</b> |
| 4         | 21.001 | 4 a   | 9     | 289   | 9.8            | 7.6  | 12.1 | <b>9.2 a</b> |
| 5         | 18.222 | 7 a   | 80    | 430   | 3.6            | 4.6  | 6.7  | <b>5.0 b</b> |
| Mean      | 16.555 | 8     | 78    | 392   | 4.9            | 4.4  | 8.0  | <b>7.6</b>   |

What's important here?

# Poster Content: Tables

Table 1. Example of table description.

| Treatment | Horgne<br>(m) | Borch<br>(mg/kg) | Keing<br>(%) | Xeros<br>(gpm) | Blings (Mg/ha) |      |      |       |
|-----------|---------------|------------------|--------------|----------------|----------------|------|------|-------|
|           |               |                  |              |                | 1998           | 1999 | 2000 | Mean  |
| 1         | 17.083        | 14 a             | 77           | 402            | 4.5            | 3.8  | 7.2  | 5.2 b |
| 2         | 15.256        | 2 a              | 76           | 480            | 3.8            | 2.9  | 8.1  | 4.9 c |
| 3         | 6.664         | 11 a             | 81           | 358            | 1.5            | 3.3  | 5.9  | 3.6 d |
| 4         | 21.001        | 4 a              | 79           | 289            | 9.8            | 7.6  | 12.1 | 9.2 a |
| 5         | 18.222        | 7 a              | 80           | 430            | 3.6            | 4.6  | 6.7  | 5.0 b |
| Mean      | 16.555        | 8                | 78           | 392            | 4.9            | 4.4  | 8.0  | 7.6   |

# Poster Content: Tables

Table 1. Example of table description.

- Horgne = 16.555 m
- Borch = 8 mg/ha
- Keing = 78%
- Xeros = 392 gpm

**Keep the  
content  
of your  
tables  
concise!**

# Poster Content: Graphs

## Graphs

- Legend above figure
- Use >6 mm/24 pt font
- Do not copy from thesis or manuscript
- Number figures
- Do not include numerical value with figure
- Use color

## Bar graphs

- No “pseudoperspective” (3D)
- No more than 3 groups of bars
- Label Y axis on horizontal

## Line graphs

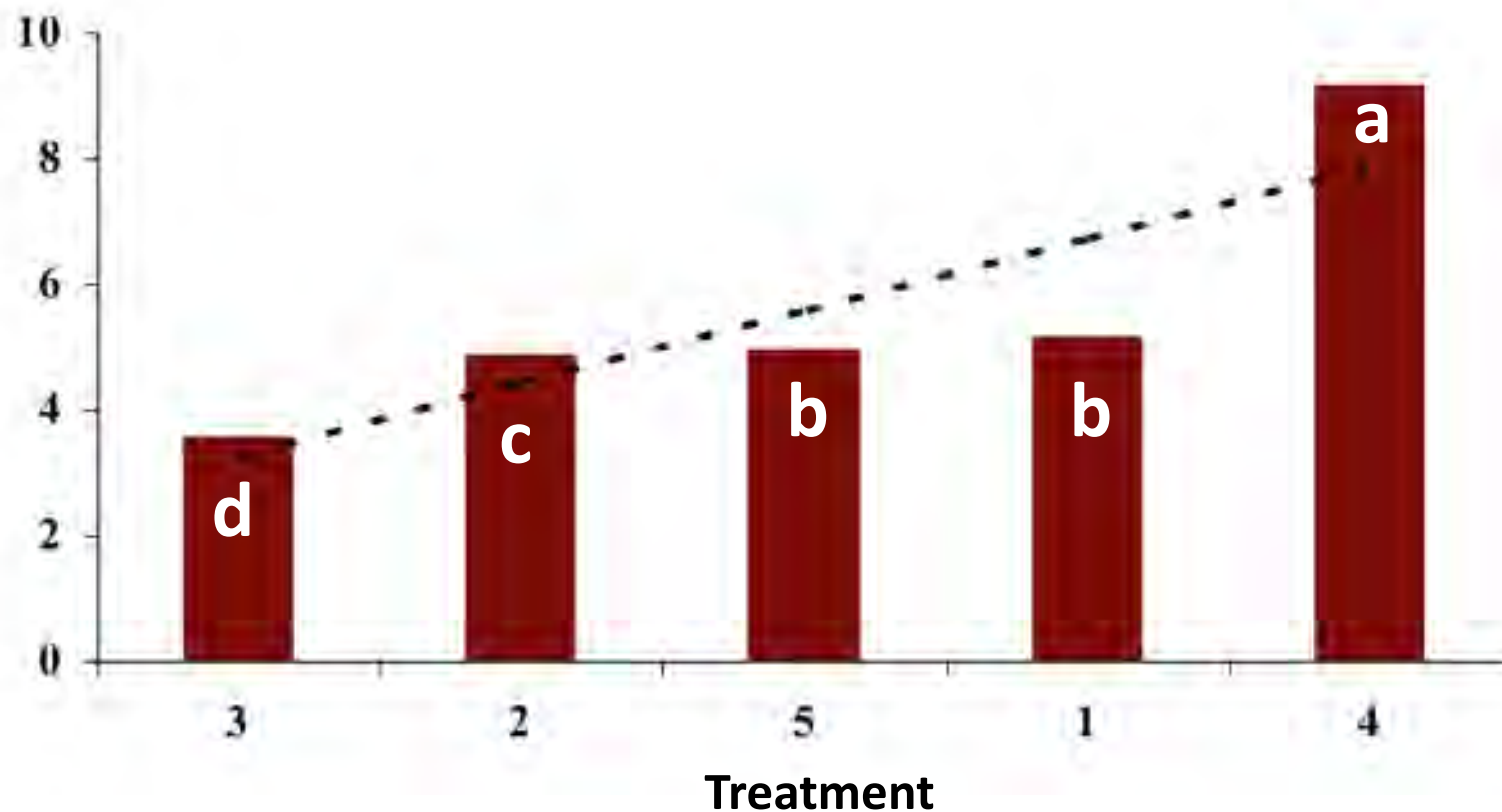
- No more than 5 lines
- Remove 1 line for every cross-over

# Poster Content: Graphs

**Remember  
that less is  
more when  
presenting  
your data!**

Example of bar chart title.

