



Hennepin County
Data visualization



Data visualization

Displaying and annotating data in a clear, direct and accessible way engages the viewer and helps them comprehend the information quickly.

Understanding how the data supports the main insights you want to share will help you choose the chart type that will most effectively help you achieve your goal.

By maintaining consistent styles and format, you ensure that data is useful and also strengthens and reinforces the Hennepin County brand style.

Charts aren't your only choice. Remember, sometimes a well-written statement or table can be equally or more effective in conveying your point.

Accurate

A chart is only as good as the honesty and clarity of its data. Always present data in a way that does not distort information.

Use clear and accurate copy, labels, units and timelines.

Helpful

Make sure you understand the data story before selecting the visual. Provide enough context to ensure your audience will be able to follow the data story. Key tools include accurate and clear labels and consistent units and timeframes.

Accessible

Charts, graphs and maps can effectively use visuals to convey complex images. However, images can create serious barriers for vision-impaired people who use screen readers. Always follow best practices to make the data accessible to more readers.

End goals drive chart choice

Similarities and differences

Comparison charts show differences and similarities in data values. Readers are particularly good at contrasting differing values in a bar chart.

Examples:

Survey results, participation numbers

Suggested chart styles:



Bar chart



Column chart

Change over time

Change over time charts show data over a period of time, such as trends or comparisons across multiple categories. A clearly defined time period is important context for the reader.

Examples:

Chronologies, participation changes

Suggested chart styles:



Line chart



Column chart



Area chart

Relationships

Relationship charts show relationships and compare size or volume. They are best used to show numbers rather than percentages.

Examples:

Number of participants, volumes

Suggested chart styles:



Scatterplot chart



Bubble chart



Column and line chart

Part-to-whole

Composition charts show relative value, or represent relative makeup of a value, across a group. If the reader's interest is solely in the size of the components consider using a relationship chart.

Examples:

Budget, types of program participants

Suggested chart styles:



Stacked bar chart



Pie chart



Tree map

Use of color

Considerations for successful color usage

Consistent use of color allows you to easily lean into our brand equity. Data-set-specific color palettes were designed to harken back to the Hennepin palette – anchoring in the traditional Hennepin blue – but are expanded to meet unique needs in data delivery.

We have optimized our data visualization palettes for users with color vision deficiencies and for reproduction in gray scale.

Use color consistently across charts.

Categorical data

Color usage for displaying categorical data is intended to show clear distinction between elements. This distinction is visible without persuading or showing value; saturation levels are roughly equal to each other. Colors should be used in the order presented.

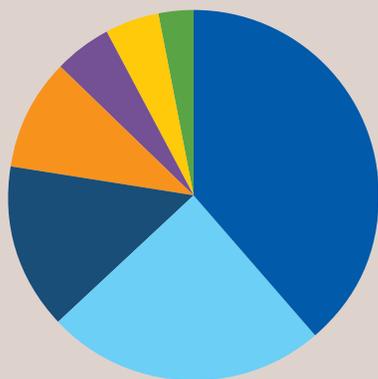
Sequential color palettes

Colors with numeric meaning go from light to dark; darker colors indicate larger numbers. Anchored in our core colors, five color palettes are available that leverage blue and purple.

Diverging color palettes

Like sequential shifts, these patterns also have a numeric meaning. Diverging palettes are a pair of gradients that meet in the center.

This method is useful when you are working with data that have two extremes and a middle baseline.



Categorical chart colors

		
Blue	Light blue	Deep blue
CMYK 95 70 1 0	CMYK 50 0 0 0	CMYK 100 80 32 25
HEX 005aaa	HEX 6dcff6	HEX 113c66
RGB 0 90 170	RGB 109 207 246	RGB 17 60 102
		
Orange	Purple	Yellow
CMYK 0 50 100 0	CMYK 82 97 19 6	CMYK 0 20 100 0
HEX f7931d	HEX 543079	HEX ffc004
RGB 247 148 29	RGB 84 48 121	RGB 255 203 5
		
Green		
CMYK 70 15 100 0		
HEX 5ba345		
RGB 92 164 70		

Sequential chart colors

				
CMYK 20 2 0 0	CMYK 44 13 0 0	CMYK 70 31 5 0	CMYK 89 58 18 2	CMYK 100 80 32 25
HEX c6e8fb	HEX 88bfe7	HEX 4895c8	HEX 22689a	HEX 113c66
RGB 198 232 251	RGB 136 191 231	RGB 72 149 200	RGB 34 104 154	RGB 17 60 102
				
