ADDING DATA

IN THE ARCGIS PRO ONLINE PORTAL

From the catalogue pane, select Portal
There are two online portals   - the all portal
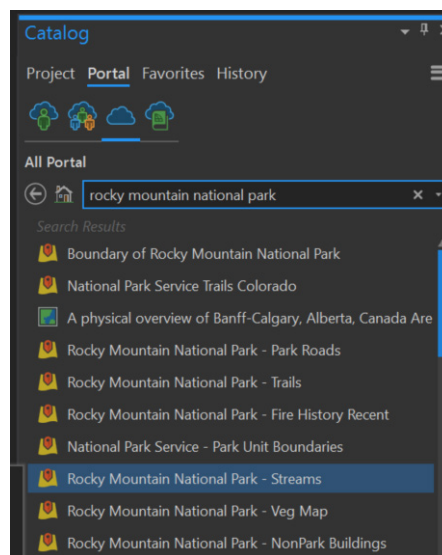
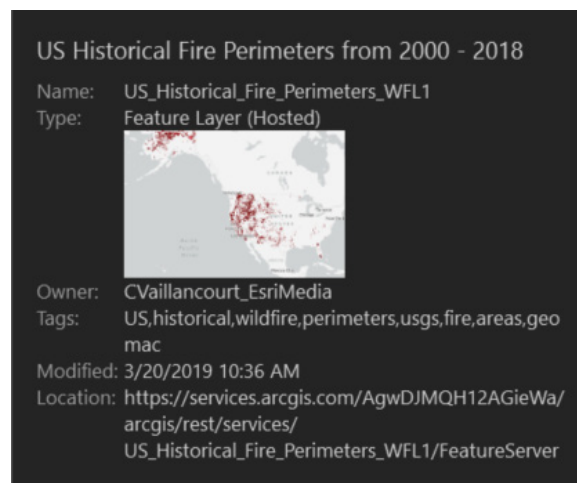- the living atlas

Type in search parameters
  only layers with this icon

      can be added to your map
      (right click>add to map)

See a preview of the data
and metadata

PROJECT DATA

Adding other types of project data is also done from the catalogue pane

PROJECT
This is data located local on your computer. In your project database, right click and add folder connection

PORTAL
You can also add data from your personal online account, or your organization's account

FAVORITES
Project favorites is a collection of fre-quently-used folder, database, and server connections

HISTORY
Choose from recently used database items
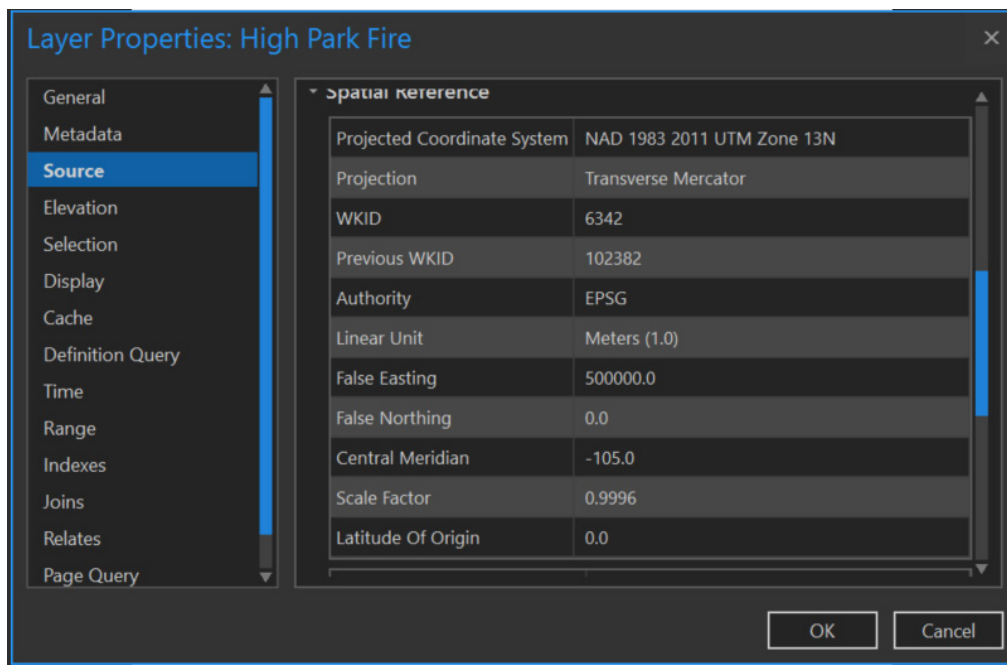
CARTOGRAPHY
IN CREATIVE CLOUD

