



Layout

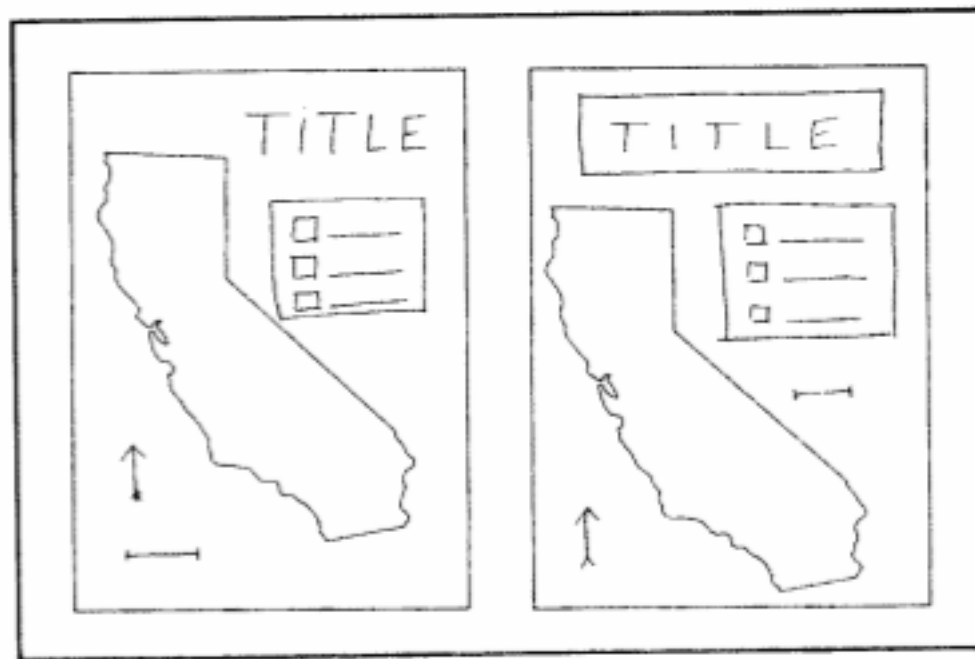
Considerations for visual arrangement

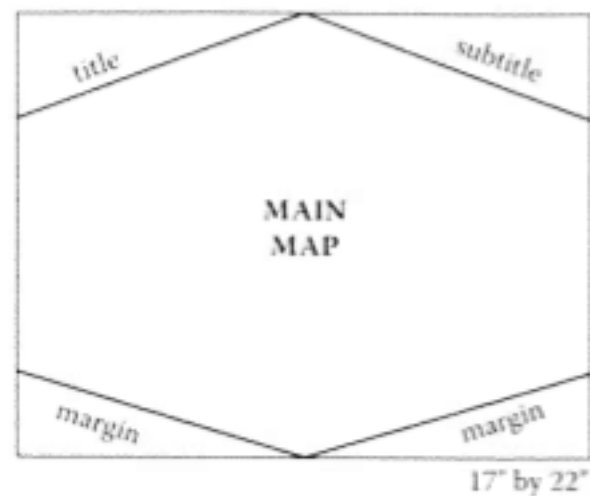
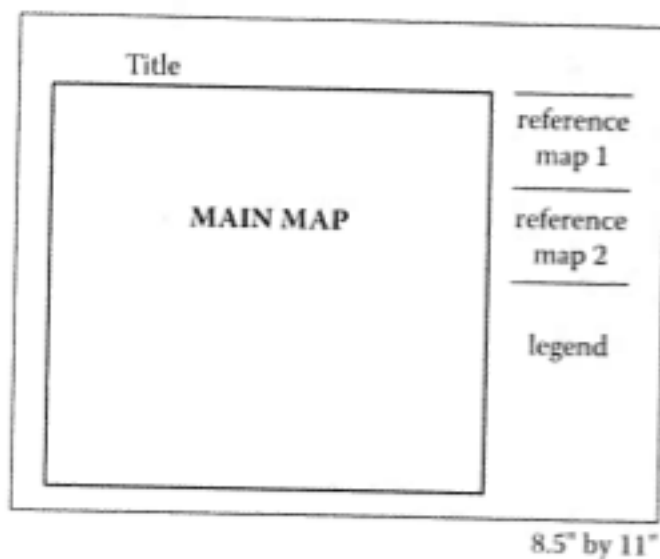
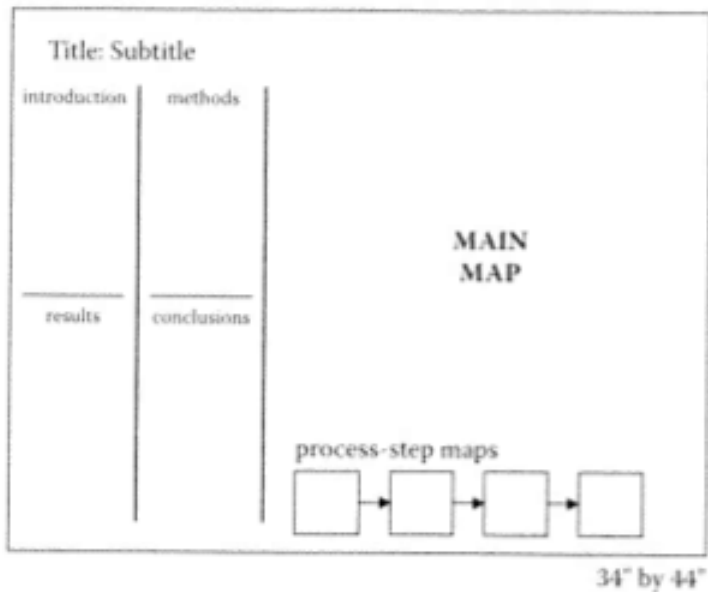
Designing the layout

1. Visual hierarchy
 1. What are the most important elements?
 2. What is the first thing the viewer should see?
2. What elements are included in your map and how should they be arranged on the map?

