



More than Pretty Maps



Key Principles for Creating Maps that Communicate Effectively

Power point developed by Frank Kenney, with modification by Mark Richardson and Kurt Snider (Rev March 2015)



Key Principles

1. know your audience, venue, purpose and media
2. take time to understand basic geodesy
3. think simple when designing
4. understand and apply contrast/figure ground
5. balance your map composition



“The purpose of design is to focus the attention of the user.”





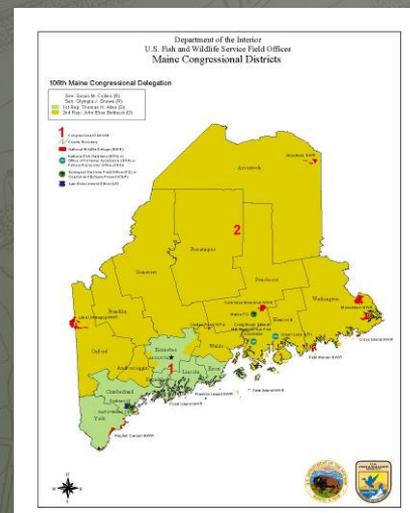
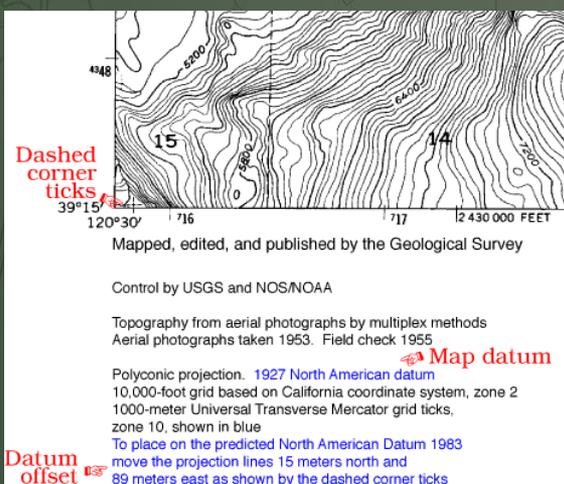
1. know your audience, venue, purpose and media

- age, profession, limitations, expertise...
- web-site, report, town meeting, newspaper...
- general purpose, topic-specific, one of a series...
- large printed map, 8.5x11 hand outs, projected on a screen, on the web, figure in a report



2. take time to understand basic geodesy

- datums - NAD27, NAD83, WGS84...
- projections - Mercator, Lambert conformal conic...
- coordinate systems - latitude/longitude, UTM, SPCS