KAREN ZEEB
CAPSTONE • MSGT 2019

SET YOUR PROJECTION

IN ARCGIS PRO

Right-click the data frame name and choose Properties to bring up the Data Frame Properties dialog box.

Click the Coordinate System tab and navigate to the desired coordinate system for your map display

Layer Properties: High Park Fire		✕
General	**Spatial Reference**	
Metadata		
Source	Projected Coordinate System	NAD 1983 2011 UTM Zone 13N
Elevation	Projection	Transverse Mercator
Selection	WKID	6342
Display	Previous WKID	102382
Cache	Authority	EPSG
Definition Query	Linear Unit	Meters (1.0)
Time	False Easting	500000.0
Range	False Northing	0.0
Indexes	Central Meridian	-105.0
Joins	Scale Factor	0.9996
Relates	Latitude Of Origin	0.0
Page Query		
		OK Cancel

TO CONSIDER

For web maps, Mercator is the popular choice but be aware that this projection is widely considered inappropriate for many kinds of thematic mapping or anything larger than local areas. If you are making choropleth or dot density maps, look for an equal-area projection.

DISTORTION

What specific map property do you need to preserve?

AREA

Maps of density demand equal area projections

FORM

Conformal projections are often good for general-purpose reference mapping, where we want to keep places looking recognizable and familiar

DISTANCE

If you'd like to show, visually, how far one thing is from another, you're going to need to preserve distance

