



# Geographic Information Systems Emergency Management

Bryan Fisher

Scott Nelsen





# Initial Damage Density Maps

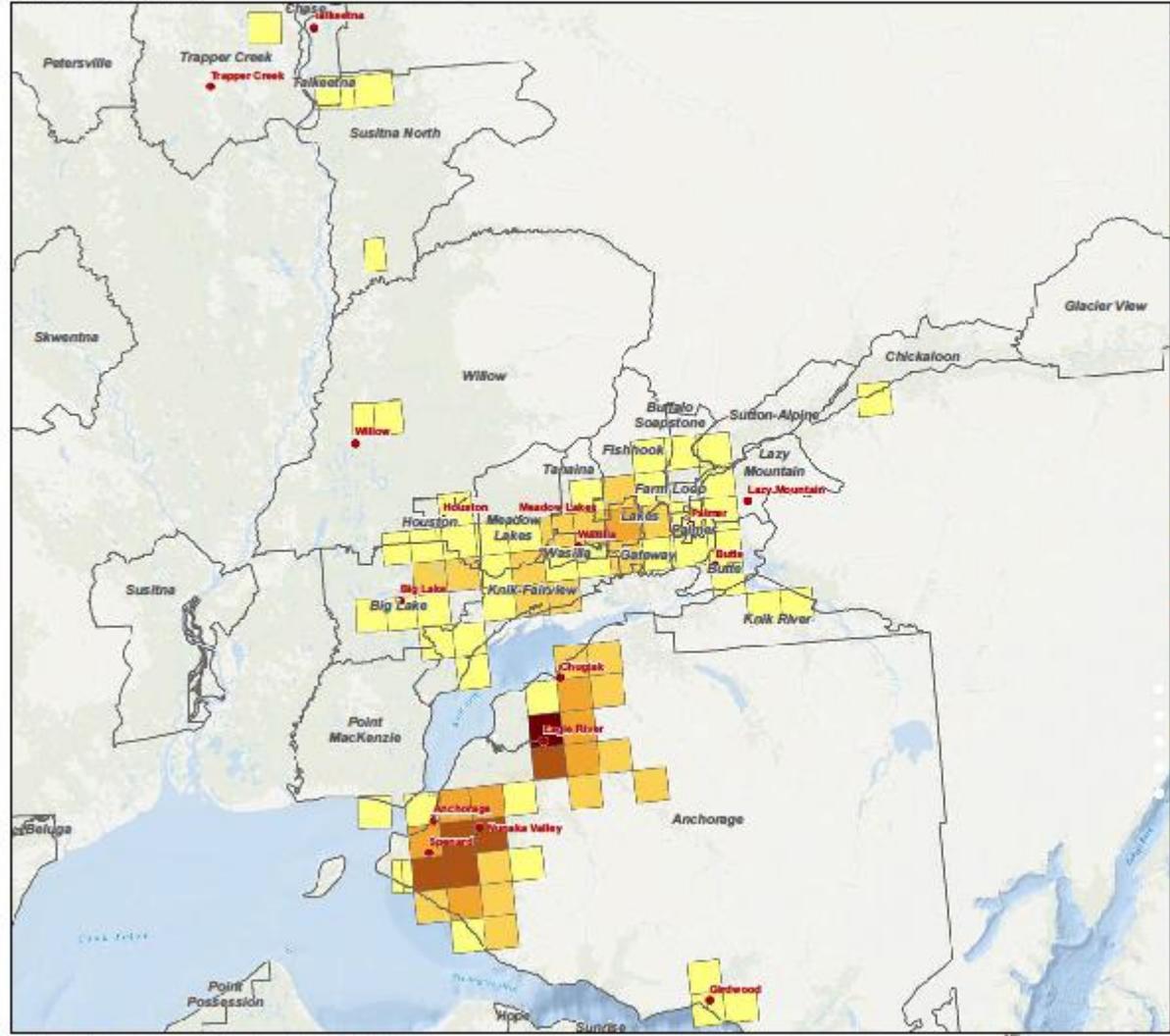
- Variety of Uses
  - Direct response and rescue efforts
  - Determine points of distribution (PODS)
  - Re-route traffic
  - Prioritize areas for debris removal
- Information sources
  - 911 calls
  - Local media reports and social media postings
  - Field data collection, IE Survey 123





# Initial Damage Density

## Initial Damage Assessments per 5KM - All Points Alaska Earthquake



Data Layer / Map Description:  
Initial Damage Assessments  
From various sources  
As of 12/7/2018