Emphasis or sketch map(s)

A simple sketch of the map layout that helps you look at the big picture

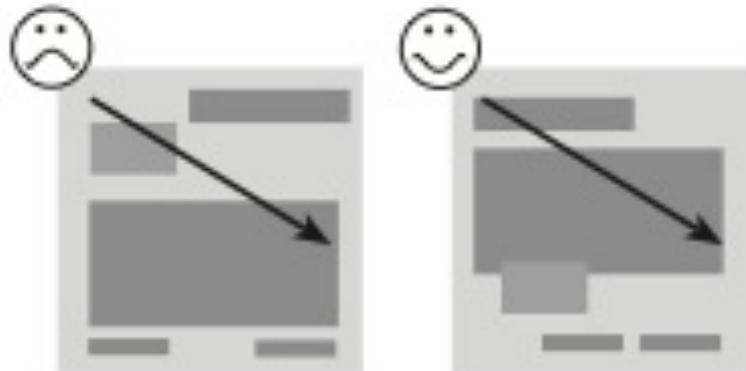




Path

Assume that reading a map is like reading a book – from upper left to lower right (English)

- ▣ Design the map elements so that those that should be seen first are in the upper left



Symmetry

Balance around a central axis

- ▣ ***Symmetrical*** balance is more traditional, conservative, and cautious
- ▣ ***Asymmetrical*** balance is more modern, progressive, complex, and creative



Sight-Lines

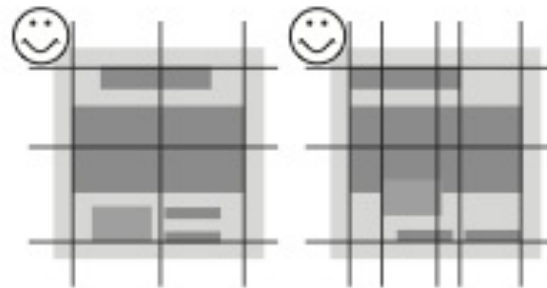
Invisible horizontal or vertical lines that touch the bottom, top or side of map elements

- ▣ Less sight-lines = cohesion, stability



(A)symmetrical Grids

- **Symmetrical** grids are based on two central axes, and top, bottom, and side margins
- **Asymmetrical** grids are more complex, but still have top, bottom, and side margins





Elements

Pieces of the map

- Title
- Subtitle
- Legend
- Maps
- North Arrow
- Date
- Authorship
- Scale bar(s)
- Page border

- Neat lines
- Graticules
- Network path
- Disclaimer
- Data sources
- Data citations
- Logos
- Graphs
- Map number (series)
Tables
- Copyright
- Projection
- Inset map(s)
- Descriptive text

Elements – which ones do I include?

1. Would the element provide information that is crucial for correctly understanding this map?
2. Would the element provide visual relief or create a cluttered feeling?
3. Is it necessary?

Title

Succinctly pronounce the intent of the map

- What: the topic of the map
- Where: the geographic area (if not obvious)
- When: temporal info (date)

Title – which is better?

Schmoe County Land Consortium's Analysis of Purple
Toad Habitat in Northwest Hooktown

OR

Purple Toad Habitat Greater Than Previously Thought

Title

□ Authorship

- ▣ not necessary in the title
- ▣ could be included in subtitle or in authorship

□ Geographic Location

- ▣ could be redundant if the location is evident in map
- ▣ necessary if creating a reference map (i.e. Multnomah County Roads)

Title

- Large enough to grab attention of the reader
- Short enough to read quickly – interesting, pertinent, accurate
- Summarize primary finding of analysis in 10 words or less
- Avoid redundant terms
 - ▣ Map of....
 - ▣ Analysis of...
- Avoid Acronyms

Let's work on these...

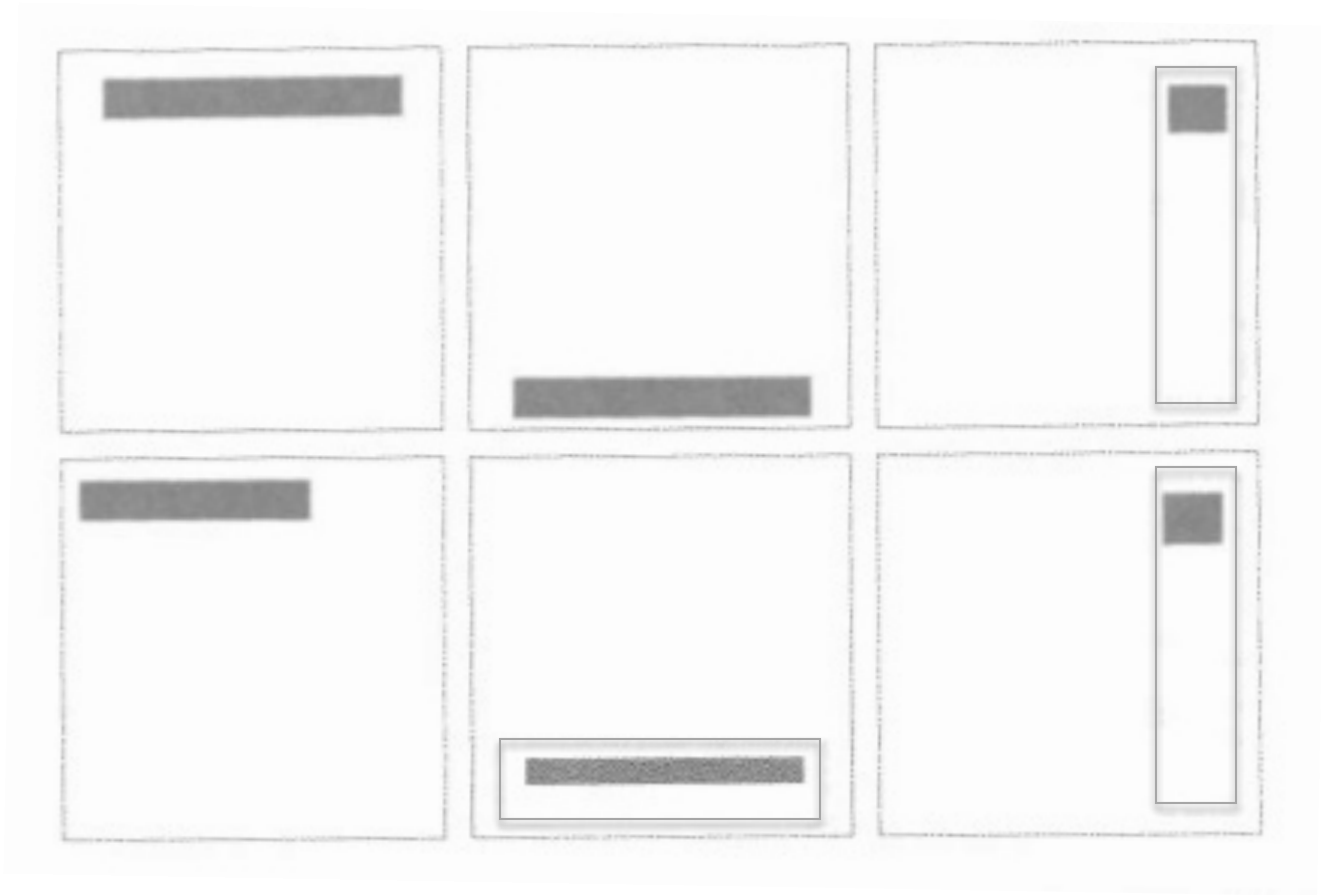


Proximity of a New Osteopathic Family Practice Clinic in Vancouver to Provider-Shortage Areas and Farmworker Housing in Nearby SW Washington

The Number of Environmental Based Bachelor's Degrees Offered Per College

Hydroelectric Dams in Listed Salmonid Habitat: Additional Possibilities for Dam Removal?