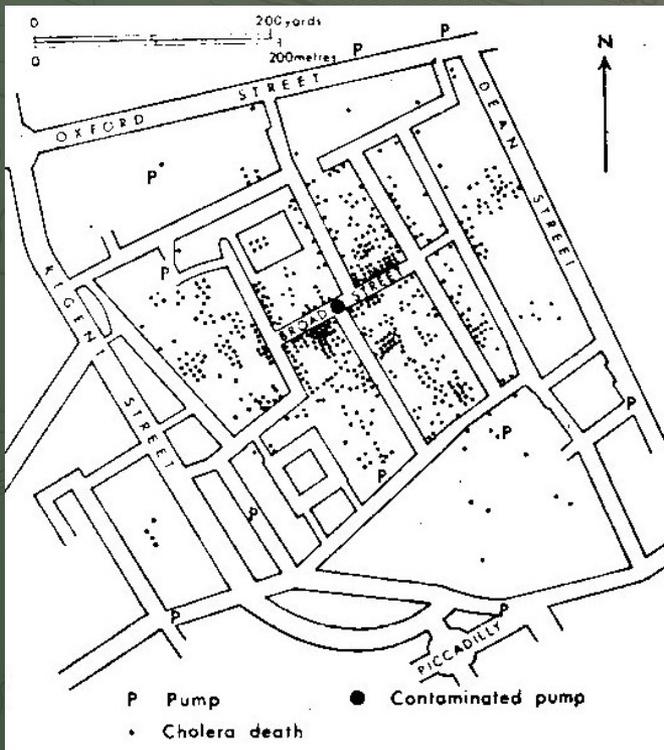


3. think simple

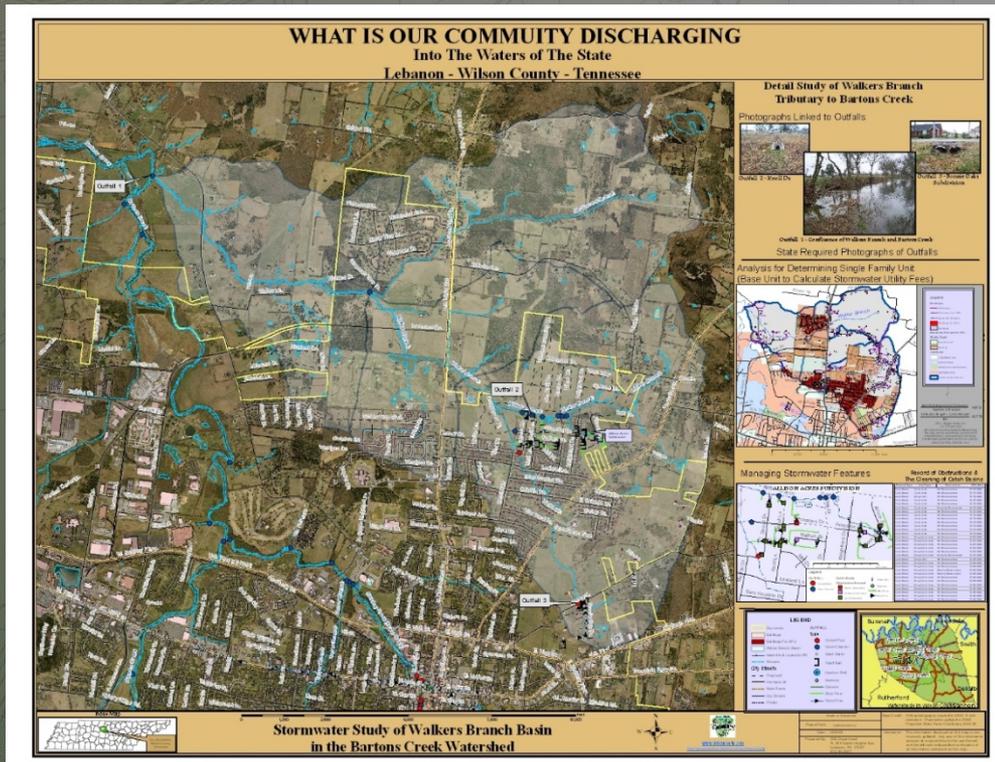
- Good design leans toward simplicity
- There must be a defensible reason for every element in a map composition
- The composition is complete when nothing else can be removed
- Honor the empty spaces



3. think simple



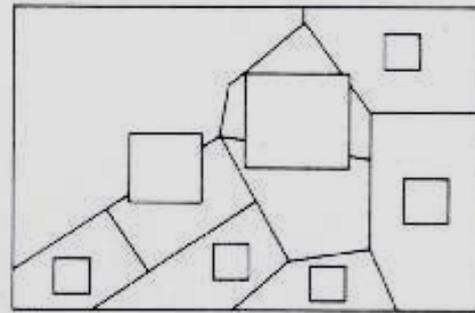
Less can be more



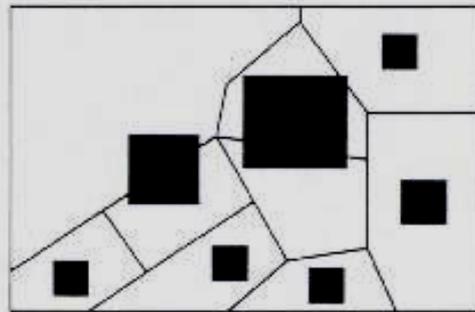
Just because you can doesn't mean you should



4. understand and apply contrast/figure ground



(a)



(b)

Figure 12.14. The development of figures on maps. The graphic treatment of the squares in (a) resists figure formation. The application of black to the squares in (b) causes them to emerge as strong visual figures. In many cases, only minor graphic adjustments are necessary to develop figure formation.