- Legend**
- Cities
  - Jurisdictions
  - IDA All Points by 5KM**
  - 1 - 8
  - 9 - 26
  - 27 - 97
  - 98 - 208
  - 209 - 335

- Alaska Counts:**
- Destroyed (19)
  - Major (125)
  - Minor (175)
  - Affected (191)
  - Unknown (1,519)

Data Sources:  
FEMA, ESRI

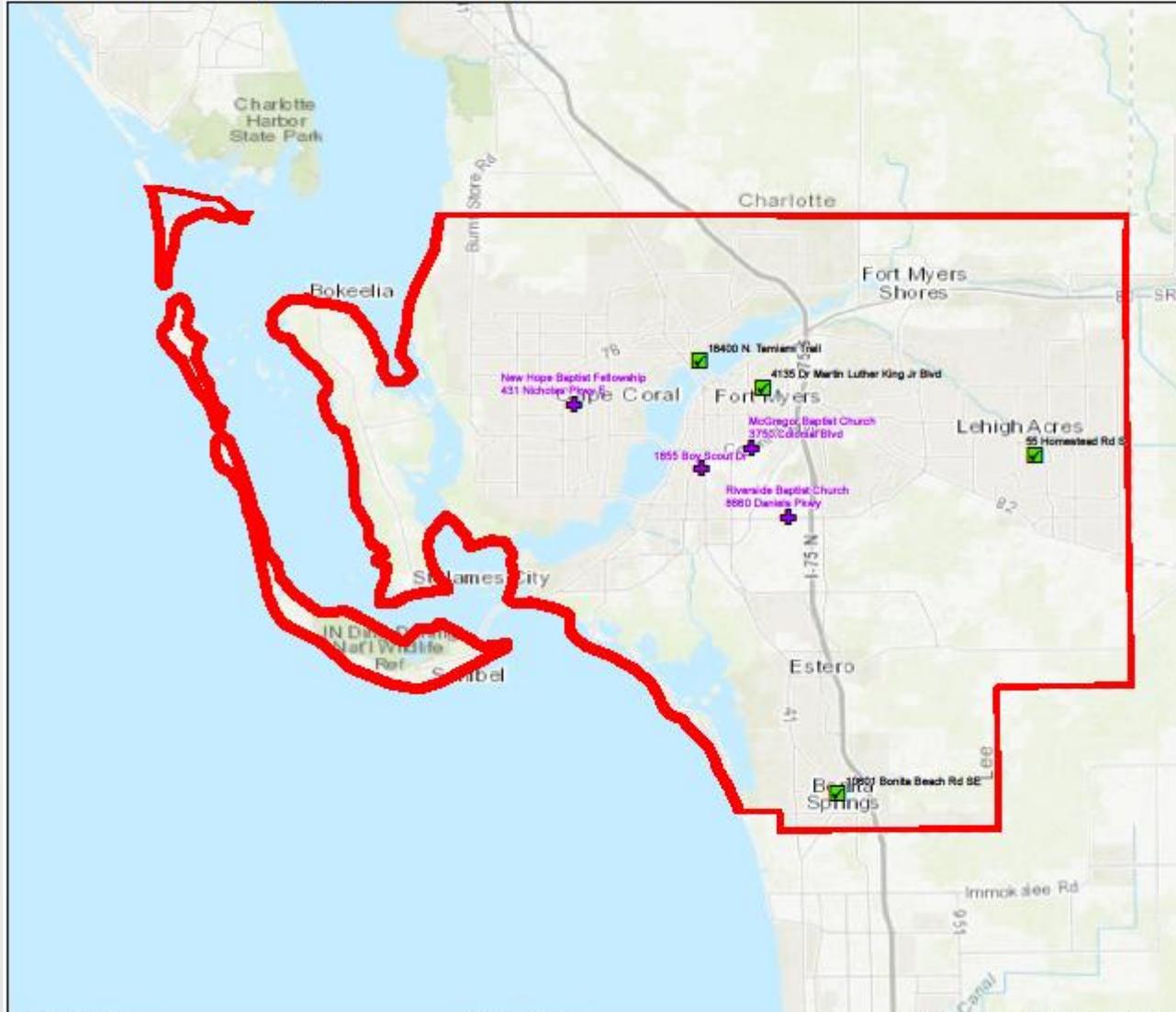




# Points of Distribution (PODS)

Florida DR-4337: Lee County (9/14/2017 23:00)