Title – where does it go?



Title – the ‘style’

- All caps is acceptable, but generally harder to read
 - ▣ People cannot easily decipher letters when they are all the same height
- Alternatives
 - ▣ Small caps
 - ▣ Drop-cap for first letter
- Title needs emphasis – what are other ways?
 - ▣ Drop shadows
 - ▣ Underlining
 - ▣ Bold

Title – the ‘style’



Estimating Impervious Cover Under Full Buildout

: Riverine Habitat Inventories

Best Sites for Ground Mounted Solar Systems

Fast Food Chains Per Capita

D I S A P P E A R I N G B I R D S

Subtitle



Slightly less important text that is still necessary to fully understand the map, placed directly below or to the right of the title

Species Distribution Change over Time

Five Species Tracked – Four Show Significant Change

Animal Shelter & Rescue Organizations

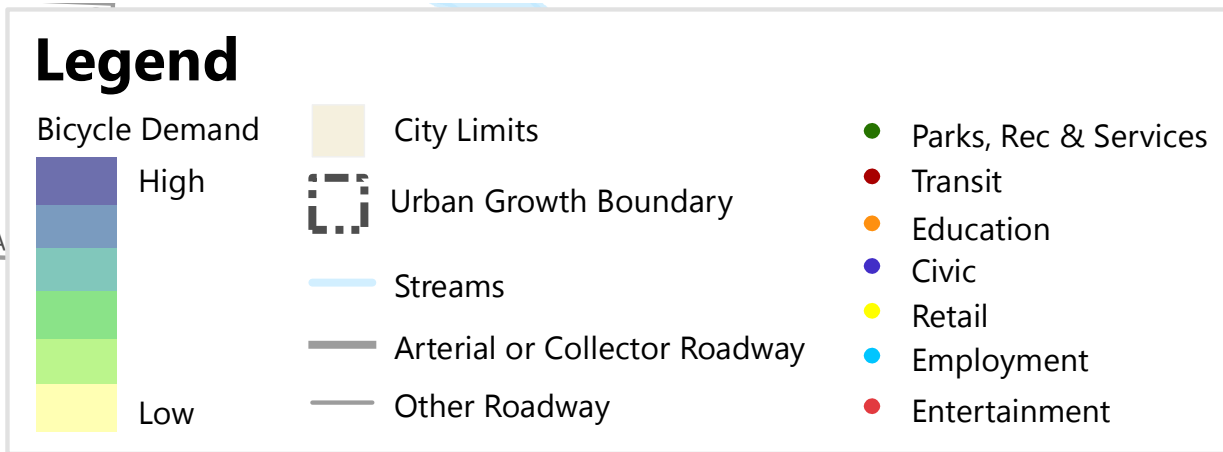
Non-Homecare Facilities Only

Legend

A legend is KEY to understanding the map

- ▣ Provides color / symbol look-up details
- ▣ Only necessary symbols should be included
- ▣ Do NOT need a title “Legend” or “Key” – that is obvious

Legend – a few examples




NORTH CLACKAMAS
PARKS & RECREATION
DISTRICT

PARKS & FACILITIES



0 0.25 0.5 1 Miles

 NORTH CLACKAMAS PARKS
AND RECREATION DISTRICT

CITIES

 DAMASCUS	 LAKE OSWEGO
 GLADSTONE	 MILWAUKIE
 HAPPY VALLEY	 OREGON CITY
 JOHNSON CITY	 PORTLAND
	 WEST LINN

 NCPRD PARKS & OPEN SPACE

 CITY BOUNDARY

 COUNTY LINE

 RAILROADS

 SCHOOLS

 FIRE STATIONS

 LIBRARY

 Local and Regional Trails

2005 Aerial Photography shown.

-  BASEBALL/SOFTBALL FIELD
-  BASKETBALL COURT
-  SOCCER FIELD
-  SWIMMING POOL/AQUATIC CENTER
-  TENNIS COURT
-  OFF-LEASH DOG AREA
-  HIKING/NATURE TRAIL
-  PICNIC FACILITIES
-  PLAYGROUND
-  SHELTER
-  BOAT RAMP
-  SPRAY GROUND
-  FISHING DOCK

The North Clackamas Parks and Recreation District has provided these maps as an information resource for the public. Every reasonable effort has been made to assure the accuracy of the maps. However, this map is not a legal document and should not be used as such. Some information in these maps has been approximated, such as park acreage. Further, this map and information was last updated in September 2009 and therefore may not reflect the most current information.

Legend – best practices

- Items are placed to the left of their corresponding label
- Complicated legends with many items necessitate using group level
 - ▣ Categorical. All land use colors placed separately from stream-level colors
 - ▣ Shape-type. All polygon features placed separately from all line features
 - ▣ Use headings to describe each group in categorically separate legends

Legend – best practices

- Shape-type
 - ▣ displayed in the following order: point, lines, polygons
OR
 - ▣ in the order of relevance
- Make sure there is not too much space between items & labels
- If showing a gradient of values (choropleth) have them touching each other (not separated by white)
 - ▣ Labels are be associated with each value OR
 - ▣ Label only max & min values