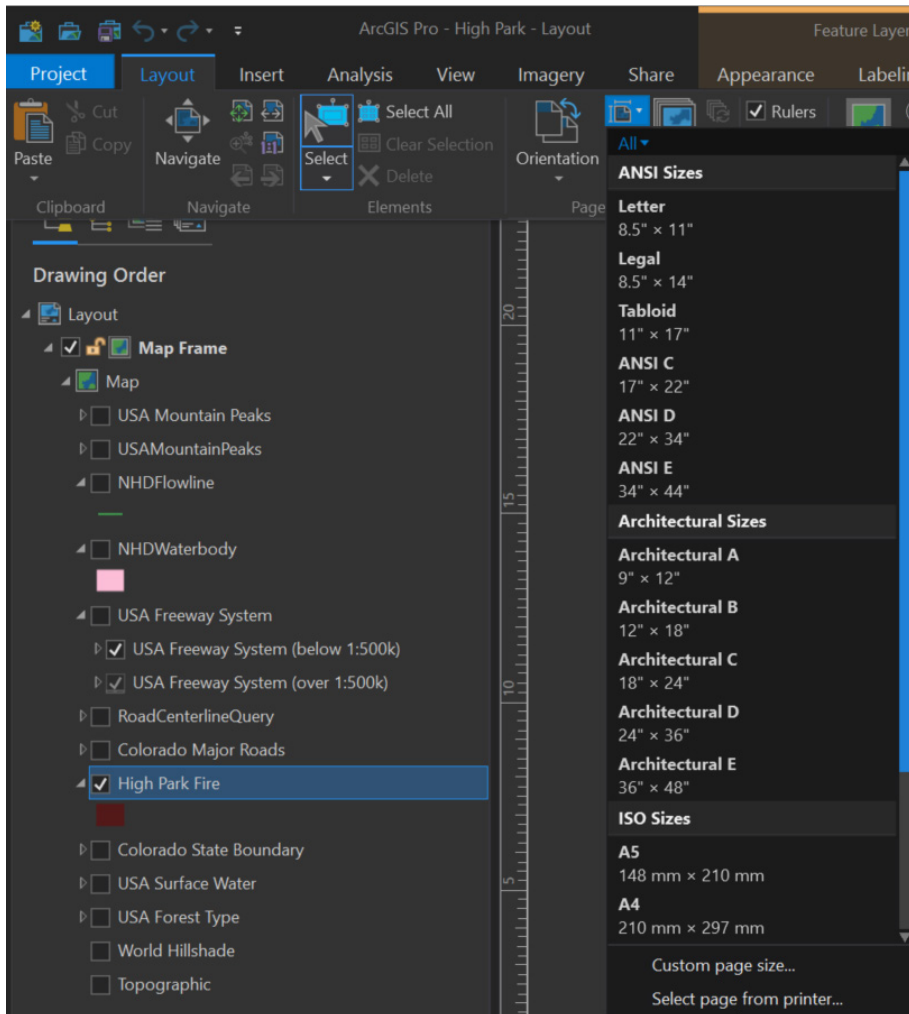### DIRECTION

Also helpful for navigation

LAYOUT

IN ARCGIS PRO

To create a layout, select insert from the map ribbon and click layout
Choose a default size or input your own

Select New Map Frame and choose your map from the pop-up

A cross-hair cursor will appear on your blank layout and you must draw the area where your map is to appear.

TO CONSIDER
Make sure your map is set to the exact size of your final map. This assures proper resolution for your final product.

A WORD ABOUT RESOLUTION
Resolution is the pixel dimensions of a graphic, the dots-per-inch (dpi).

Higher resolution equals larger file size, so use only what you need.

FOR PRINT
High quality printing requires at least 300 dpi

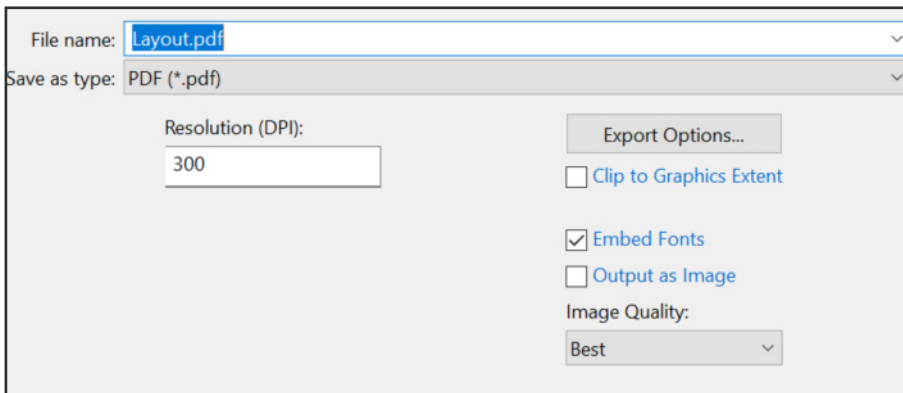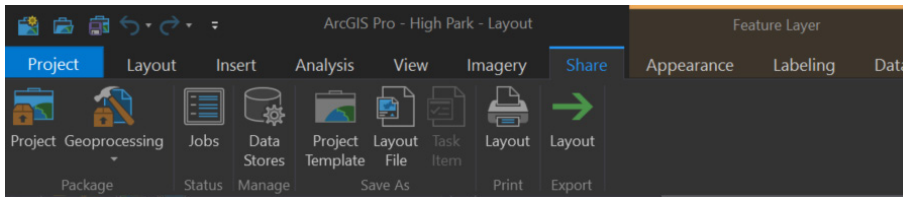## FOR WEB
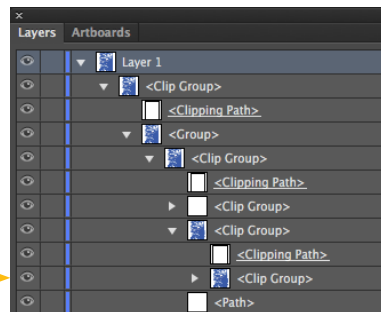Web graphics require a resolution of 72 dpi.