Points of Distribution (POD) Sites & Feeding Sites



Data Description: PODs and Feeding site data is valid as of 23:00 9/14/2017

### Legend

- County Boundary
- + Feeding Sites (4)
- PODs
- Active PODs (4)

0 125 250 500 Miles





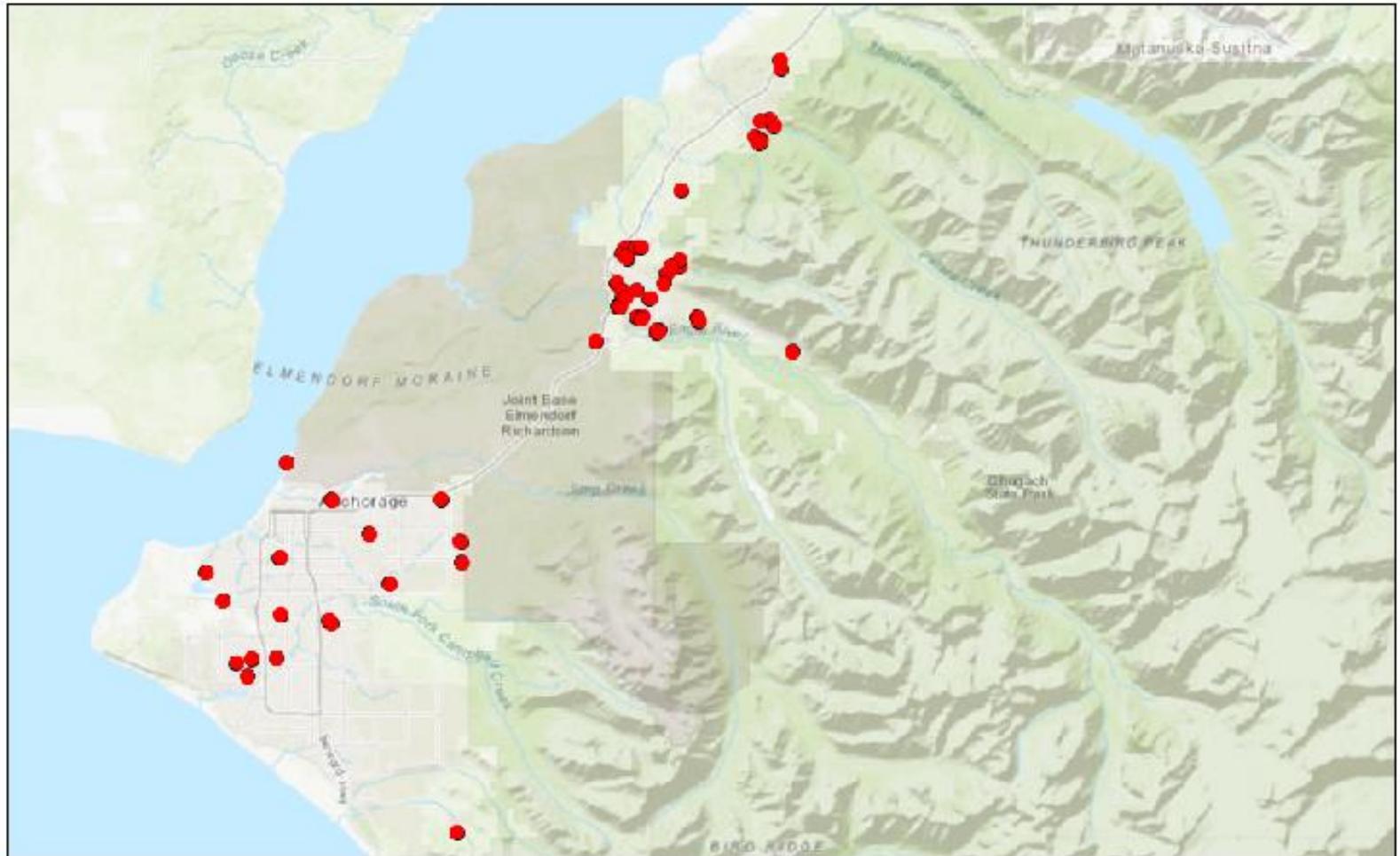
# Structural Damage Assessments

- Critical for public safety
- Supports a State and Federal disaster declaration.
- Reveals the scope of damage.





