Alaska Department of
Transportation & Public Facilities

Alaska DOT Road Weather Information System Innovations

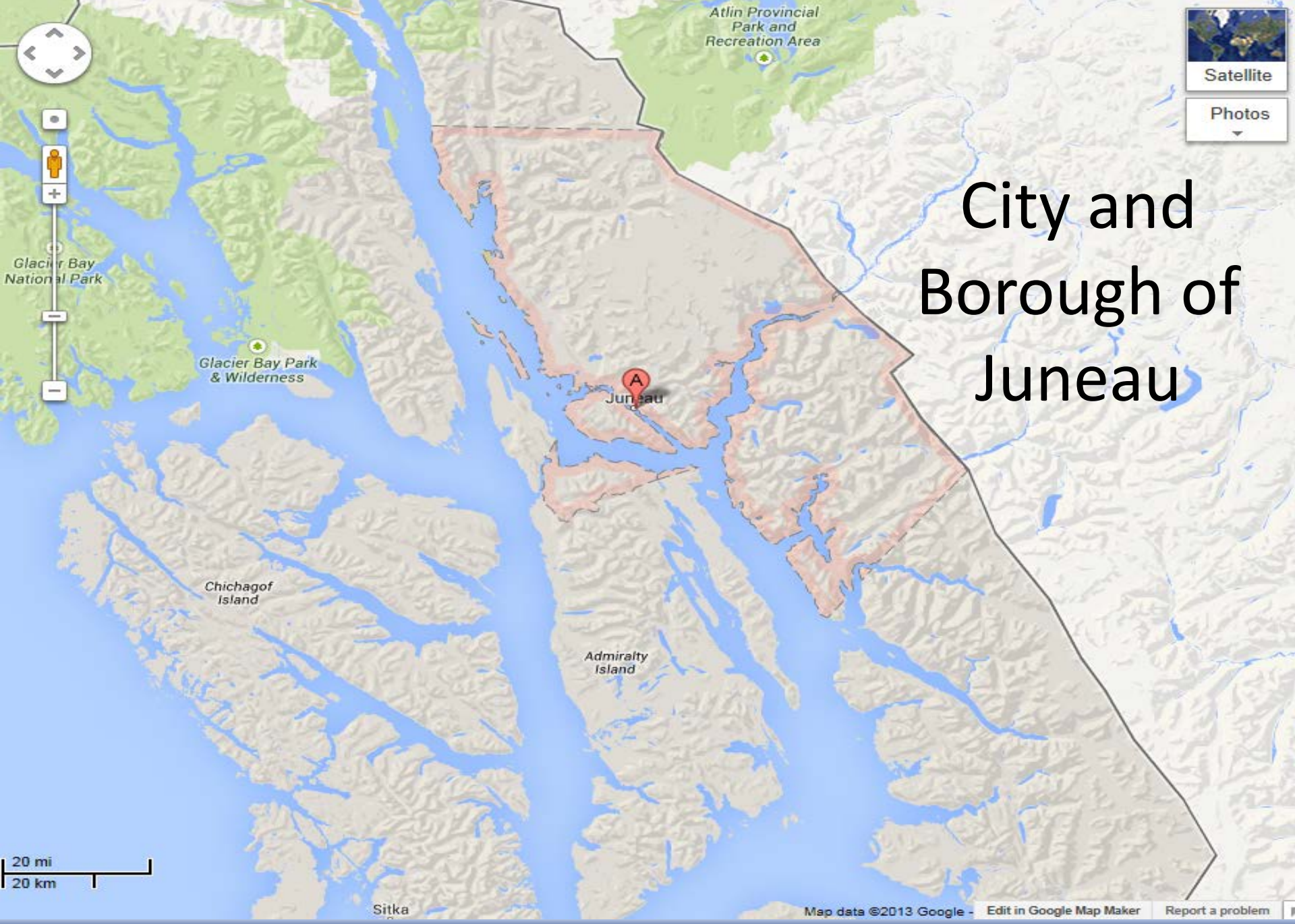
Jack Stickel

16 July, 2013

Thane Road Avalanche Sites

City and Borough of Juneau

City and Borough of Juneau



Thane Road

Juneau
Egan Dr
4th St
S Franklin St
Thane Rd
Douglas
2nd St
3rd St
1st St
5th St
Point Bishop Dupont
Satellite
Photos
2000 ft
1 km
Map data ©2013 Google -
Edit in Google Map Maker
Report a problem

Thane Road Avalanche Zones

Thane Road Avalanche Zones

Mobotix MX-D15Di Day/Night

- 5 megapixel
- Day/night lens
- Motion detection capability – MxActivity Sensor
- DOT interrogates images from site - Mobotix Control Center