EXPORT AND OPEN

FROM ARCGIS TO ADOBE CREATIVE CLOUD

Export the map by selecting share from the layout view, name and set the resolution.

After opening the pdf in Adobe Illustrator, there are myriad clipping paths that need to be removed. The easiest way to do this is to open every group until the actual graphics are located - drag only the graphic to a new layer and delete everything else.

For the High Park Fire map, the layers were exported and opened separately, using the fire boundary for alignment. This proved faster for both the exporting process and cleaning up layers in Illustrator.

MAKE IT EASIER ON YOURSELF WITH:

LAYER STYLES
Each feature type needs its own layer to uniformly style them as a group.

Use the appearance window to style your features, save it as a graphic style and apply it to the layer. Not just user-friendly, its the only way to connect any disconnected paths (i.e. roads)

GLOBAL COLOR
When selecting color, check global color so that hue changes in every instance of its use.

NOTE ON COLOR
CMYK for print
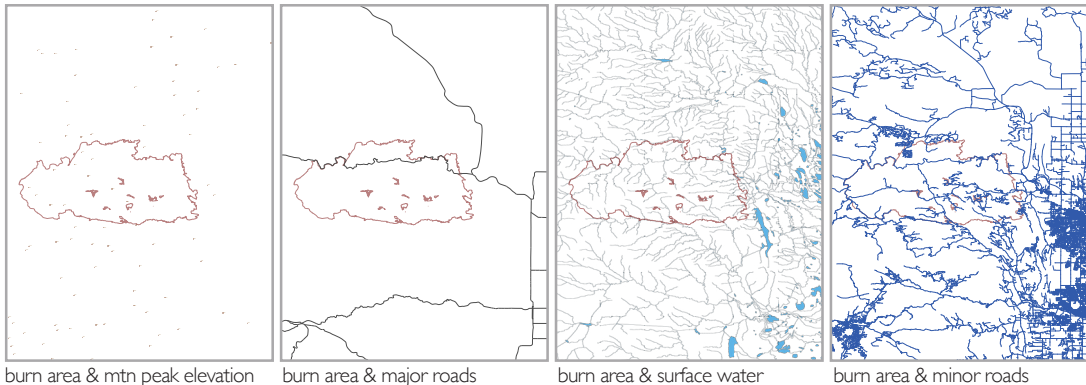RGB for web
HEX for programmers

VECTOR GRAPHICS

ADOBE ILLUSTRATOR

Vector graphics are the lines and polygons of GIS. These features maintain their sharpness when resized, and save as smaller files.

burn area & mtn peak elevation burn area & major roads burn area & surface water burn area & minor roads
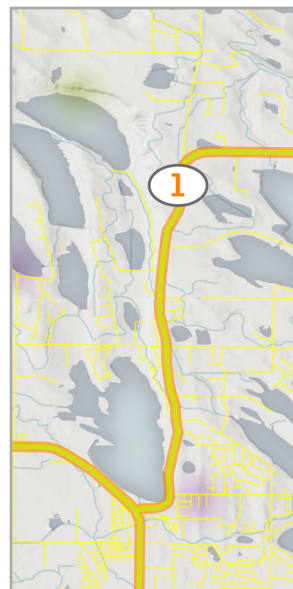
TRANSPARENCIES
There are multiple options for applying transparencies that create visual hierarchy for the vector elements of your map.