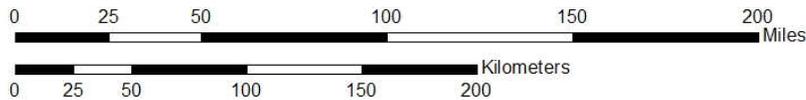


4. understand and apply contrast/figure ground

National Wildlife Refuges in Tennessee



Coordinate System: State Plane Tennessee FIPPS 4100
Datum: NAD 83
Units: Feet

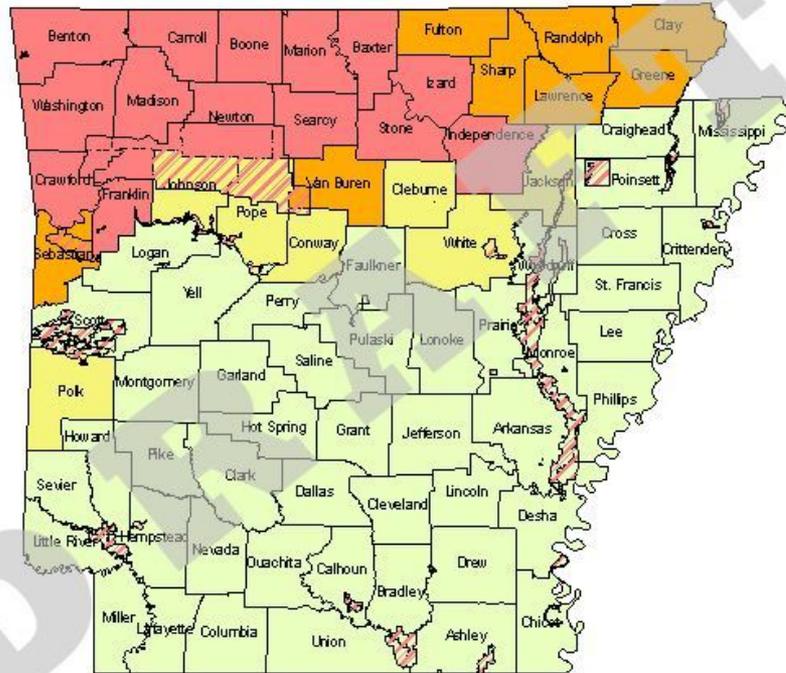


Map Production: Southeast Region GIS Center in Cookeville, TN
Map Production Date: September 11, 2012
File Location: G:\projects\TN_NWR_map\tn_nwr_map.pdf



5. balance your map composition

- Visual balance results from two major factors: weight and direction
- Visual weight depends on location
- Elements at the center of a composition pull less weight than those lying on the tracks of the structural net.
- So, the farther away you get from the middle of the page, the heavier an object is perceived. ...