## Infor Earthquake Building Inspections



4/23/2019, 12:53:54 PM

Infor\_Building\_Status - Earthquake

Red - Do Not Occupy

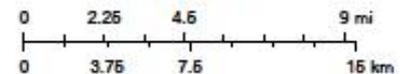
Yellow - Caution, Building Damaged

Green - Safe to Occupy

Blue - Unknown - Windshield only or not Inspected

Purple - Multiple Records - Pending QA Check

1:577,792

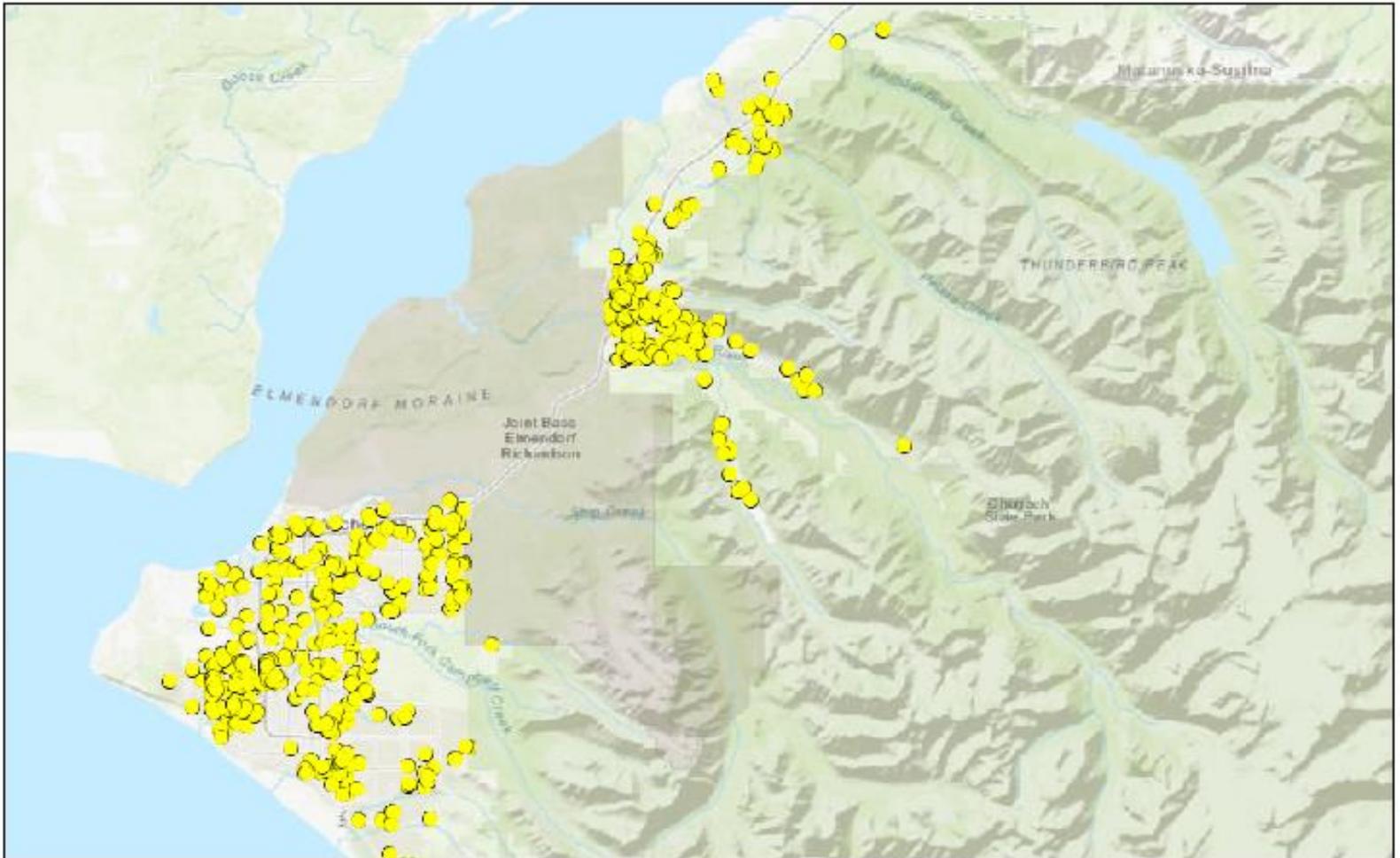


Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS,





## Infor Earthquake Building Inspections

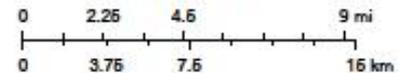


4/23/2019, 12:55:14 PM

Infor\_Building\_Status - Earthquake

- Red - Do Not Occupy
- Green - Safe to Occupy
- Yellow - Caution, Building Damaged
- Unknown - Windshield only or not Inspected
- Multiple Records - Pending QA Check