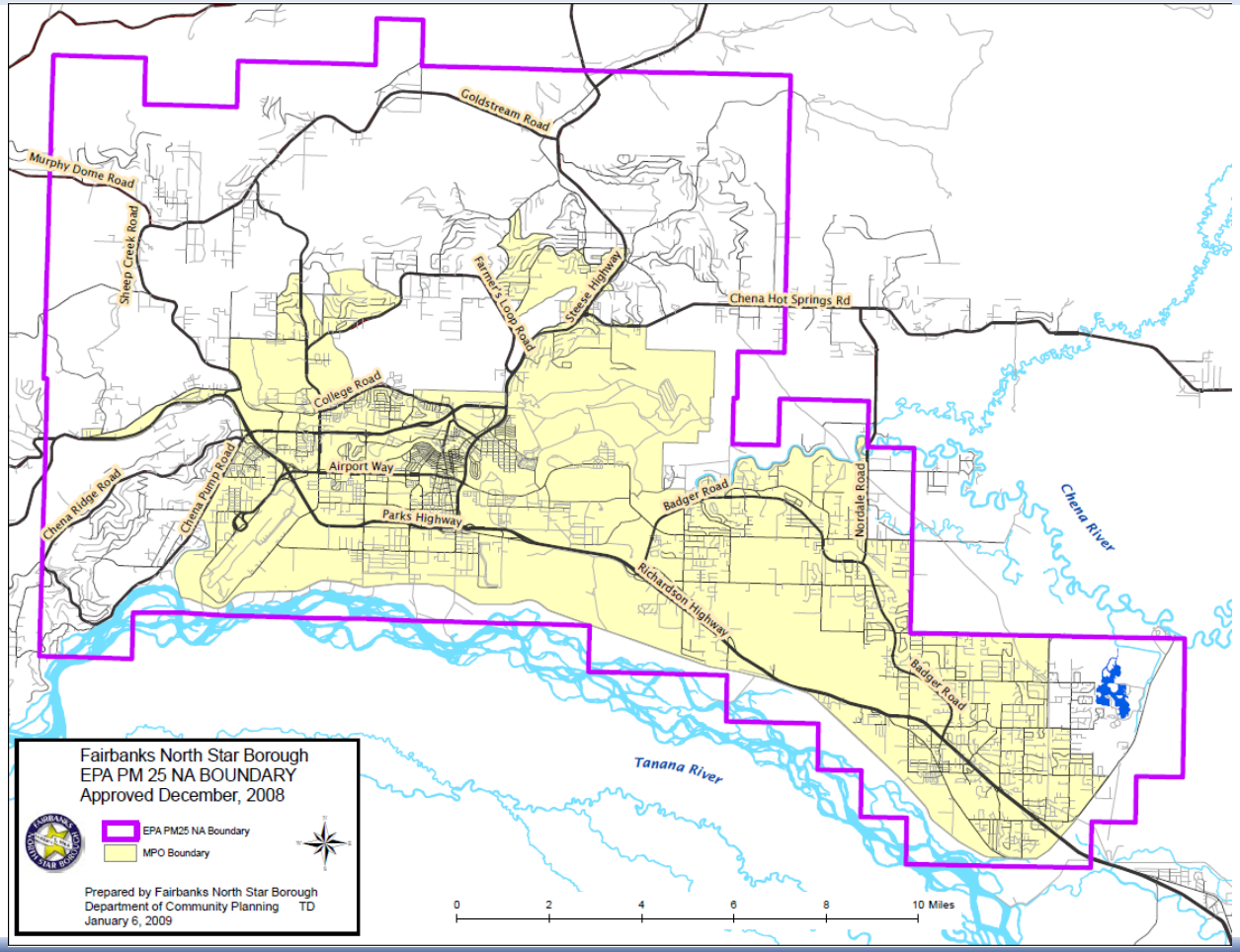
Fairbanks EPA Non-Attainment RWIS

Fairbanks Northstar Borough

Fairbanks Non-Attainment Area

- CO non-attainment area – 1990
- CO maintenance area – 2004
- 24-hr $MP_{2.5}$ NAAQS non-attainment area – 2009
  - Fossil fuels: traffic, power plants, industrial plants, wood burning, heating oil
  - Made significantly worse by extended idle to warm vehicles in cold weather

Fairbanks Northstar Borough



Fairbanks EPA Non-Attainment ESS

- Standard atmospherics: temperature, humidity, wind speed/direction, precipitation occurrence
- Traffic – Wavetronix
- AeroQual (AQM) Air Quality Base Unit with:
  - Carbon monoxide - CO
  - Sulphur dioxide - SO_2
  - Particulant matter - $PM_{2.5}$

AQM Air Quality Base & EPA NAAQS Standards

- CO: 0 - 25 ppm
  - 1 hour primary – 35 ppm
  - 8 hour primary - 9 ppm
- SO_2: 0 – 10 ppm
  - 1 hour primary – 7.5 ppm
  - 3 hour secondary - .5 ppm
- $PM_{2.5}$: 0 – 2000 µg/m^3
  - 24 hour primary & secondary - 35 µg/m^3
  - Annual primary - 15 µg/m^3

AQM Sample Deployments