



pennsylvania

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Bureau of Air Quality

Long-Term Ambient Air Monitoring Project Near Permanent Marcellus Shale Gas Facilities

AQTAC Meeting

September 12, 2012

▶ *Long-Term Air Monitoring Project*

Description of the Project

- A one-year ambient air monitoring project with an emphasis on characterizing near-source concentrations of criteria and hazardous air pollutants from permanent facilities related to the Marcellus Shale gas industry.

▶ Long-Term Air Monitoring Project

- Study focused on Washington County, PA.
- Study consists of four dedicated air sampling sites and a background site.
- Projected study timeframe -July 2012-July 2013.
- Proposed report publication- October 2013.

▶ Long-Term Air Monitoring Project

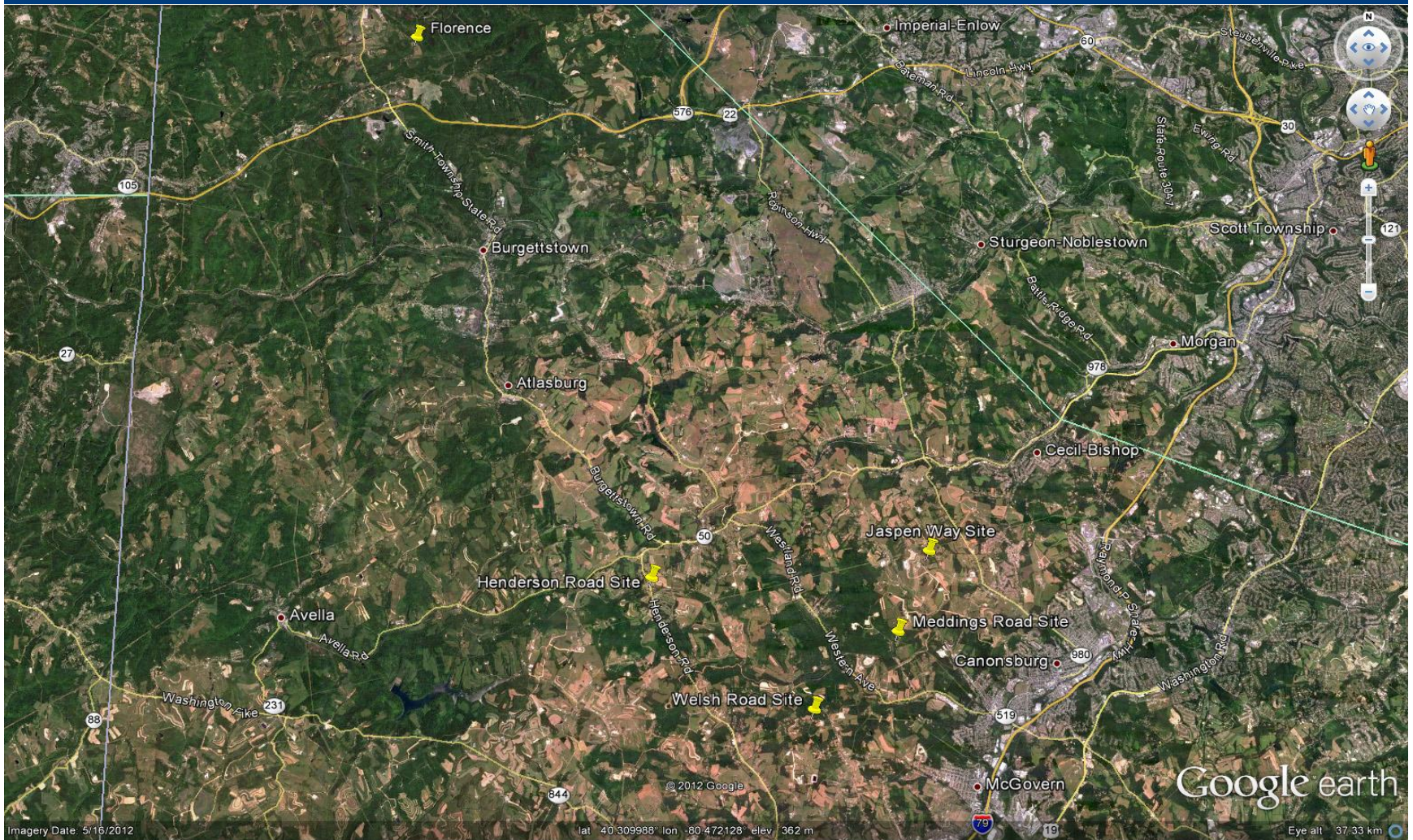
- Why these sites?
 - They are permanent facilities, whereas well-installation activities (drilling, fracking, etc.) are more short-term and don't factor in chronic risk analysis.
 - Have been shown to be a source of methane, nitrogen oxide (NO_x), carbon monoxide (CO) and hazardous air pollutant (HAP) emissions during the PA DEP short-term studies.
 - They are a source of complaints to DEP Regional Offices for malodor and other issues.
 - They are components of an industry that as a whole, could be considered a major new area source and affect Pennsylvania's attainment of the National Ambient Air Quality Standards.