1:577,792



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS,

MOA Building Inspections

Municipality of Anchorage, Matanuska-Sustina Borough GIS, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS |





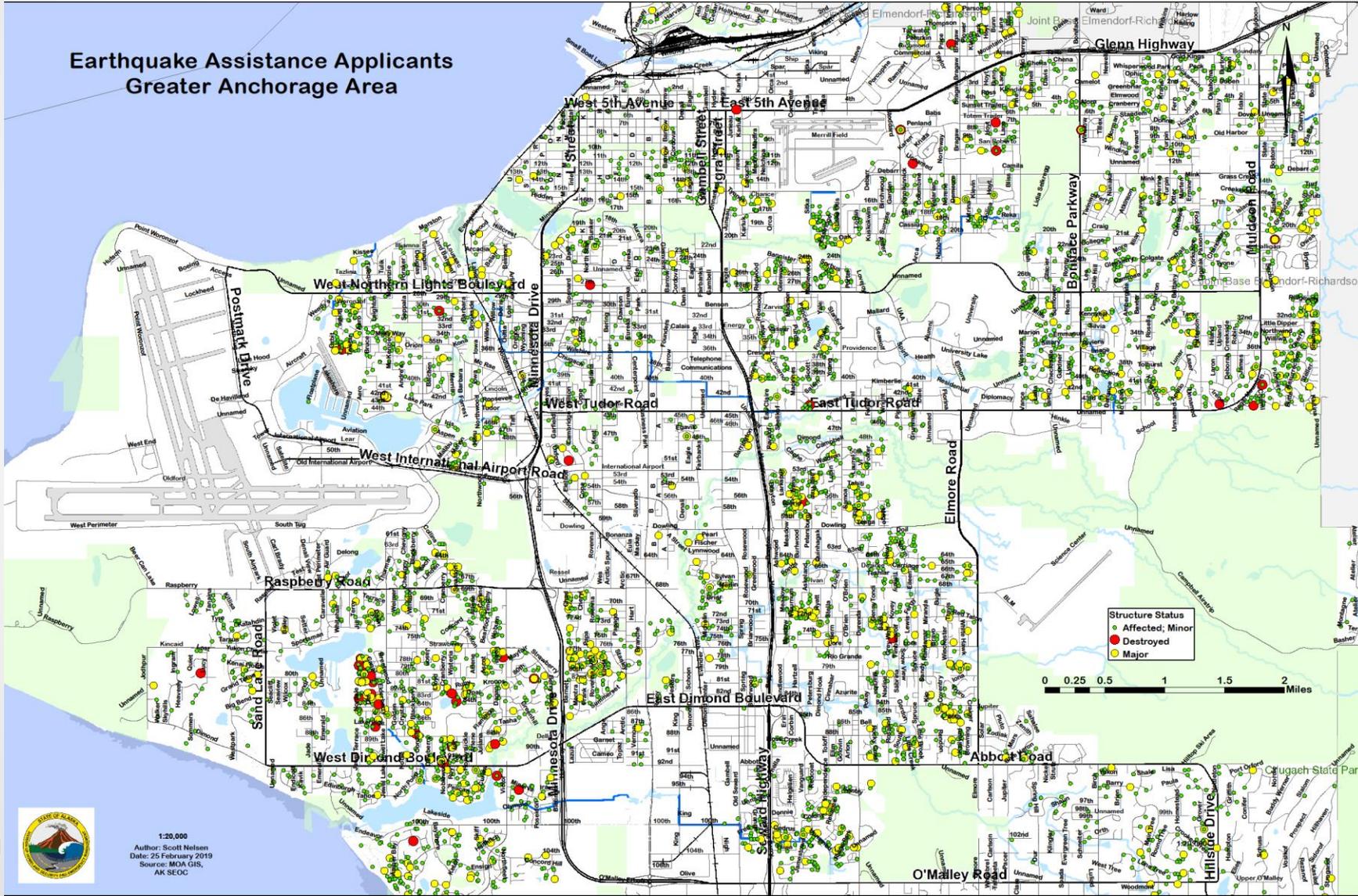
# Disaster Applicant Maps

- Culmination of applicants and damage assessments.
- Useful tool for prioritizing site visits.
- Supports disaster assistance.