Legend – best practices

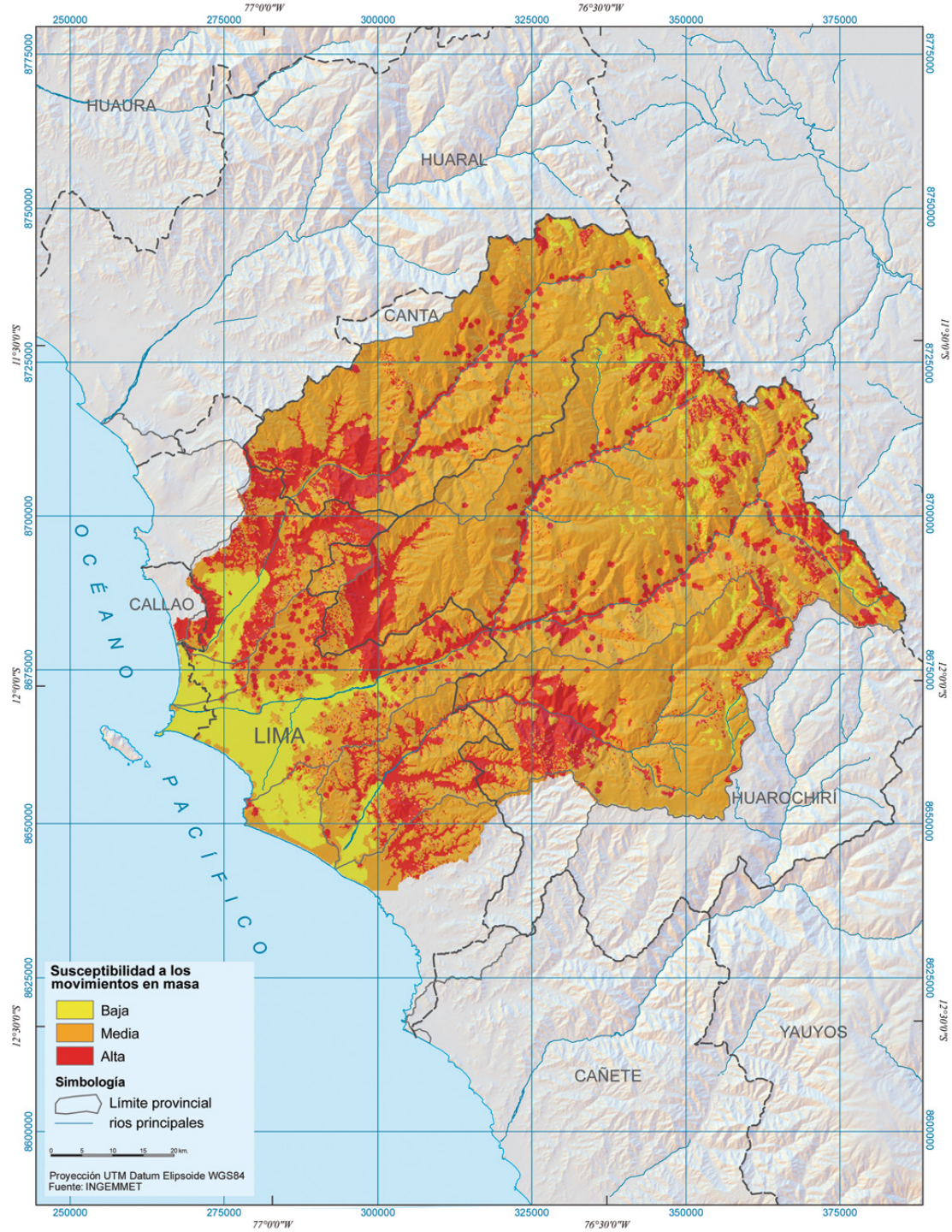
- Items can be shown vertically or horizontally (in columns)
- If a legend title is used, make sure it does not obscure the main point (items & labels)

Legend – placement

- Nearby or within the map with which they are associated – two exceptions
 - ▣ Only one map on the page
 - ▣ All maps share a common legend

Legend – the ‘style’

- When placed outside of the map (in the margins)
 - ▣ Encased in shaded box or outline
 - ▣ Without box and incorporated into the other margin elements, creating less seams on the layout
 - ▣ Partial outline – use a shortened line above and below
- Background color may need to be similar to map background to maintain the contrast between colors
 - ▣ Some colors will appear different when on a blue v. white background



Main Map(s)

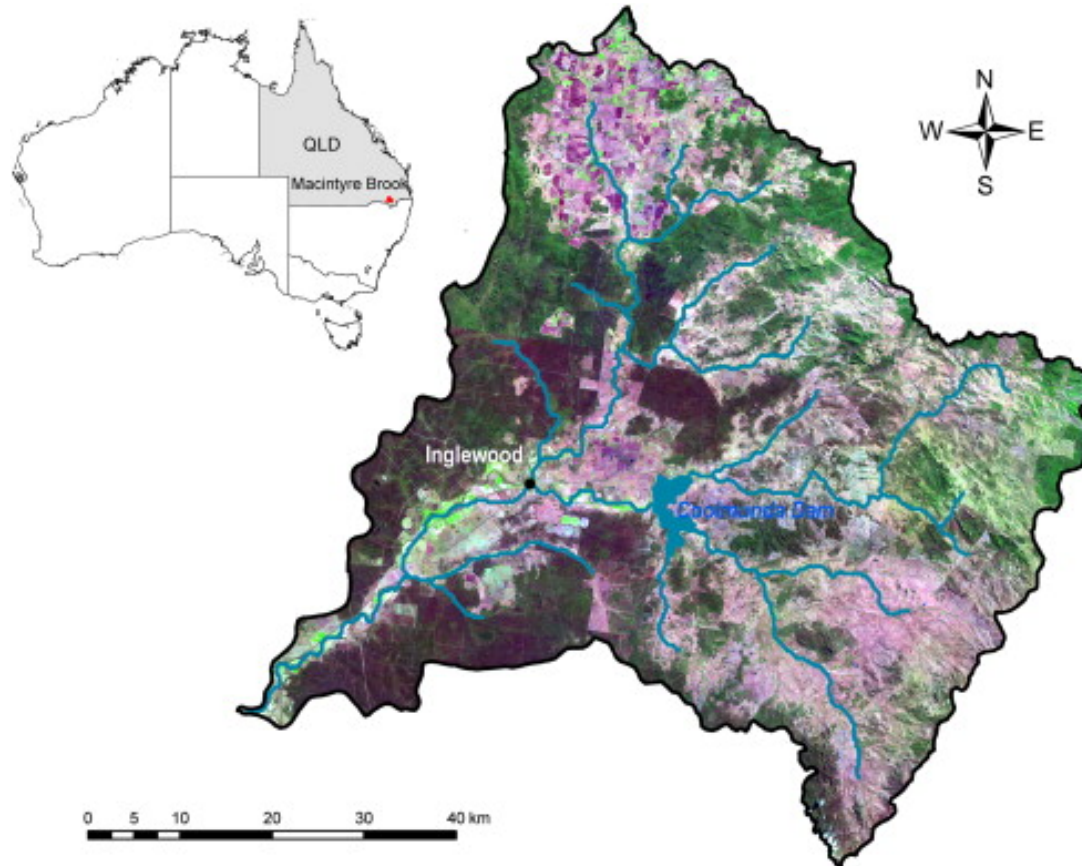
Large graphic that shows off data in coordinate space. It is your primary means of conveying information to the map reader.

- ▣ Should you overlap multiple layers onto one large map element or separate the layers onto multiple smaller maps?