STROKE
In the appearance pane, select apply stroke - this adds an additional stroke that can differentiate feature types or enhance the look of a line. This effect is used most often on highways

GLOW
The inner-glow effects is used on the water bodies of the High Park Fire map. The creates a gradient at the edge of a polygon and when used on water, gives an appearance of depth

GET TO KNOW THESE TOOLS:

PEN TOOL
The pen tool is an invaluable asset in Illustrator. Used to draw lines, curves, connect the disconnected, and trace graphics.

It takes some practice to create vertices with desired arcs but once you master the pen tool, you can draw (and re-draw rasters) with ease.

IMAGE TRACE
This function is used to make vector graphics (usually from raster) more manageable.

COLOR DROPPER
This tool allows for color matching and saving color swatches of imported graphics. Great for color consistency
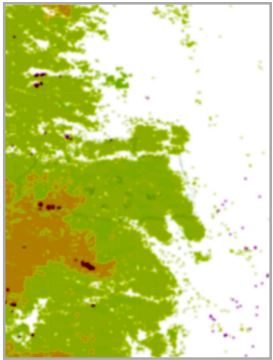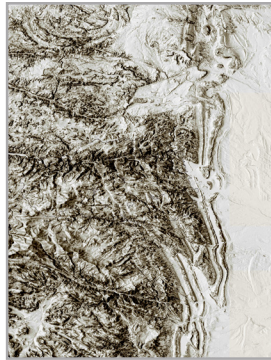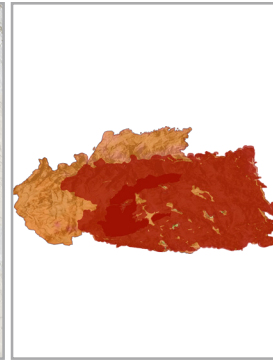
RASTER GRAPHICS

ADOBE PHOTOSHOP

Raster graphics are the pixel graphics of GIS. Resolution dependent, these should only be used background layers.

forest type color adjust & blur

hillshade at full opacity

burn area w. hillshade
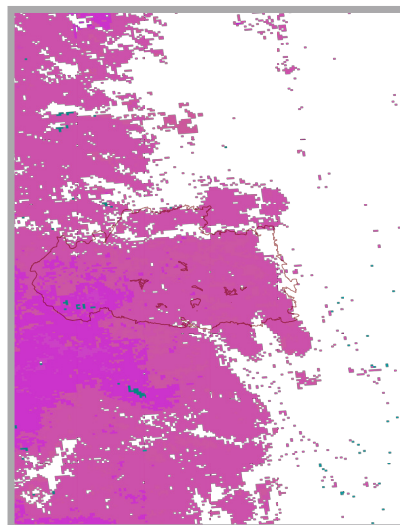
burn area w.. burnt edge

TRANSPARENCIES

Transparency adjustments can be applied to many layers, allowing elements levels of visibility that combine for visual hierarchy.

COLOR ADJUSTMENT

For the High Park Fire map, color adjustment was done on the forest type layer. This function allows the entire layer to change together keeping the integrity of hue variations.

DESIGN EFFECTS

The burnt edge effect on the burn area layer that was created with a layer mask, large round paint brush, blur and the distortion effect of adding noise.

forest type before color adjustment

GET TO KNOW THESE TOOLS:

FILTER GALLERY
This gallery applies artistic filters to layers or elements of the map, including painting, drawing or poster effects.

MASKING
Masking is important when you need to apply an effect to specific elements or areas, not the entire layer. Important in the burnt edge effect.