Long-Term Air Monitoring Project

Sites and Parameters

- Main Site- Meddings Road (Houston Gas Processing Facility)
 - VOC's, Carbonyl, Ozone, NO_x, CO, PM_{2.5}, Methane/Non-Methane, H₂S, MET.
- Upwind Site- Welsh Road (Houston Gas Processing Facility)
 - VOC's, MET
- Satellite Site- Jaspem Way (Brigich Compressor Station)
 - VOC's, MET
- Satellite Site- Henderson Road (Stewart Compressor Station)
 - VOC's, Carbonyl, H₂S, MET
- Background Site- Florence COPAMS
 - VOC's, Ozone, PM_{2.5}, MET

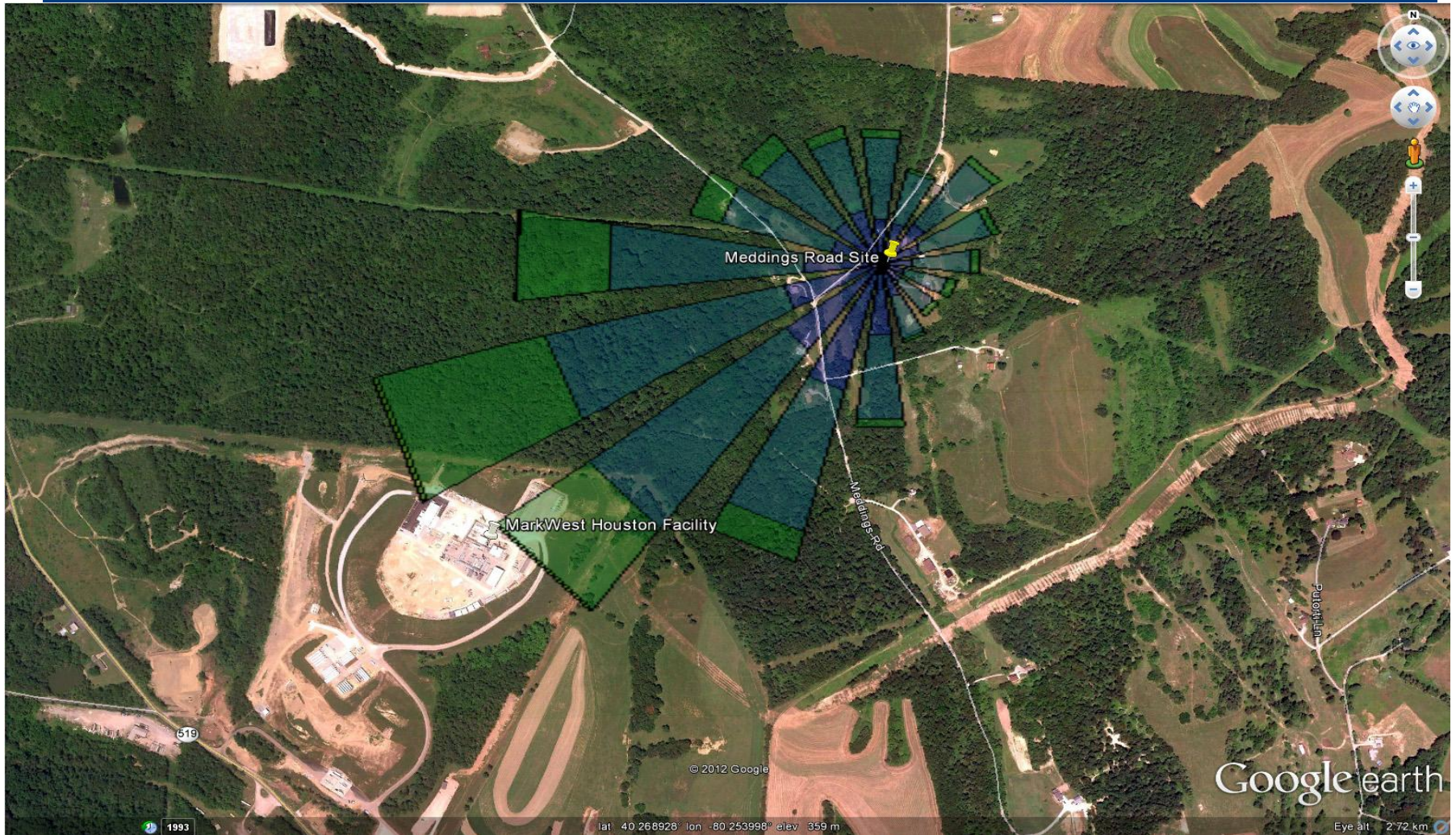
Site Locations



Meddings and Welsh Road Sites



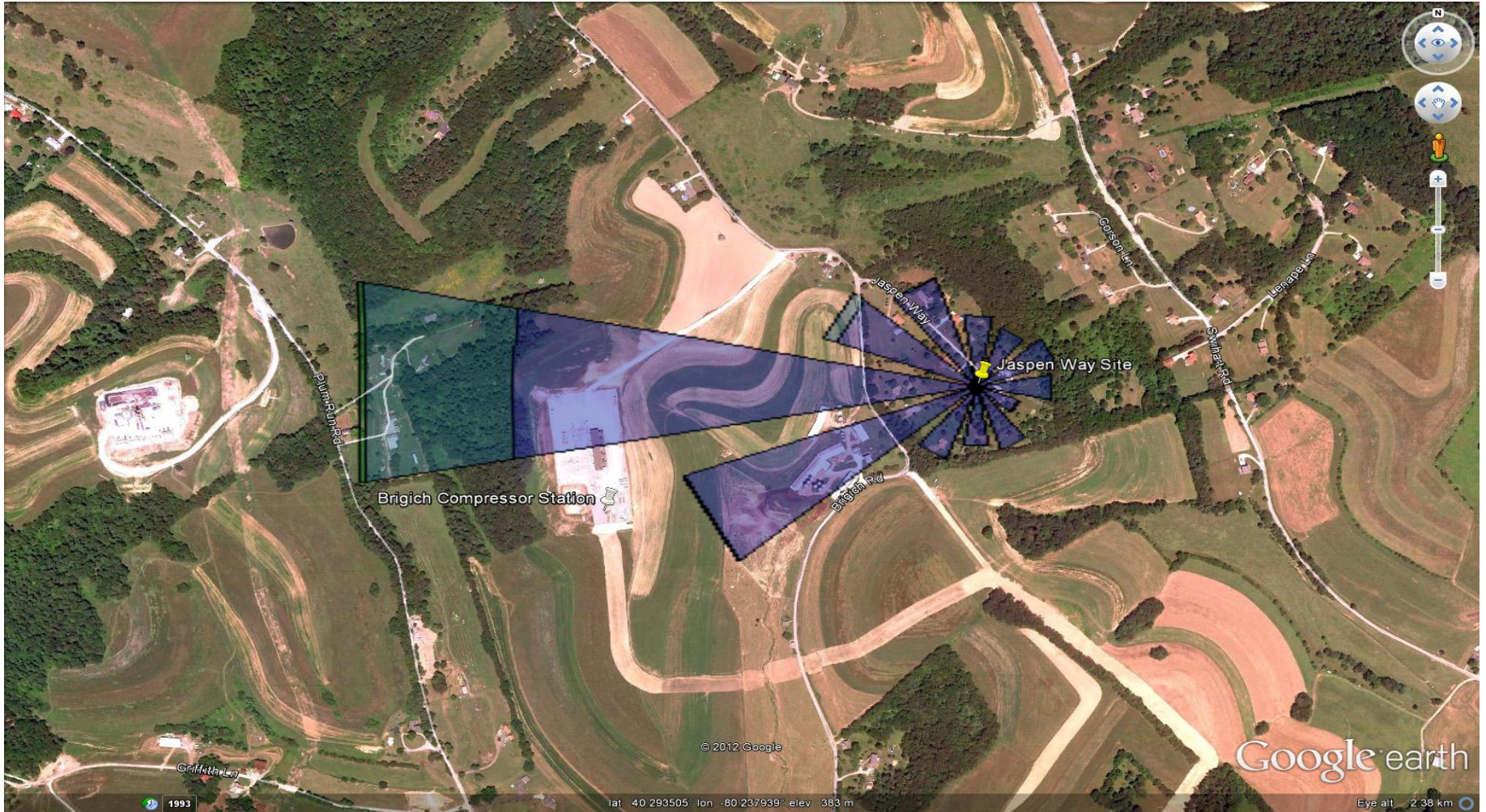
Meddings Road Wind Rose



Wind rose vane length represents the percentage of time from which the wind is blowing.

Vane color represents wind speed (dark blue=slow, green=fast).

Jaspen Way Site Wind Rose



Henderson Road Site



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QUESTIONS??



Bureau of Air Quality

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