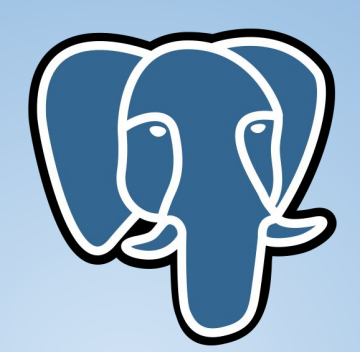




Local Scoop - Hazards - Floods

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Problem

- BreazeHome, led by Dr. Masoud Sadjadi, is a real-state website project
- seniors can use to hone their skills.
- BreazeHome provides Hazard information just around selected selected property.
- BreazeHome hazard data is not detailed.

Solution

- Create page where users can browse and compare surrounding neighborhoods.
- Provide Hazard data as users move through the map or search new locations.
- Provide an accurate Flood Data Layer for zones in flood risk.

Current System

- Need to go in multiple properties to compare neighborhoods.
- Flood information is generalized for the whole county.
- Flood risk is calculated using arbitrary metrics.
- Flood uses a list of events that often do not match area name.

Screenshots

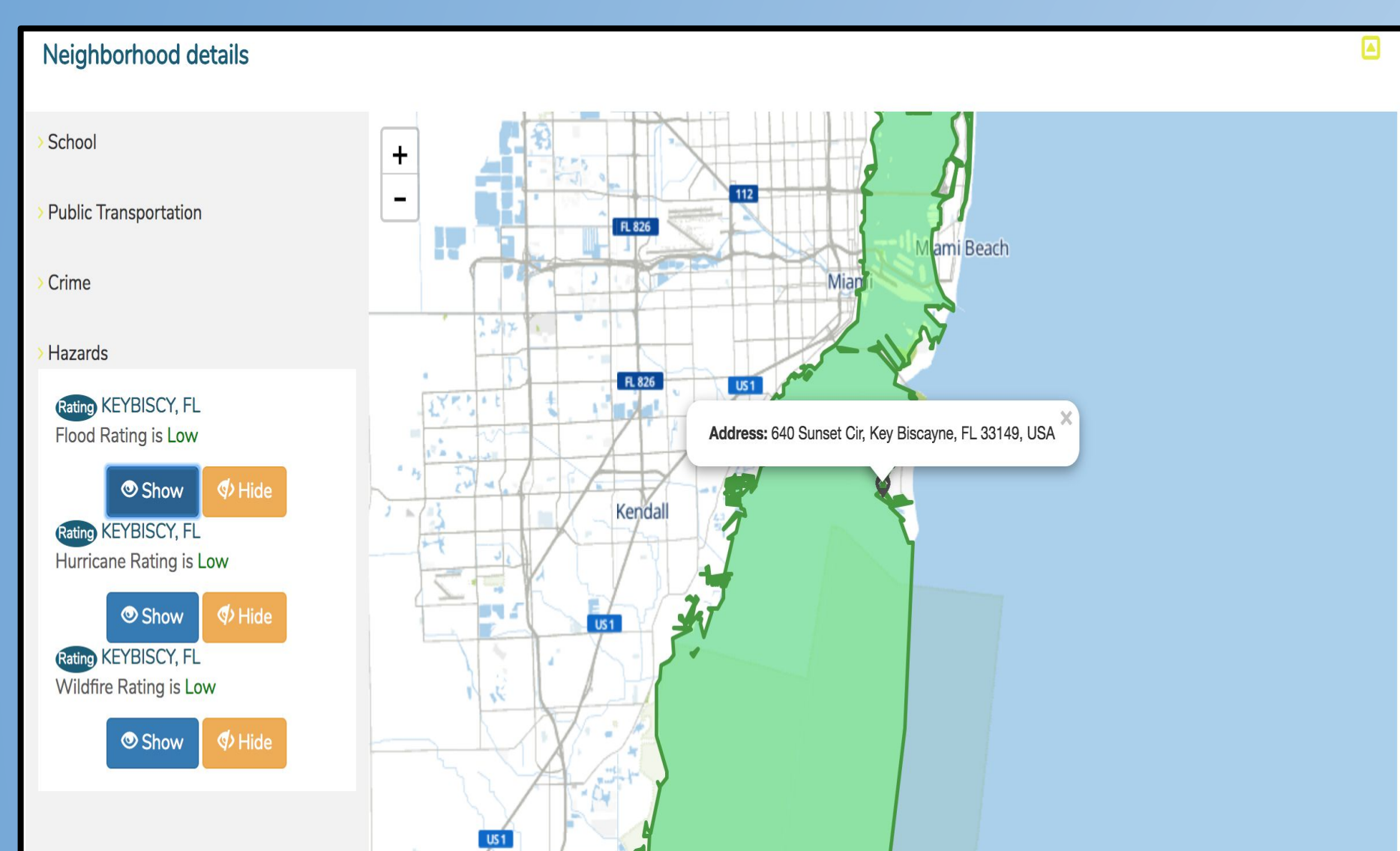


Figure 1: Current Implementation

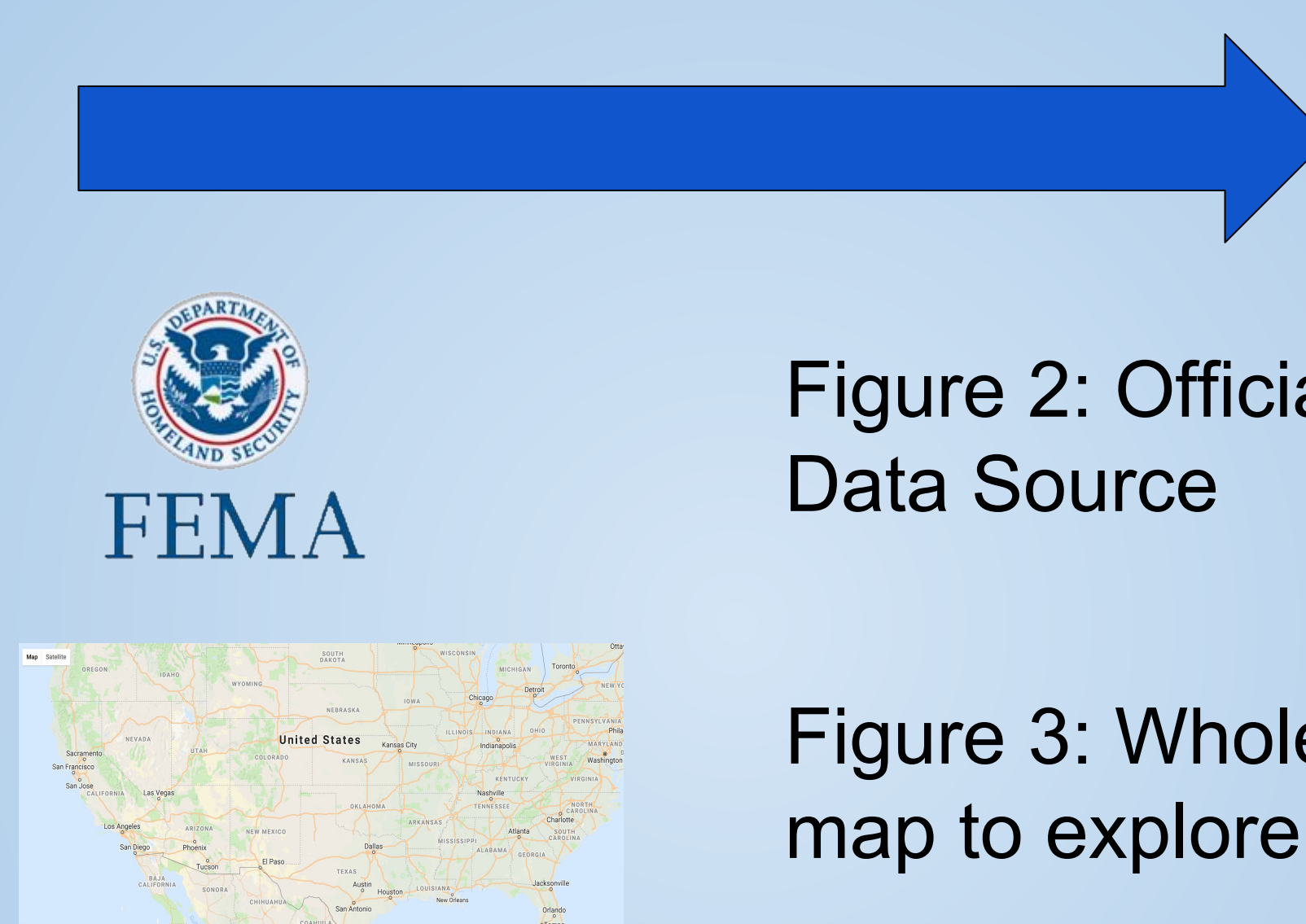


Figure 2: Official Data Source

Figure 3: Whole map to explore

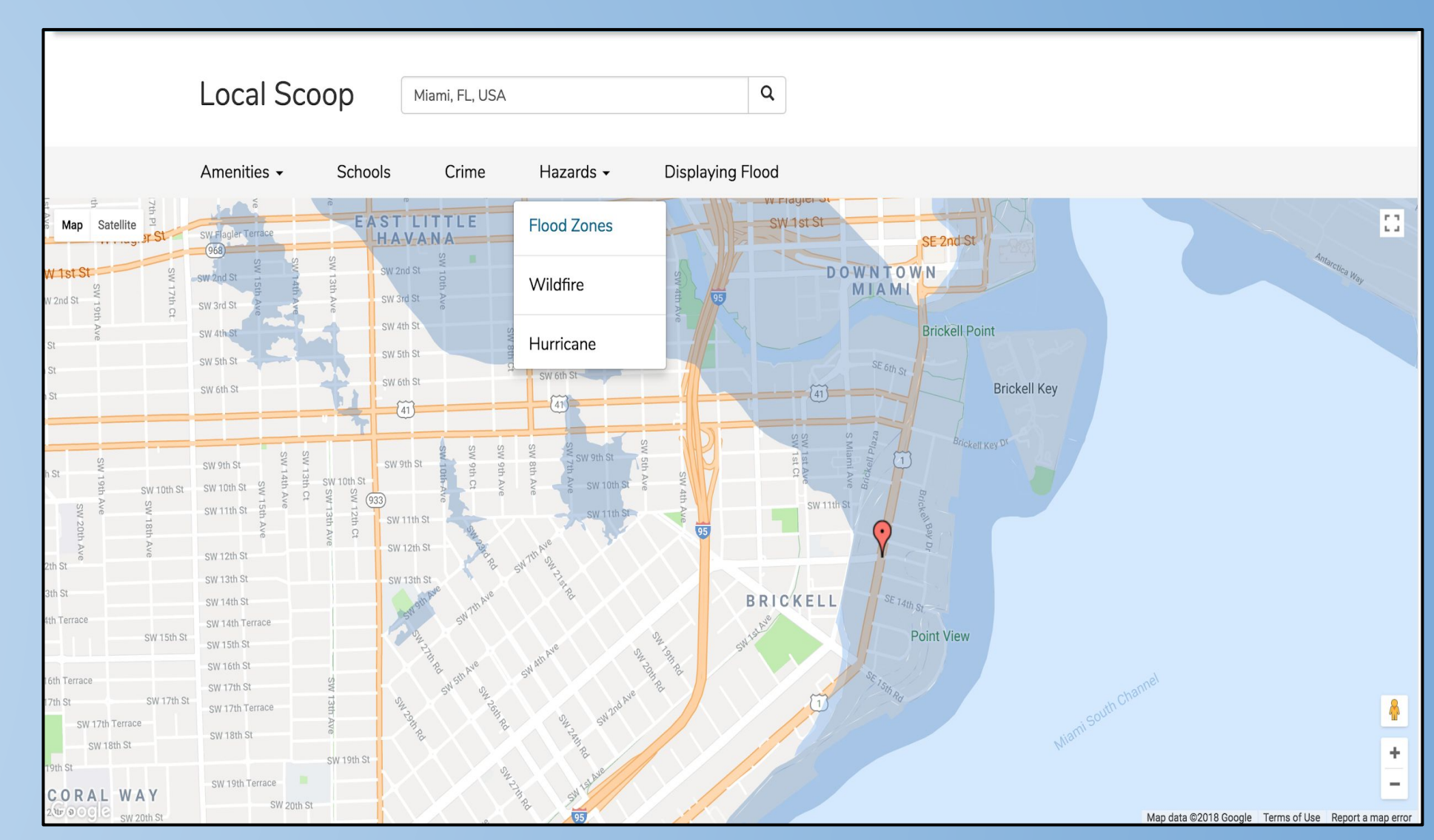
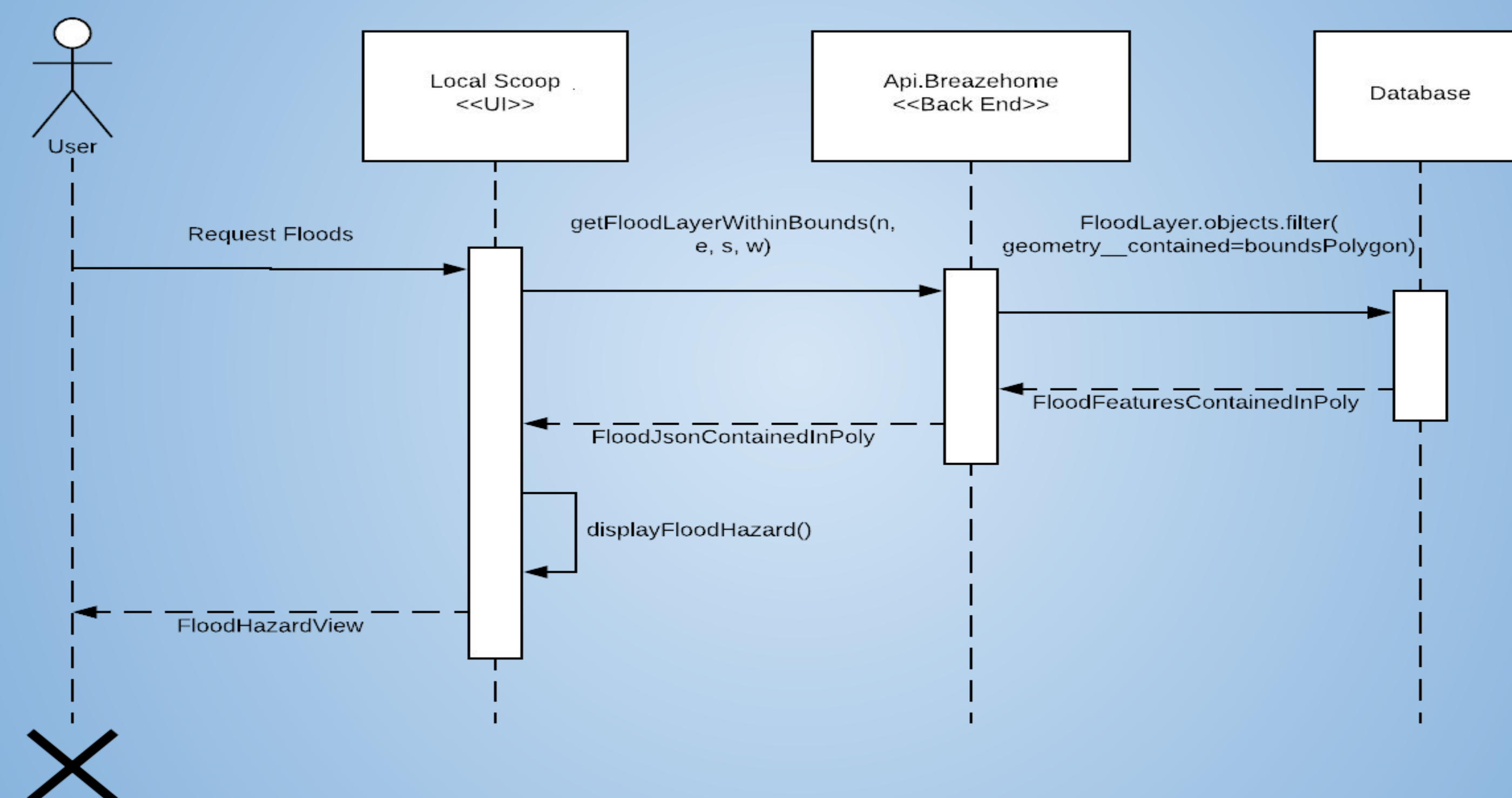


Figure 5: Flood Solution

Requirements

- Local Scoop page should allow users to freely explore surrounding neighborhoods.
- Local Scoop page should allow users to browse the different aspects of the neighborhoods intuitively and consistently.
- Local Scoop page should clearly specify what data is being displayed.
- Hazard data should be fetch dynamically as user browse the map.
- Flood data needs to be detailed and accurate.

System Design



Implementation

- Frontend: AngularJS, Bootstrap, HTML5, CSS3
- Backend: Python 3, Django
- Database: PostgreSQL, Postgis
- Version Control: Git
- OS: Mac OS Sierra

Verification

Integration Tests:

- Test Case ID:** hazard_flood_001
- Test Case Summary:** Get request for flood polygons within valid latitude and longitude bounds.
- Precondition:** Get request with n = 25.8125334, s = 25.7408081, w = -80.2468755, e = -80.1247384 bounds.
- Expected Result:** Return 200 and 135 polygons contained within those bounds.

Summary

- User no longer needs to click multiple properties around different neighborhoods to compare neighborhoods.
- Hazard data is displayed as user moves the map to a new neighborhood.
- Flood data accurately displays flood risk zones that require user to get Flood Insurance.