Objectives:

What is Google Earth?
Navigating Google Earth
Examples
• Public Sewage and Water Service Area Analysis
• Walkability Assessment
• New Alexandria Borough Build-Out Analysis
Advantages/Disadvantages
More resources
Introduction

What is Google Earth?

At its most basic:
• Virtual, 3-Dimensional Globe
• Satellite Imagery
• AKA... a Geobrowser

A geographic information program (i.e. mapping program) that allows users to freely navigate the globe (among other geographies) and **annotate features from a desktop platform as a pc program**
Keyhole Markup Language or KML or .KML

• Just like Word or PowerPoint have files associated with them, so does GE.

• The file format by which GE reads and outputs annotations (i.e. placemarks, polygons, paths, tours, overlays, etc.).
KMZ = KML(zipped)

The KMZ file format is a zipped file that acts like a folder for the annotations

A KMZ file will condense numerous KML’s, images and other annotations into a smaller file
Annotations:

Placemarks: points in space that identify a particular (x, y) location

Paths: lines in space that identify a continuous series of (x, y + x, y + ...) locations to create a single feature

Polygons: areas in space that identify 2-dimensional locations that consume space
Annotations:

**Tours:** recordings of your movements or along a path

**Photos:** images that can be inserted into any view within GE

**Image Overlays:** drape an image over the virtual globe surface
Annotations:

Models: 3-D figures that can be created in other programs (Google SketchUp) and uploaded to complement the 3-D virtual globe.

Network Links: aren’t true annotations. They allow a content producer to hold data at a remote location for local viewing (like every web page).
Info Balloons:
Descriptive HTML balloons that appear when an annotation is clicked in the Places Panel
One of the most powerful tools in Google Earth.
Allows a user to communicate more information than merely spatial.
Planning with Google Earth

Menu Bar

Tool Bar
Evaluating Use

GE has many great attributes, however just as a cartographer must consider limitations of GIS, one must make considerations for GE’s limitations.
Advantages

FREE!!!
3-D
Simple to learn and operate
Dynamic scaling and views
Plays well with GIS, Export to KML tool
Files are much smaller and easier to share
Advantages

Street View
Incorporation with Google Maps & online mapping, Sketchup, CommunityViz, Google Fusion Tables, ArcGIS Online, Google Spreadsheet Mapper
Take it with you on your smart phone
With Google, possibilities are endless
Disadvantages

- Poor print quality
- Poor analytical capabilities
- Poor thematic mapping capabilities
- Google Earth Pro $400
- Basemaps are limited to aerial imagery, there are workarounds
- Quality of aerial imagery varies by year, season, geography and resolution
Disadvantages

Limits on the number of features that can be exported and successfully viewed from ArcMap.

Computer, projector and screen are necessary to present, and possibly internet.
Simplistic approach to mapping and geographic visualization reduces barriers to geographic communication and offers unique opportunities versus other technology, but...leads to poorer functionality and customization.
More Resources

Google Earth Tutorials & More
• support.google.com/earth

Google Earth Blog;
• gearthblog.com

Google Earth Library; Topo Maps & More Overlays
• gelib.com

Google IT!