CMYK 12 20 0 0	CMYK 24 38 0 0	CMYK 40 60 0 0	CMYK 65 79 9 0	CMYK 82 97 19 6
HEX dbcae3	HEX bfa2cd	HEX 9e76b4	HEX 745195	HEX 543079
RGB 219 202 227	RGB 191 162 205	RGB 158 118 180	RGB 116 81 149	RGB 84 48 121

Diverging chart colors

					
CMYK 0 50 100 0	CMYK 0 20 100 0	CMYK 11 8 9 0	CMYK 24 38 0 0	CMYK 40 60 0 0	CMYK 82 97 19 6
HEX f7931d	HEX ffc004	HEX dfe0de	HEX bfa2cd	HEX 9e76b4	HEX 543079
RGB 247 148 29	RGB 255 203 5	RGB 224 224 223	RGB 191 162 205	RGB 158 118 180	RGB 84 48 121
					
CMYK 70 15 100 0	CMYK 43 0 100 0	CMYK 11 8 9 0	CMYK 41 17 0 9	CMYK 64 25 0 22	CMYK 100 80 32 25
HEX 5ba345	HEX 9ecb3a	HEX dfe0de	HEX 88bfe7	HEX 4895c8	HEX 113c66
RGB 92 164 70	RGB 159 204 59	RGB 224 224 223	RGB 136 191 231	RGB 72 149 200	RGB 17 60 102

Type and rules in data sets

Titles, labels and legends

When assigning type and rules to data sets it is important to be as helpful and accurate as possible. Avoid acronyms and use language that is simple, concise and clear. Use the county writing style guide and plain language standards.

Assign a hierarchy to the information, ensuring that the audience sees the most critical information first. You can add significance to a selection using scale, color or tone.

Sentence case is the preferred capitalization style for titles, labels and legends.

Titles and subtitles

Titles should be accurate and easily scannable. Best practice is to break long titles into heads and subheads. Use Myriad Pro Regular to set off the main title and Myriad Pro Light for any subtitles.

Axis, labels and rules

Direct labeling individual data points or bars is best practice. Data point labels should be presented above or to the right of the data point in Myriad Pro Regular. This practice is especially helpful to people with visual impairments.

When you need an axis title, orient the title with the axis, either horizontally or vertically. Axis titles should be simple, concise and understandable.

Axis labels should be located to the left or bottom of the chart and should read left to right in warm gray. Sometimes this information is critical for understanding – in those instances black or even regular weight is allowed.

Less is more when it comes to applying rules on charts and graphs. Choose where and when they are necessary to help the viewer – it is often OK to simply omit them.

Legends

Locate legends to the right or below a chart or graph. Left-align text with any color or shape indicator preceding the text.

Titles

Left-align or center.
Use Myriad Pro regular 12 point,
full contrast, black or white.

Subtitles

Use Myriad Pro light 12 pt

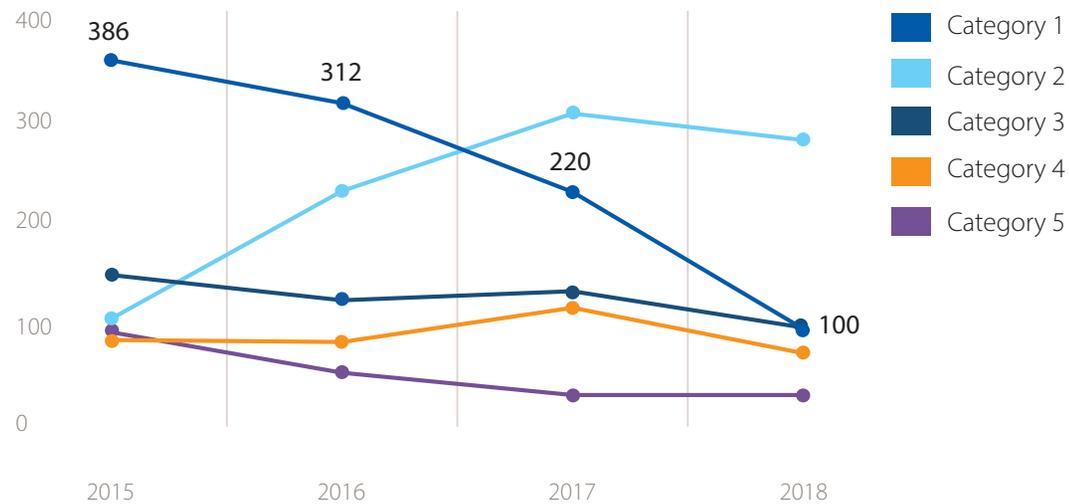
Axis and labels

Use sparingly and with intention. Tint text warm gray and align to read left to right.