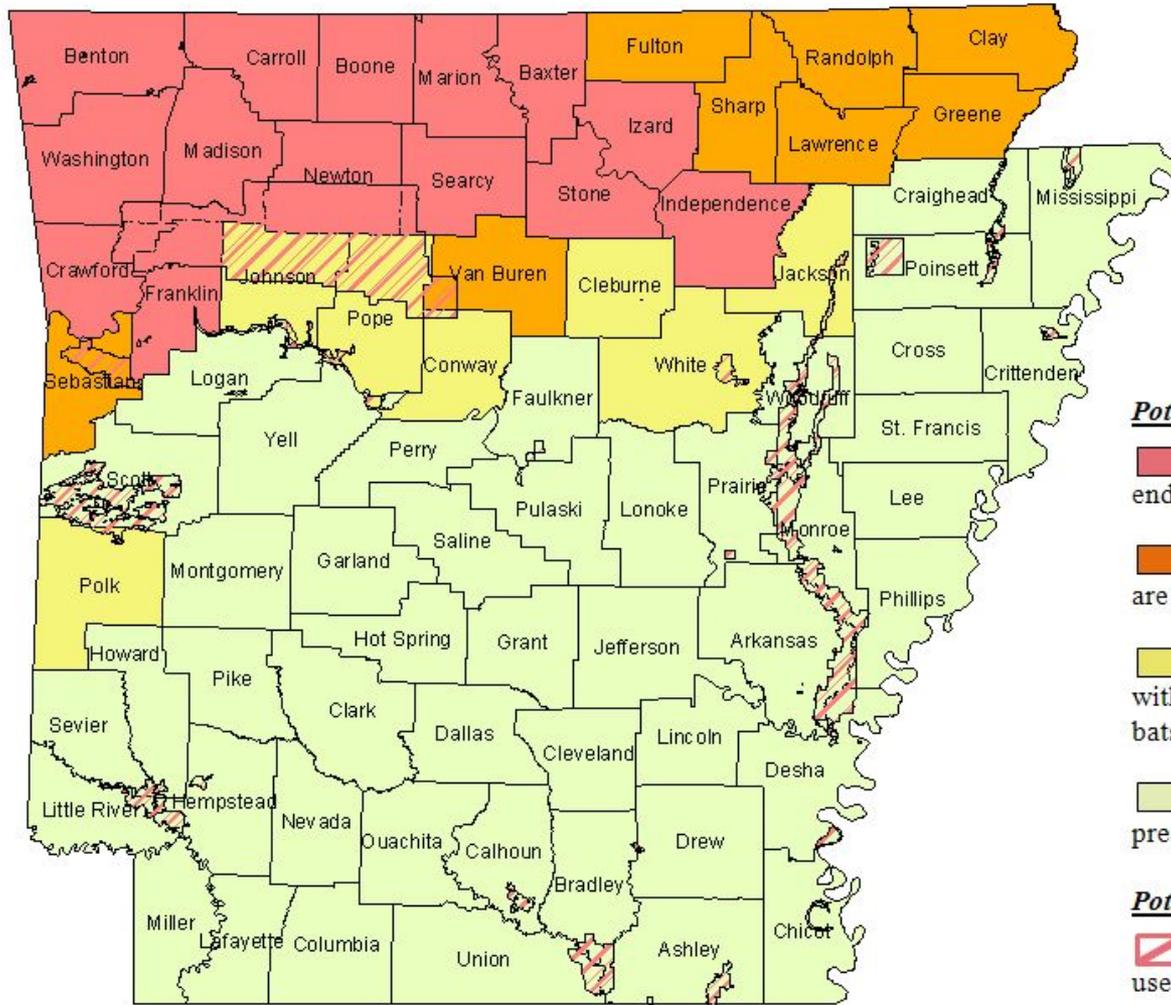
Potential Risk: BATS

-  **High** Important caves used by endangered bats are present in this county
-  **Moderate-High** Endangered bats are or have been present in this county
-  **Moderate** These counties are within the potential range of endangered bats, but none have been documented
-  **Low** No known or predicted presence of endangered bats

Potential Risk: BIRDS

-  **High** Important known habitat used by local and migratory birds

NOTE: The map above depicts potential risk (due to construction of wind farms) for endangered bats (by county) as well as local and migratory birds (known habitat areas). Proposed construction in a high risk county or known bird use area does not mean automatic termination of a project. Each project will be assessed individually.



Potential Risk to Endangered Bats and Migratory Birds from Wind Farms

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Six Simple Suggestions

1. just because you *can* do it, doesn't mean you *have* to
2. steal the best ideas and make them your own
3. don't (necessarily) accept the defaults
4. you're done when you can't take anything else out
5. the customer is NOT always right
6. have someone else check/review your map