C: Clipping, dissolving, and constructing buffers

Three GIS methods for manipulating **geometry:**

Clipping:

- Using one layer to cut off portions of another

Dissolving:

- **Aggregates** separate features into a composite
- Equivalent to **.groupby()** plus **.agg()**

Constructing buffers:

- Creating polygons with a set radius around features

Mixes of these are frequently used:

- Example: areas near roads or schools

Will do two ways:

- Demonstrate in QGIS

  1. Load US counties and NY primary and secondary roads
  2. Filter counties to Erie, 36029
  3. Filter roads to interstates via RTTYP I
  4. Clip roads at county boundary
  5. Project clipped roads to EPSG 26918, UTM 18N
  6. Construct a 1 km buffer

7. Dissolve roads
8. Construct a 1 km buffer

• Will do in g25 using geopandas