Labeling specific data points:
Use as an option if it aids in comprehension.
Placed above or to right
Regular weight black text

This is the title of the chart it should be concise and in sentence case

This is the subtitle it should be concise and in sentence case



Rules

Apply warm gray,
1 pt stroke.

Use sparingly and intentionally.

Legends

Titles are optional
Use 11pt Myriad Pro light
Align left
Place identifying graphic
boxes to left of text.

Design considerations

Make information clear, direct and accessible

It is important to practice good design principles and follow the county's overall brand philosophy when you create data visualizations for discovery or communication.

Understand the Hennepin County brand

These are the elements that shape our style:

- Language that is easy to understand
- Type that feels approachable rather than overwhelming
- Ample use of white space and consistent use of contrast and color to enhance readability and understanding
- Imagery that is inviting, relatable and meaningful

Apply light type

Hennepin County's corporate type face is Myriad Pro. Segoe is a widely available substitute font. In either font, we prefer to use the lighter weight.

Size fonts appropriately: 12 point for titles and 11 point for other elements. It is OK to use type in regular weight or boldface to highlight the most significant data, but do so sparingly.

Reserve ample white space

Remove any unnecessary elements, including backgrounds, redundant labels, borders or special effects. Use a light touch when applying labels or lines. Only add them as necessary, using an appropriate light-weight typeface and gray tones.

Use contrast and color consistently

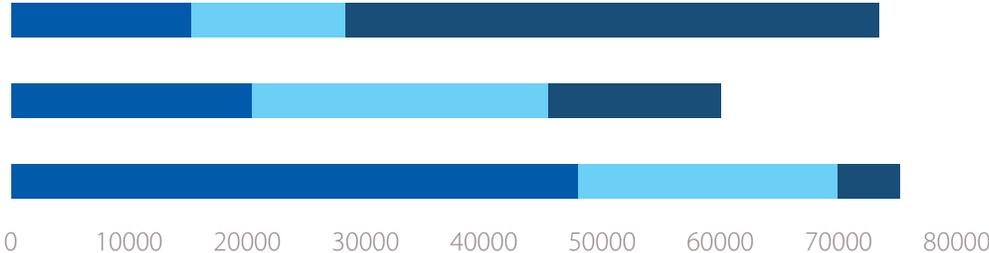
Designing within the supplied color palettes ensures that you apply adequate contrast. It's important to be consistent with color when there are multiple charts in the same view. If a color is used to represent a concept in one chart, the same color should represent the concept in all the charts.

Use color in a limited and intentional way; use categorical colors only in certain cases, because a simple one-color chart is often effective.

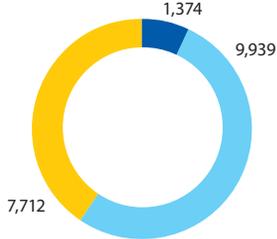
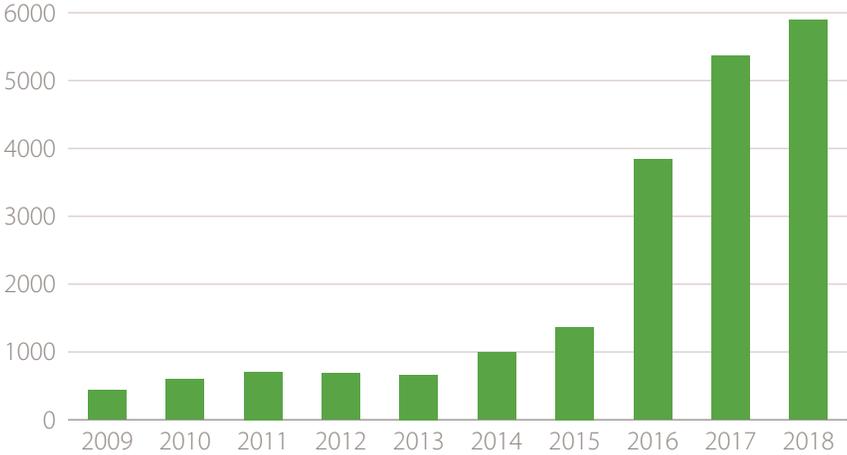
Inviting, relatable and meaningful imagery

Sometimes icons or images can be used to enhance charts and graphs – use this technique sparingly and for maximum impact.

Title of this chart
Subtitle of this chart



Residential organics tons collected



Breakdown of child support families by public assistance status
Current support paid may or may not be paid in full Federal Fiscal Year 2020

- Receiving public assistance
- Formerly receiving public assistance
- Never received public assistance

Hennepin County

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hennepin.us/brand