STYLE GALLERY
Here you can add effects to layers or layer elements such as glow, drop shadow, distortions, blur or sharpen

PAINTBRUSH
Many effects are executed with the variety of paintbrush options of size and hardness.
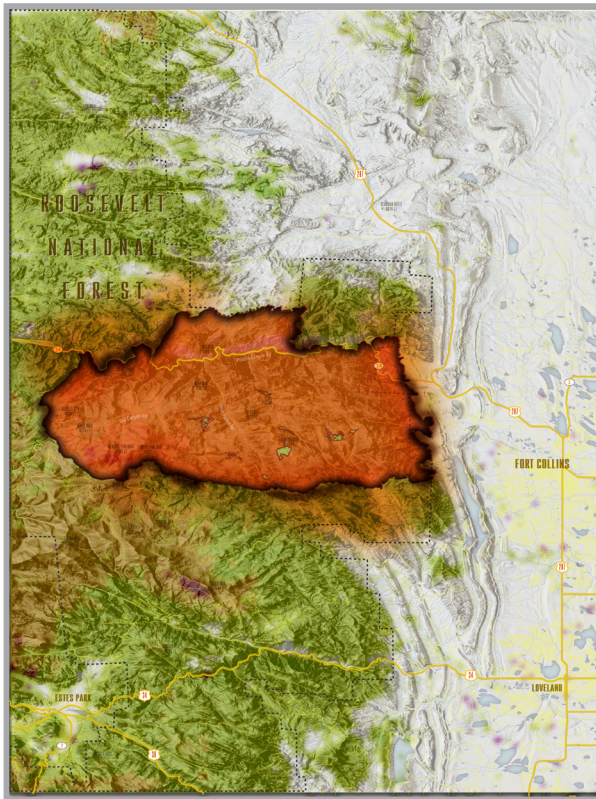
PUTTING IT TOGETHER

ASSEMBLING LAYERS IN ILLUSTRATOR & PHOTOSHOP

Vector and raster layers put together in Adobe Photoshop.

PHOTOSHOP OR ILLUSTRATOR?

Putting together your adjusted layers can be done in either software, but Illustrator is usually preferred. This map was assembled in Photoshop simply because the raster layer effects are the main focus of the map.

FILE FORMATS

Options to save or export to myriad file formats is a key function in Creative Cloud. See sidebar for tips on best use of popular formats.

A WORD ON FILE FORMATS

JPG

Useful for print or web, important to remember the resolution for best use. (300 dpi for print; 72 dpi for web). Jpgs appear as a flattened file, showing the background in white.
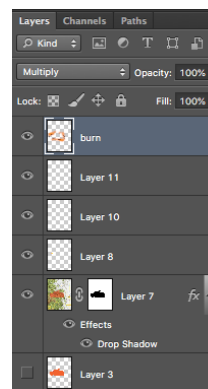
PNG

Portable network graphics are relatively new, and a great alternative to jpgs. Background appears as transparent.

AI

Adobe Illustrator vector file, used for professionally printing, and excellent for import into final layout software.

PDF

Portable document file is a good option for general use but can appear distorted when viewed on-screen

THE FINAL PRODUCT

CREATING A LAYOUT IN ADOBE INDESIGN

InDesign is the software used by professionals for design layout. The High Park Fire map was finalized by adding the text, title, and additional graphics.

(10) TENETS FOR SUCCESS:

- Find Your Focus
- Direct the Eye
- Scale and Hierarchy
- Balance
- Use Complimentary Elements
- Contrast
- Repeat Elements of Your Design
- White Space
- Alignment

POWER POINT

Many map layouts are prepared in Power Point, which has some similar basic operations - such as adding text boxes - but lacks advanced design functionality.

PRE-FLIGHT

For projects headed to professional printers, or for sharing files, the pre-flight function gathers and packages all the elements of your project into one folder.

VISUAL HIERARCHY

LAYOUT

The main focus of this map is the burn area, which is centered on the page, and its shape repeated in the fire progression graphic. The burn effect draws attention and the maps intent is immediately understood.

MAP ELEMENTS

Forest and hillshade provide a geographical reference to the map without distracting from the burn area.

COLOR

Standard cartographic choices of green for natural areas and blue for water make the map easy to understand. The orange hue used for the burn area although muted, is naturally associated with fire.