**Innovations in Mapping**

**Short Term 2016**

**Fieldpapers/OSM Lab**

**Due Thursday, May 19 at 10am**

**Community Partners:**

Seth Fitzsimmons (Fieldpapers, Stamen Design)

Drishtie Patel (Missing Maps, American Red Cross)

Tom Twist (Sustainability, Bates College)

**Objective:**

In this lab, we are learning the workflow used by mappers who collect information used to edit OpenStreetMap (OSM). OSM is the map equivalent of Wikipedia that is the major alternative to Google. It depends on volunteer contributions and is especially driven by local knowledge. It is used around the world for disaster mapping, indigenous land rights claims, historians, and other communities who value open data. For more information: https://www.openstreetmap.org/about

*Using an adapted workflow developed by Fieldpapers/Red Cross and the TeachOSM faculty at George Washington University, we will collect geospatial data for Bates Sustainability projects.*

I will evaluate you based on contributions to data collection for gridded areas in the Tasking Manager & Individual Reflection on experience. Our goal is to provide enough useful data for Tom Twist and the EcoReps to eventually analyze campus waste stream data.

**Monday, May 16**

10am-12pm (meet in Commons 226)

1. Introduction to OpenStreetMaps
   1. Understand the purpose of OSM: http://learnosm.org/en/beginner/introduction/
2. Login to OSM (www.openstreetmap.org)
3. 11am: Meet Drishtie Patel, Introduction to Missing Maps and Humanitarian Mapping initiatives, OpenStreetMap editing tutorial
4. Practice tracing buildings on campus (http://learnosm.org/en/beginner/start-osm/)

1-2pm (Pettigrew 200)

1. Presentation by Tom Twist on sustainability projects at Bates
2. Collectively agree on categories of features to collect data about
3. Introduction to Fieldpapers and Ground truthing by Seth Fitzsimmons
4. Divide buildings and features among student groups (of 2 people)
   1. Areas organized on OSM Tasking Manager: http:// http://tasks.teachosm.org/
   2. Search for Bates under “All Jobs” and select Bates Sustainability (Project #174)
   3. Zoom in and choose a tile for your group. Start with one tile that includes buildings. If your tile includes part of a building, collaborate with the group who has the other part to make sure you don’t duplicate data collection. You may complete more than one tile as long as every group has at least one tile that includes a building.

**Homework:**

1. Print out Fieldpapers map for your assigned tile:
   1. Click on “Make yourself an atlas” here: http://fieldpapers.org/ and zoom into your tile area.
   2. Change grid layout to 1 x 1 (in the top left hand corner of the map) to approximate your tile area.
   3. Give your atlas a title (perhaps your last names).
   4. Choose the basemap: for example, Satellite + Labels or Mapbox Satellite.
   5. (Video tutorial here: https://www.youtube.com/watch?v=A\_HGkBXZ69g)
2. Collect data on your Fieldpapers print out for the features agreed upon in class. You should mark up the printout sheet so that this data gets scanned and can be easily transferred to OSM, but can also use a data collection sheet (template posted on Lyceum) to keep track of attribute details.

**Wednesday, May 18**

10am-12pm (Pettigrew 200)

1. Scan annotated Fieldpapers sheets using smartphone camera
2. Save files as tiff, jpg, png, or gif (not pdf).
3. Upload files here: http://fieldpapers.org/snapshots/new
4. Open JSOM: In Preferences, enable Remote Control in the second to last tab on the left of the window.
5. Still in JSOM Preferences, in the 4th tab (Plugins) click “Download list” and then search for Fieldpapers. Check the box next to Fieldpapers and then click OK at the bottom of the Preferences window.
6. Back over on the Fieldpapers page with your uploaded scan, scroll down until you see “Edit in…” on the right-hand side of the page. Click “Edit in JSOM.” You should now see the Fieldpapers scan appear as one of your your JSOM layers.
7. Make edits in JSOM using your Fieldpapers notes. Only edit your assigned area! Save edits frequently!
   1. Finish tracing building outlines based on the aerial imagery (Bing or Mapbox) – you can do this in either the online iD editor (directly from the OSM site) or in JSOM.
   2. Add building attributes (<http://wiki.openstreetmap.org/wiki/Map_Features>) in either iD or JSOM. (iD is a little easier since the presets for certain attributes are easily added in the left-hand side of the editor.)
   3. **Add waste stream tags as appropriate in JSOM. For example:**
      1. **amenity=recycling**
      2. **recycling=[TYPE: batteries, cans, clothes, glass, paper]=yes/[no]**
      3. **amenity=waste\_basket**
      4. **Always include source=Innovations in Mapping 2016**
      5. **When counting number of amenities/building use note=[#]**
   4. Add any other appropriate data useful to waste stream monitoring.
   5. When you are done making edits for your assigned grid, return to the Tasking Manager at http://tasks.teachosm.org/ and “Mark your task as done” under the “Contribute” tab.
8. You will be evaluated on how completely you edit and tag your assigned area.
9. Export data for Tom Twist (we will do this as a group when all of the Tasking Manager grids are complete). Working with this data in collaboration with Tom Twist would be a great foundation for someone’s final project!

**General Information About Methods:**

* Using Fieldpapers
  + http://learnosm.org/en/mobile-mapping/field-papers/
  + INSTALL Fieldpapers plug-in to use in JSOM
* Using Tasking Manager to organize our work
  + http://learnosm.org/en/coordination/tasking-manager/#editing-choices
* Using JSOM to edit OSM – Getting started with JSOM guide: http://learnosm.org/en/josm/start-josm/
  + Follow instructions to download Java fist if you are prompted on screen
  + Download JSOM
  + Read the Introduction page on the JSOM wiki: https://josm.openstreetmap.de/wiki/Introduction
  + Learn to make edits
    - Basic editing process: http://learnosm.org/en/josm/more-about-josm/
    - Editing from Fieldpapers: http://learnosm.org/en/josm/editing-with-josm/
    - Useful information for annotating data (tags) in JSOM

http://wiki.openstreetmap.org/wiki/Waste\_Processing

http://wiki.openstreetmap.org/wiki/Key:waste

(More on tags: https://taginfo.openstreetmap.org/tags)

**What you should turn in:**

1. Annotated Fieldpapers sheet(s)
2. Printout of your edits in OSM (My Profile -> My Edits). If you and your partner make edits on your individual OSM accounts, print out both account edits lists.
3. Individual Reflection (200 words): *How do Fieldpapers and OSM transform* ***who*** *can be a mapmaker,* ***what*** *is being mapped, and* ***how*** *this information is being distributed? Draw on your own experience using these tools as evidence for what their impact is in the field.*