# Earthquake Assistance Applicants Greater Anchorage Area



Structure Status  
● Affected; Minor  
● Destroyed  
● Major

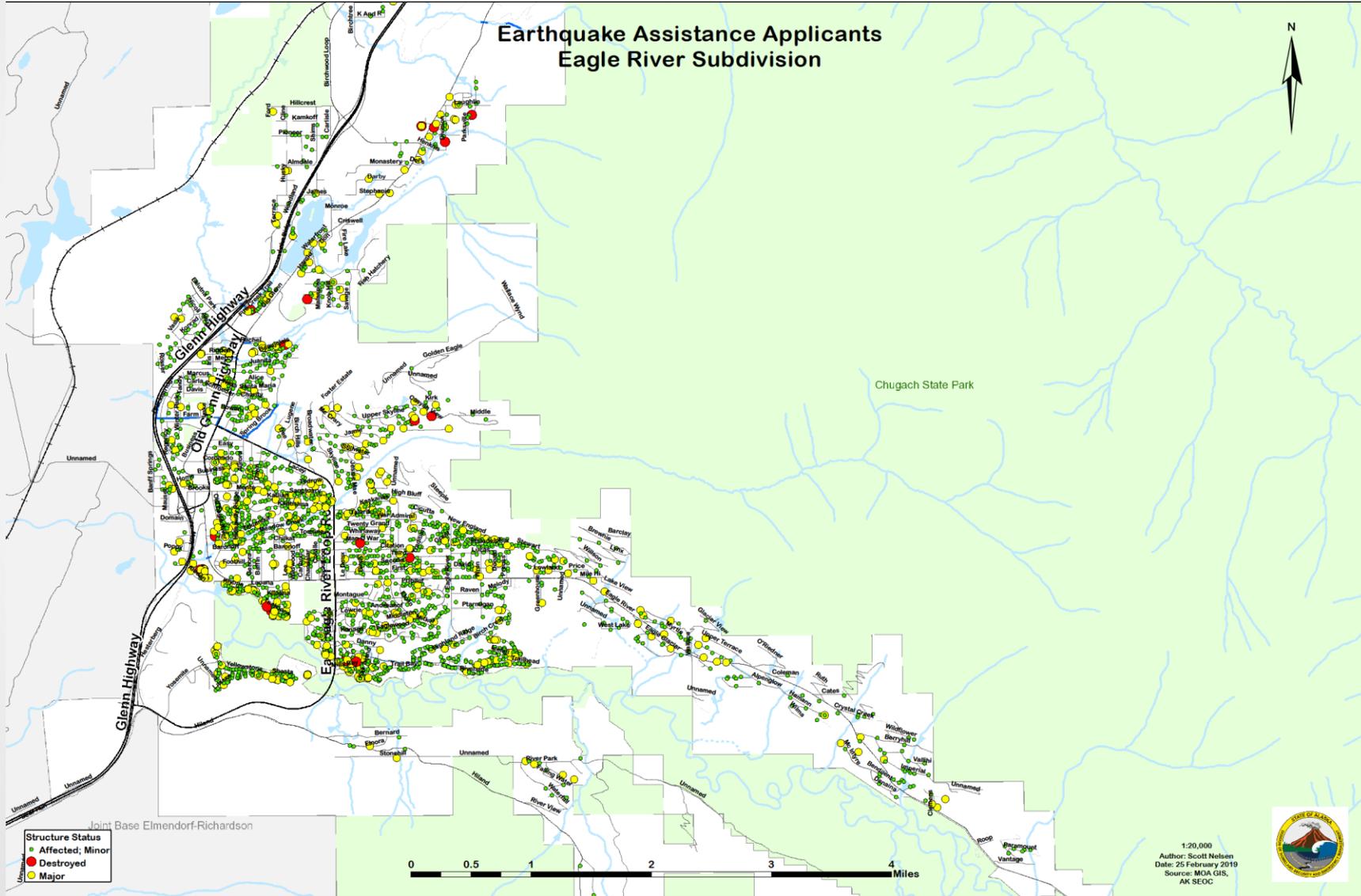
0 0.25 0.5 1 1.5 2 Miles



1:25,000  
Author: Scott Nelson  
Date: 25 February 2019  
Source: MOA GIS,  
AK SEOC