Voldt (Mg/ha)





# Copyright and Fair Use

## What is copyright?

Copyright is the legal right or “protection” granted to the author or creator of an original work. The copyright owner has the exclusive right to copy, distribute, or adapt their work.

If you want to copy or adapt a copyrighted work, you must get permission from the copyright holder—with two exceptions: public domain works and fair use.

# Copyright and Fair Use

## Public Domain

**Public domain works are not protected under copyright**

- U.S. Government works
- Works published in U.S. before 1923

*Even with no copyright protection, you should still cite or attribute public domain works. Never try to pass off someone else's work as your own.*

# Copyright and Fair Use

## What is fair use?

An exception to copyright law that allows for reproduction of copyrighted works for certain purposes. If you determine that your use of a copyrighted work is “fair use,” you do not need to get permission from the copyright holder—but you should still cite the source.

## How is fair use determined?

By judging each use on four factors: Purpose, Nature, Amount, and Market Effect. These are the same factors the courts use when deciding issues of copyright infringement.

# Fair Use Factors

## Purpose

Your purpose in using the work: instruction, research, personal, transformative, reproduction, for profit, not for profit. Educational use favors fair use, but ***does not guarantee it***.

## Nature

The nature of the copyrighted work: published, unpublished, factual, creative, artistic, “consumable” (e.g., a test or form).

## Amount

How much of the copyrighted work do you intend to reproduce/use?

## Market Effect

How will your use affect the market for the original work?

# Fair Use Factors

## For

## Against

### Purpose

instruction, research, personal, comment/criticism, transformative

any commercial use, publication, public distribution

### Nature

published work, factual, non-fiction

unpublished work, creative/artistic work, consumable

### Amount

excerpt, clip, portion

entire work, portion used is the “heart of the work”

### Market Effect

one or a few copies, no market impact, stimulates market, no license

hurts market, license is in place, multiple copies not for education, repeated use

# Fair Use Example

**Reproducing a photograph from a website in your conference poster. Fair use?**

**Purpose:** Poster will be displayed and posted on conference website (public distribution) (-). Purpose: **NO**

**Nature:** Published photo (+); creative work (-). Nature: **MAYBE**

**Amount:** Entire photo will be reproduced (-). Amount: **NO**

**Market Effect:** Depends on photo, but probably no market impact (+); potential repeated use if poster is used, displayed, or posted elsewhere (-). Market Effect: **YES/MAYBE**



# Copyright and Fair Use

## Fair Use

- Reproducing photos in your conference poster does **NOT** qualify as fair use. We must always seek permission to reproduce something, unless it is in the public domain. Other materials may be different, so always use the four factors to determine fair use. However, publication for public distribution will always weigh against fair use.
- Using materials in a presentation, workshop, or training session favors fair use (as long as the materials are not published or otherwise distributed), but still judge each use with four factors.
- Document your attempts to find copyright holder and secure permission.
- **ALWAYS cite/attribute sources of copyright-protected and public domain works.**
- If you have questions, contact the NMSU library at [copyright@lib.nmsu.edu](mailto:copyright@lib.nmsu.edu)

# Copyright and Fair Use

## Quick and easy ways to determine copyright status

- If you use Google Image Search, you can search for images with specific licenses, including licenses that allow for reproduction. On the Google Image search page, enter your search keyword(s). After searching, click on “Tools,” then click the “Usage Rights” drop-down menu to see available options.
- Some websites have a page that explains how images and other material on the site may be used, e.g., <http://www.bugwood.org/ImageUsage.html>
- If you can't find any information on the copyright status, assume that the material is copyrighted. In this case, you need to seek permission from the copyright holder.

# Copyright and Fair Use

## Sources of public domain or copyright-free images

- **Wikipedia public domain image resources**  
[http://en.wikipedia.org/wiki/Public\\_domain\\_image\\_resources](http://en.wikipedia.org/wiki/Public_domain_image_resources)
- **Center for Invasive Species and Ecosystem Health**  
<http://bugwood.org/>
- **U.S. Fish & Wildlife Service**  
<http://images.fws.gov/>
- **NOAA Photo Library**  
<http://www.photolib.noaa.gov/>
- **Creative Commons**  
<http://creativecommons.org/>

# Traveling with Posters

## Tools

- Push-pins
- Velcro
- Liquid paper
- Black pen
- Clear shipping tape  
(to reinforce corners)
- Mailing tube
- Business cards

**Do not check  
poster as luggage.  
Carry with you  
everywhere!**

**Construct pocket on your poster for  
business cards.**

# ACKNOWLEDGMENTS

**THANK YOU** to **John G. Mexal**, former Assistant Department Head and Professor, Plant and Environmental Sciences; **Cindy Watkins**, former Agricultural and Environmental Sciences Librarian, NMSU Library; and **Dawn VanLeeuwen**, Professor, Agricultural and Extension Education for their invaluable contributions to this resource.

**We hope you found this resource useful!**

For additional New Mexico State University branding resources, visit <https://brand.nmsu.edu/>