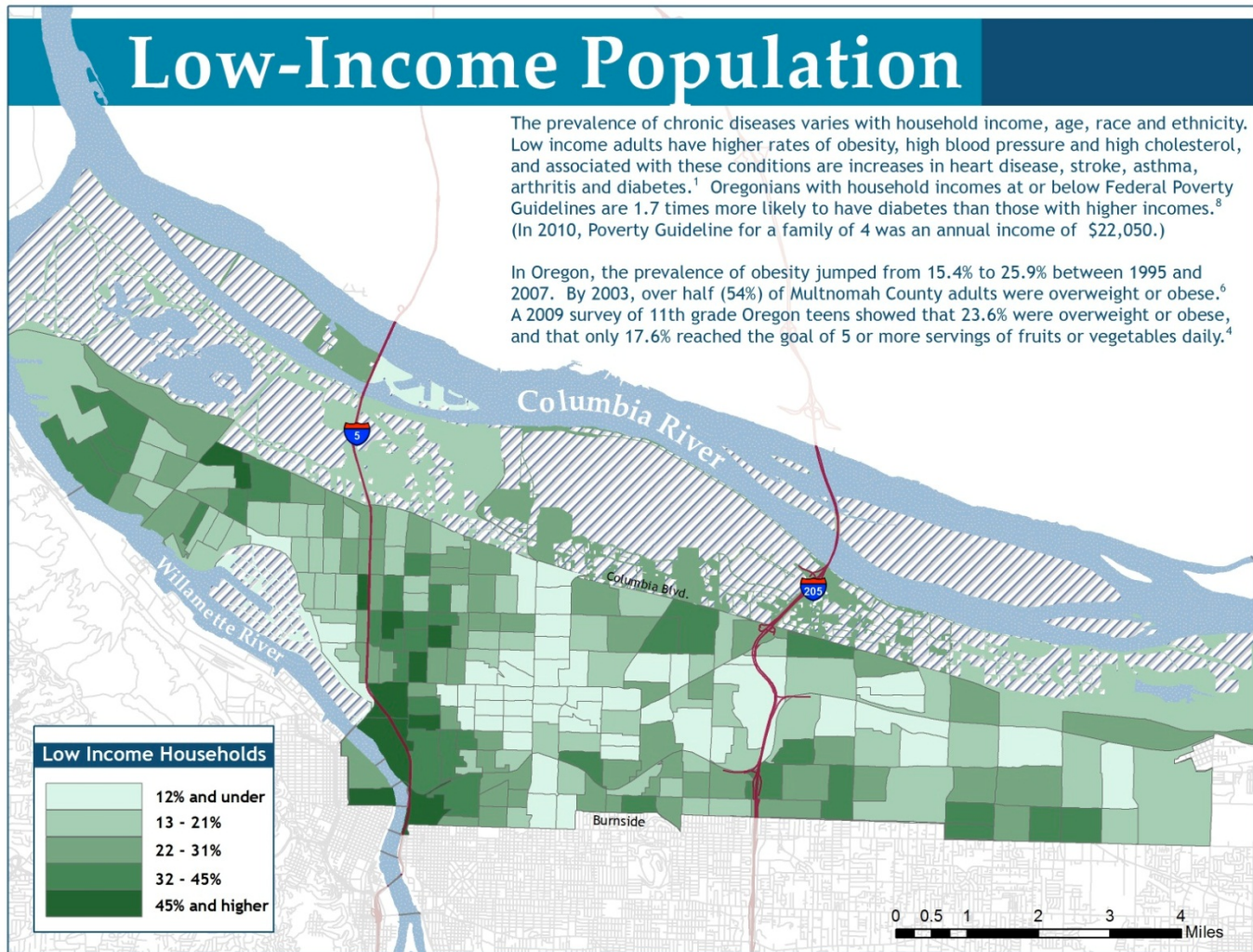
Main Map(s)

- Border or no border?
 - ▣ Map border can separate the map from the other elements, although it map itself can usually provide a visual contrast
- Isolate AOI or include outlying areas?
 - ▣ Clip out all outlying areas to have the map “float”
 - ▣ Include outlying areas that fit within the data frame
 - ▣ Include outlying areas, but generalize the data in those areas
 - ▣ Include outlying areas, but give it a faded or transparent look

Main Main – clipped

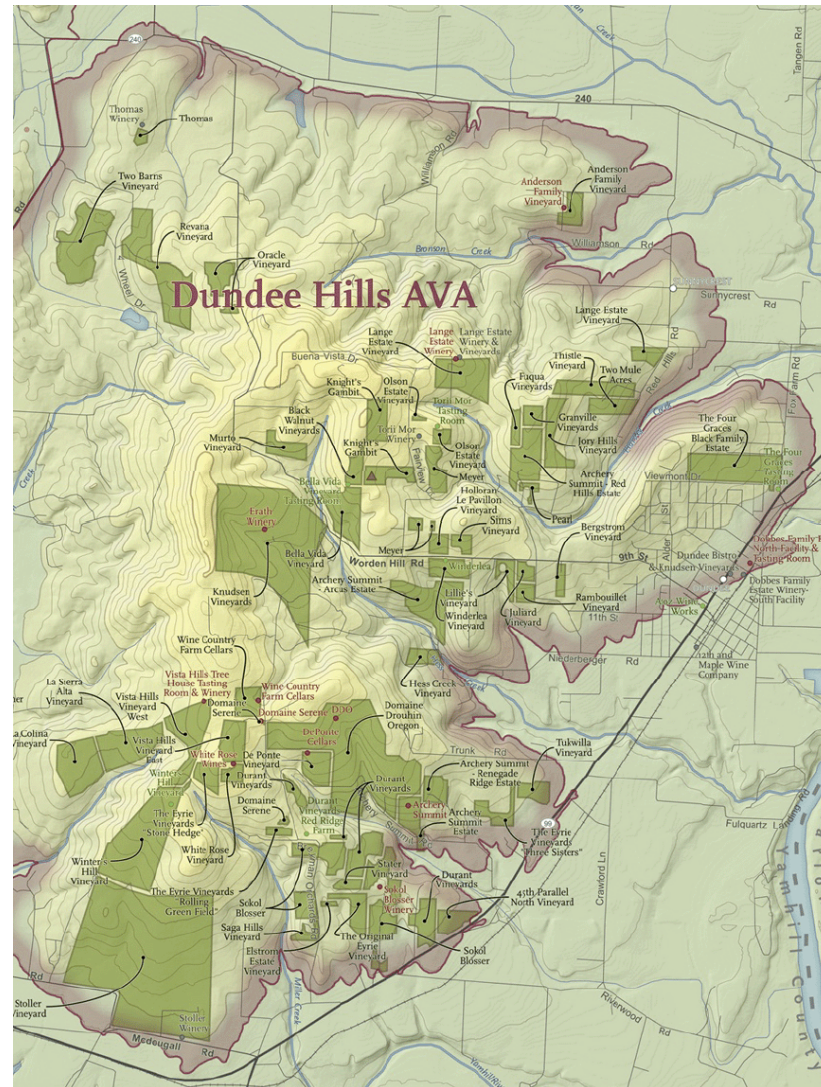


Main Map – faded



Demographic data from 2010 Census, and 2009 Census projections from Simply Map

Main Map – generalized



Main Map(s) – placement

- Usually contains the majority of the layout space
- There should be no doubt as to which is the main map
- Central, but slightly off-centered