# Earthquake Assistance Applicants Eagle River Subdivision



Joint Base Elmendorf-Richardson

**Structure Status**

- Affected, Minor
- Destroyed
- Major

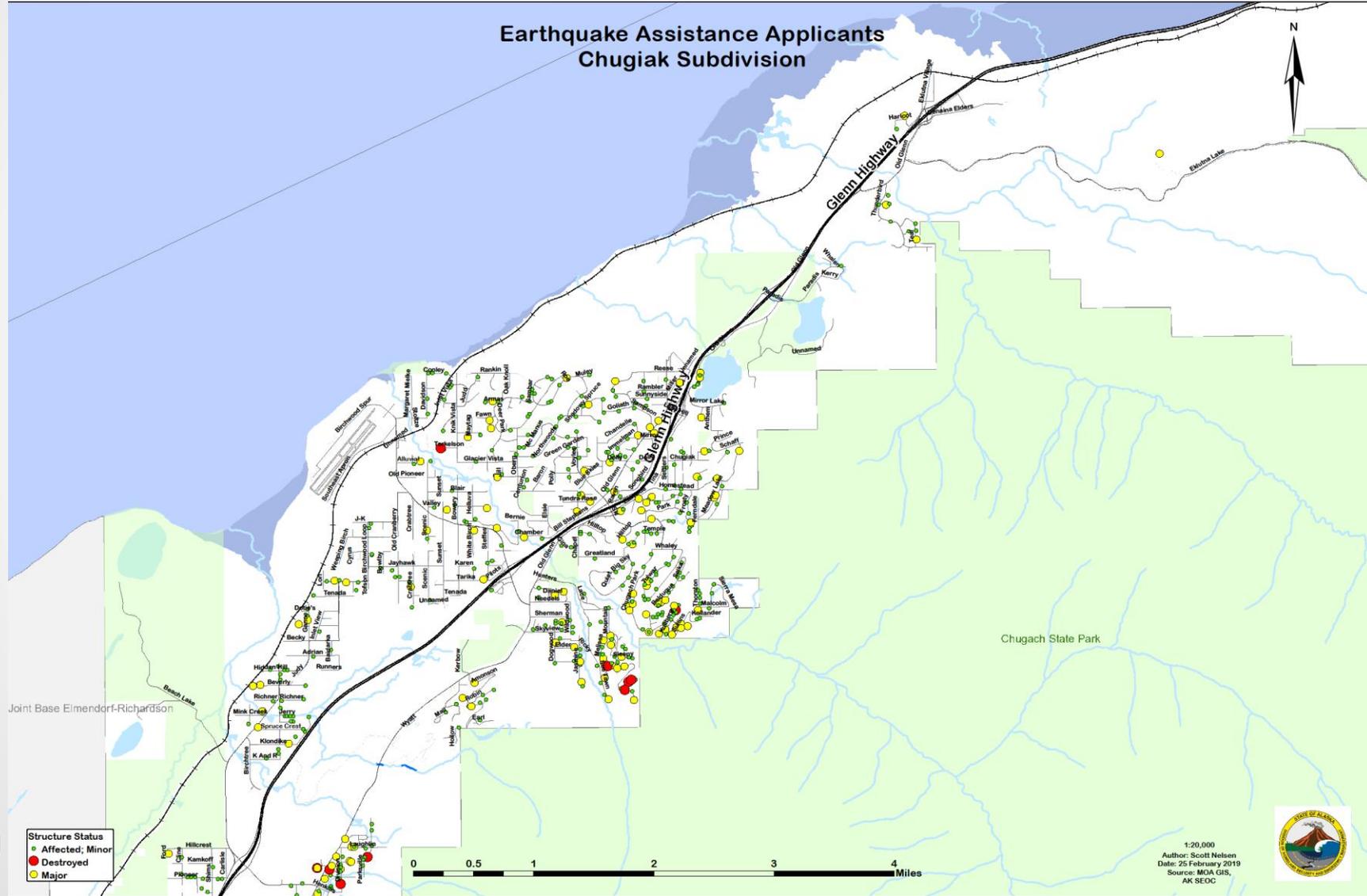
0 0.5 1 2 3 4 Miles

1:20,000  
Author: Scott Helten  
Date: 25 February 2019  
Source: MOA GIS,  
AK SEOC





