



A quarterly newsletter to broaden people's understanding of mapping, geography and the City's Geographic Information System

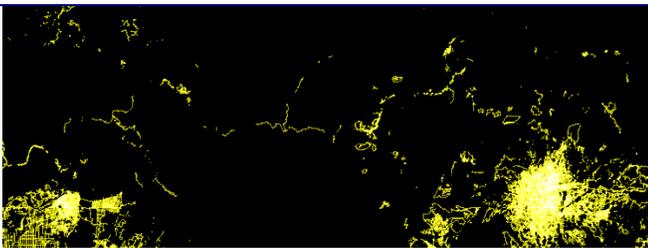
Volume 5, Issue 1

Spring 2015

Marlborough's Public Information Mapping Application (PIMA):

<http://gis.marlborough-ma.gov>

Greetings once again from the *GISette!* I've been preoccupied with other things lately and haven't been able to give this newsletter the attention it deserves. In a sad way it worked out for the best. With the recent tragic earthquakes in Nepal, I learned about an aspect of GIS that I wasn't aware of. This is a really special story. Part of the reason I love what I do is that I am fortunate enough to see the work I do affect people's lives on a daily basis. This is a great example of mapping affecting people's lives. Whether we realize it or not, mapping has become a part of our daily routines. It gets us where we need to go, it helps us find our way, and conversely, it helps people find us. This is a story that I wanted to share about how GIS and mapping are helping people find other people - All at a time where those that might not rely on mapping the same we do, need it more than ever.



Click to animate image above map and see how volunteers mapped roads and other features in Nepal in the first 48 hours after the initial quake hit.

GIS to the rescue...literally.

Opensource mapping is helping rescuers in Nepal

Since several massive 7+ magnitude earthquakes have struck Nepal since April, over 8,000 people have died, and many more have been injured or left stranded in rural areas. Aid groups like the Red Cross and Doctors Without Borders have deployed teams to help those left behind in the districts of Dhading, Gorkha, Rasuwa and Sindhupalchowk. But there are plenty of people who are contributing from thousands of miles away—on their lunch break, after work, or on the weekend. They're part of an online community of volunteers from all over the world who are mapping Nepal from their laptops, creating data that's critical to on-the-ground relief.

More than 4,000 mappers—part of OpenStreetMap (OSM), the biggest crowd-sourced mapping project on the Internet—joined in the effort. Within 48 hours, they had mapped out 13,199 new miles of road and 110,681 buildings, quadrupling the road mileage covered and adding 30 percent more buildings. Largely building off of satellite images and GPS data, they detailed a huge swath of the region, providing critical information about road networks, hiking trails, relief camps, footpaths, and river crossings to governments and aid organizations. "The maps will be used in all kinds of ways to deliver aid," says Tyler Radford, interim director of the humanitarian OSM team, "whether it's healthcare, food, or shelter."

Continued on page 2

INSIDE THIS ISSUE

- 1 *GIS to the rescue...literally.*
- 2 There's an app for that! – "Marlborough Works"
- 2 *GIS to the rescue...literally.Cont.*

Those are amazing results for a humanitarian team run almost entirely by volunteers, and almost entirely remotely. Capitalizing on any time its volunteers can offer—from 20 minutes to a whole work day—OSM has organized efforts in crises like the 2010 Haiti earthquake and the Ebola outbreak. Many of its contributors have no expertise in mapping, but the system is simple enough that a quick online tutorial can get them started, and their work is reviewed by more experienced users.

Several hours after the earthquake hit Nepal, OSM had already activated its network, which it deployed strategically to map the areas with the least coverage that had also been hit the hardest. Seismological data and reports from the ground—from a local mapping group, the news, as well as social media like Twitter—helped its coordinators identify damaged areas, so volunteers could focus first on adding escape and delivery routes there. Requests also came in from aid organizations, the Nepalese Army, and the government for maps that could help them identify and access victims.

The first need: maps of roads and buildings. The local group, Kathmandu Living Labs, had already mapped out a lot of the city (you can see the dense, filled-in city areas in white in the maps above). But volunteers had a lot of work to do filling in the districts just outside the city and rural areas. They also identified potential helicopter landing spots, mapped unrecorded footpaths into remote villages devastated by the earthquake, and used post-quake satellite images to identify camps that people set up after their homes collapsed.

As basic map information is gathered by the volunteers, OSM makes it immediately available to the public—so that people can mesh it with other datasets to create custom maps, like one that identified the location of Nepalese healthcare facilities. The foundation built by OSM’s volunteers will not only make it easier to get help to victims of this disaster, but hopefully those of future disasters as well.

Story by Annie Sneed

***THERE'S AN APP FOR THAT!!
MARLBOROUGH WORKS***



“Marlborough Works” is our new mobile app designed for residents. You can report potholes, graffiti, street light outages and more all from your smartphone or through the city website. To do this, simply log on to this City’s webpage and click on the “Marlborough Works” icon and follow the easy instructions. Help us make Marlborough an even better community!



City of Marlborough, Massachusetts
Department of Public Works
Engineering Division
135 Neil Street
Marlborough, MA 01752
(508) 624-6910

John L Ghiloni.
Commissioner of Public Works
Evan Pilachowski, P.E.
City Engineer
Nathaniel Bowen, GISP
GIS Administrator