North Arrow

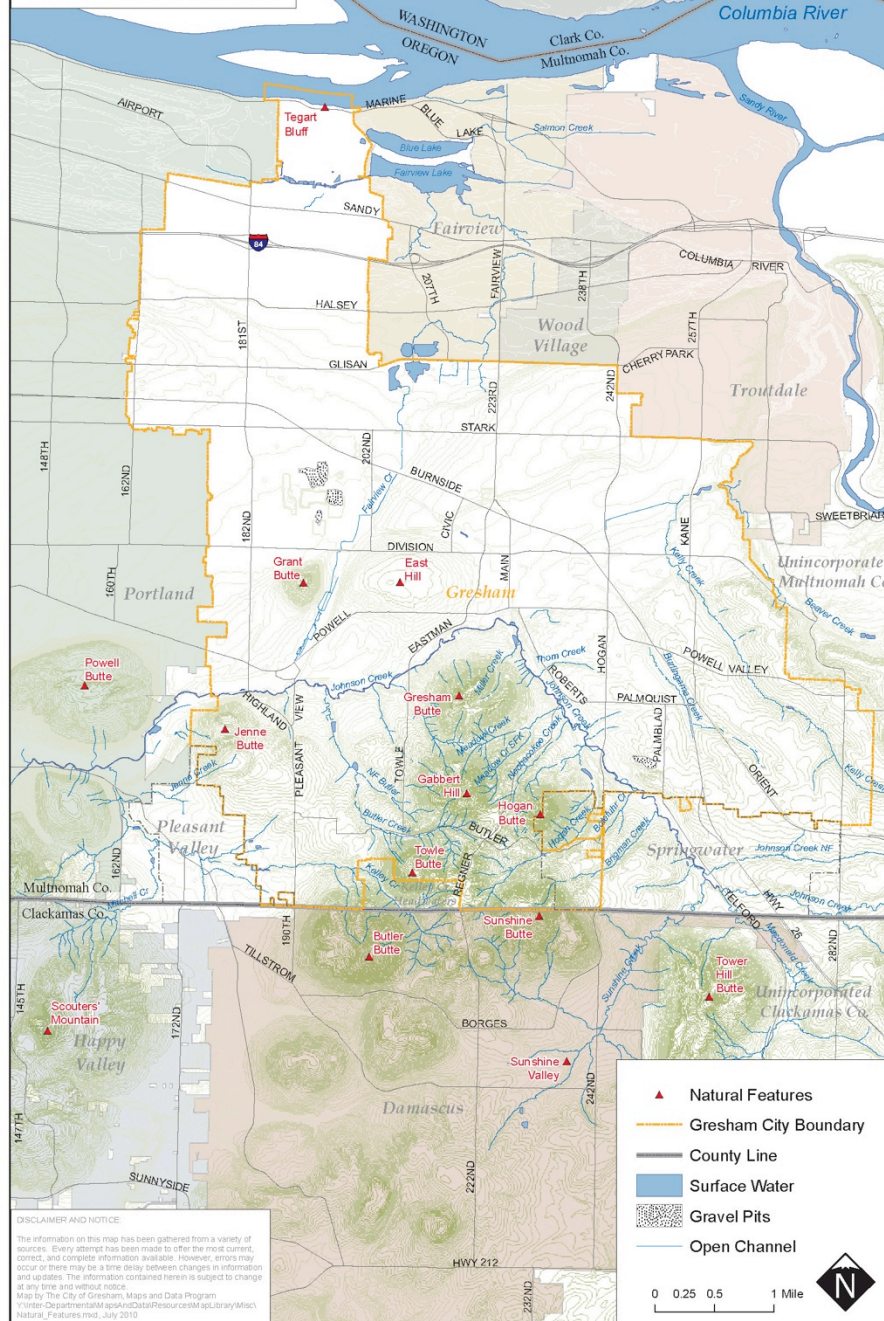
Purpose is to illustrate the orientation of the map and is commonly placed on a map

- You **MUST** use a north arrow when
 - ▣ The map is not oriented w/ North at top
 - ▣ The map is an area unfamiliar to your audience
- You **DO NOT** use a north arrow when
 - ▣ North varies throughout the map
- Nautical & orienteering maps should include true & magnetic North

North Arrow – best practices

- Keep it small, simple, and unobtrusive
- Place in a less conspicuous area of layout
 - ▣ Can be used to balance out another map element
 - ▣ Can be grouped with scale bar, legend, and other elements
- Mapping design trend has been going towards simplistic North arrows
 - ▣ Design your own?

The City of Gresham Natural Features



North Arrow



Sources / Credits / Date / Author

Maps may include:

- ▣ Data Sources and citations
- ▣ Map maker and date (of print)
- ▣ Organization (author) and logos
- ▣ Disclaimers & legal information
- ▣ Map series information
- ▣ Copyright & use issues
- ▣ Map projection & coordinate system

Sources etc. – best practices

- Printed on:
- Include author's name
 - ▣ Take responsibility / ownership of your work
 - ▣ Contact name for follow-up or questions
- Data sources useful for intended audience & future reference
 - ▣ Take care with acronyms and abbreviations
- Most of these elements are placed in an inconspicuous position somewhere in the margins

Scale

A graphic that shows the map viewer how to translate between map units & real-world units