# Earthquake Assistance Applicants Chugiak Subdivision



Structure Status  
● Affected, Minor  
● Destroyed  
● Major

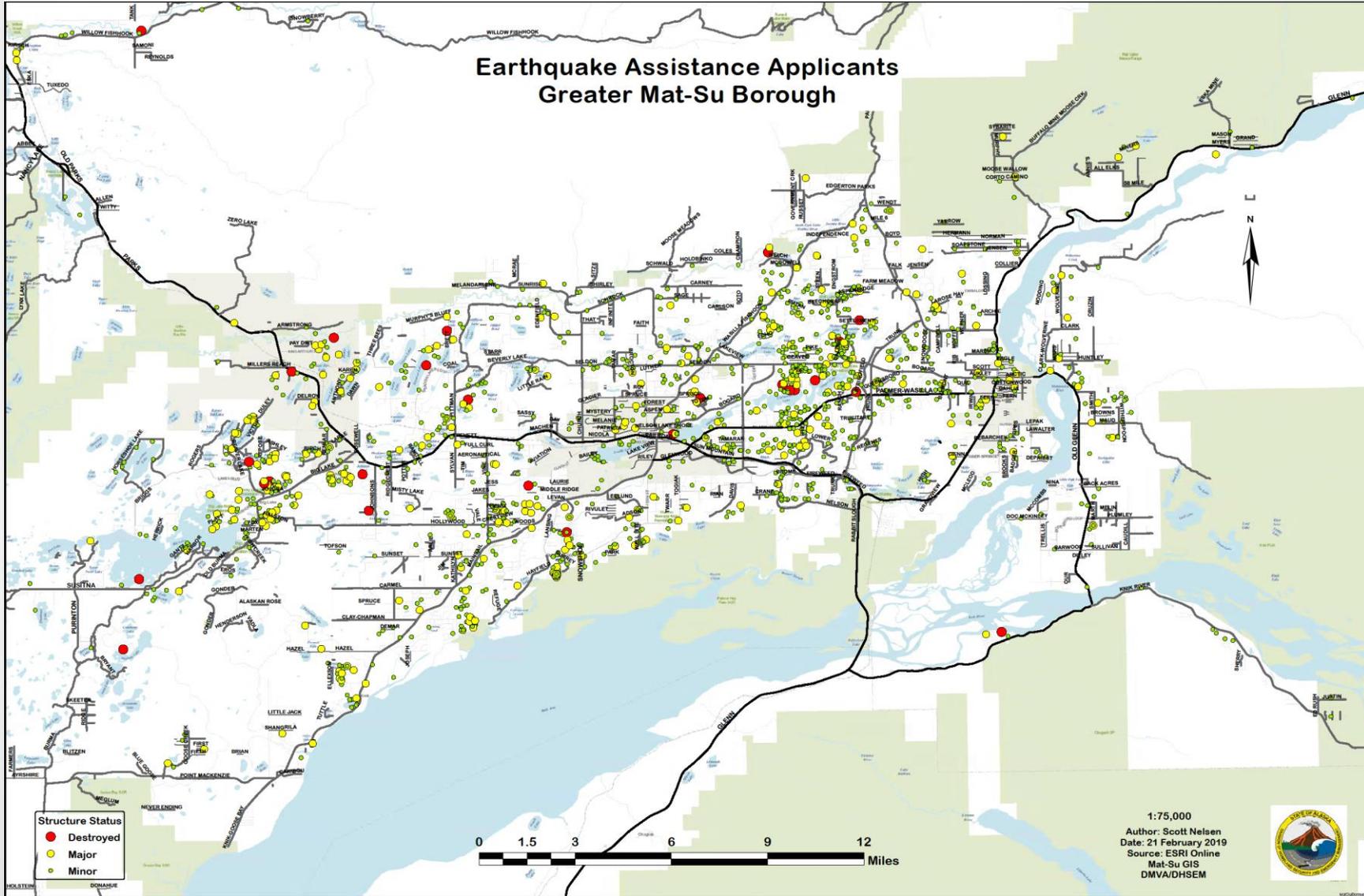
0 0.5 1 2 3 4 Miles

1:20,000  
Author: Scott Nelsen  
Date: 25 February 2019  
Source: MOA GIS,  
AK SEOC





# Earthquake Assistance Applicants Greater Mat-Su Borough



Structure Status  
● Destroyed  
● Major  
● Minor

0 1.5 3 6 9 12 Miles

1:75,000  
Author: Scott Nelsen  
Date: 21 February 2019  
Source: ESRI Online  
Mat-Su GIS  
DMVA/DHSEM





# Web GIS

- [MOA Map Viewer](#)
- [Florida Gator Map Viewer](#)
- [Oregon EM RAPTOR](#)
- [DHS&EM MAP Viewer](#)