Verbal Scale – 1 inch = 200 ft

Ratio Scale – 1:1,200,000

Graphic Scale* – 0————— 1 mile

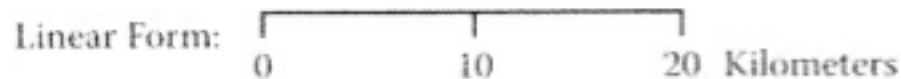
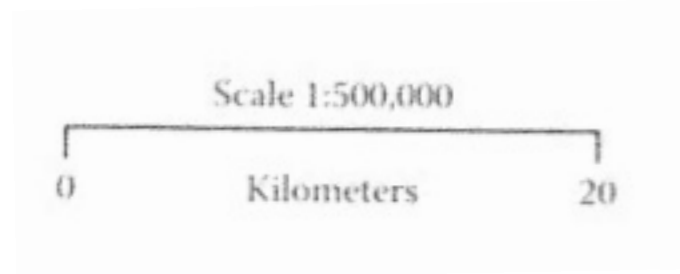
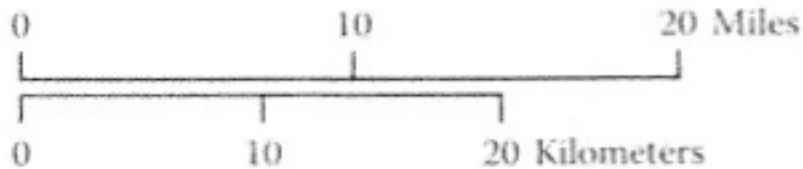
*Graphic scales are more common b/c it stays accurate even when the map is scanned, shrunk, put on a slide, or otherwise enlarged or reduced

Scale – best practices

- Simple & unadorned
- Two divisions – beginning & end
- Can provide multi-unit scale bars (metric, US) to avoid unit conversions
- Simple map = simple scale bar
- Detailed map (in regards to pinpointing exact locations or distance) = detailed scale bar

Scale – the ‘style’

- Usually black or dark gray
- Font conforms to fonts used on the layout

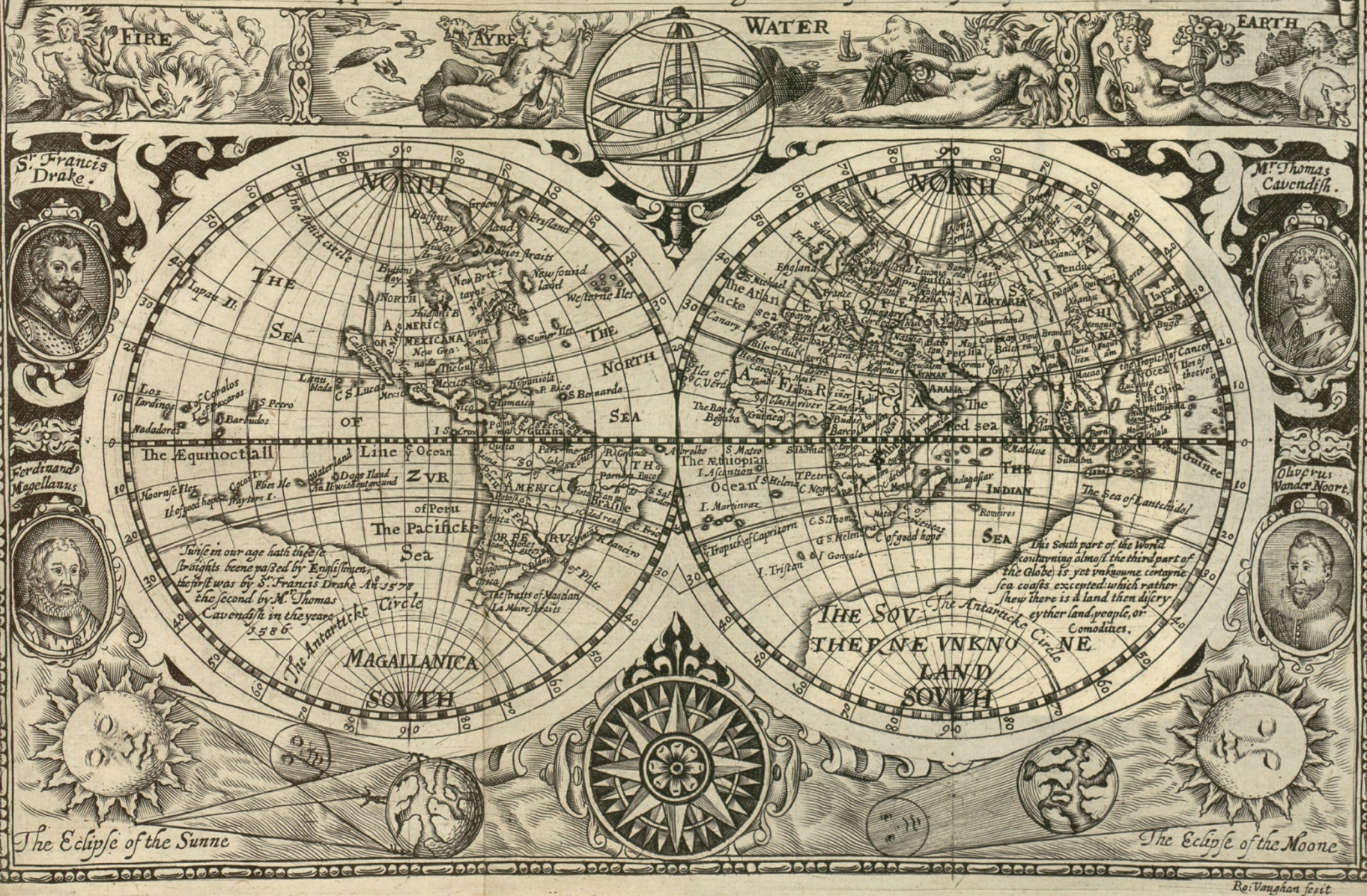


(page) Border

Used to group all of the layout elements together

- ▣ Placed around all the layout elements, including a narrow buffer
- ▣ Keep it simple – single line page border to not detract from the more important elements
- ▣ Double-lines, single-lines, varying thickness, shadow boxes, rounded corners, etc. are all acceptable

A New and accurate Mapped of the World, drawne according to the best and latest discoveries that have beene made.



The Eclipse of the Sunne

The Eclipse of the Moone



EVROPA
recens descripta
à
Guilielmo Blacuw.
1662



Explanatory/Descriptive Text

Any text that furthers the map's purpose that does not fit into any other category

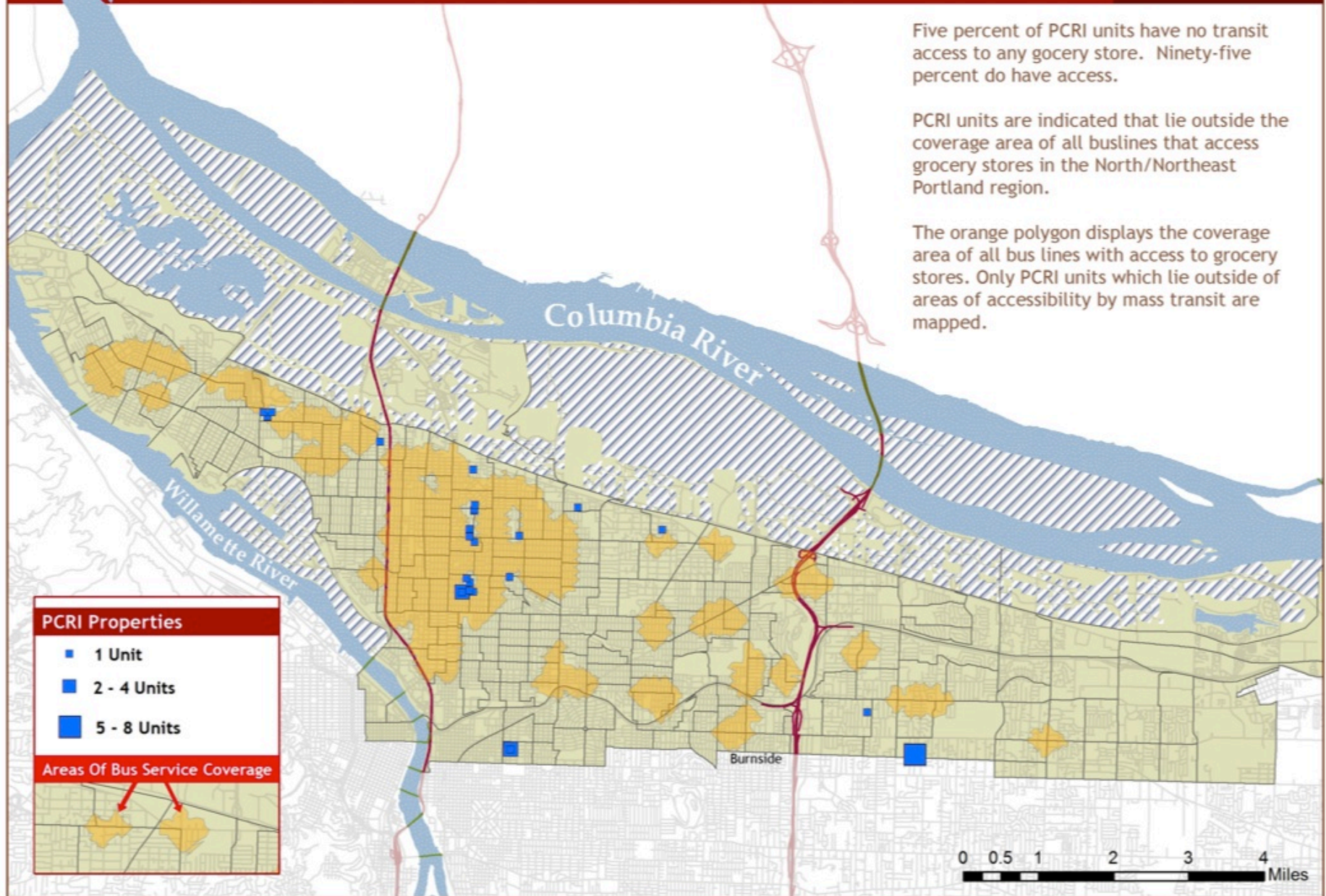
- ▣ Determine when and where a unique text element will enhance the viewer's understanding of the map

PCRI Bus Service to All Stores

Five percent of PCRI units have no transit access to any grocery store. Ninety-five percent do have access.

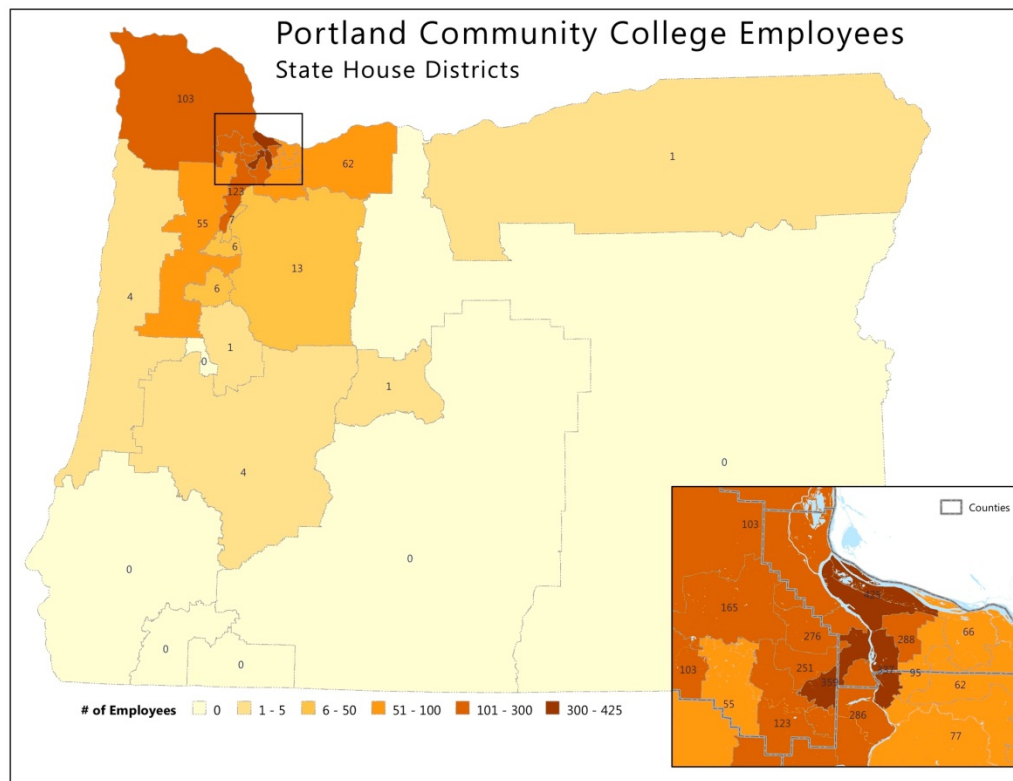
PCRI units are indicated that lie outside the coverage area of all buslines that access grocery stores in the North/Northeast Portland region.

The orange polygon displays the coverage area of all bus lines with access to grocery stores. Only PCRI units which lie outside of areas of accessibility by mass transit are mapped.



Inset / Locator Maps

A small map relative to the main map that shows either an area in more detail (inset) or an overview (locator)



Inset / Locator Maps – best practices

- Use same features & feature styles as the main map
- Same orientation as the main map
- Highlight the position of the inset features on the main map
- Can visually connect the two with ‘rays’ or lines coming out from the box
- Should include its own scale bar (inset map)

