

HRVOC Distribution and Trends in the Harris County Point Source EI

RSS Workshop

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In This Presentation

- Spatial distribution of HRVOC EI
- Trends in HRVOC EI for 2001-2004, by source cluster and county total
- Total countywide VOC trend, 2000-2004



Study

- Basics
 - Reported emission inventory – no adjustments made
 - Includes both routine emissions and upset/maintenance/startup/shutdown emissions
 - This is preliminary
 - Speciation was 85% in Harris County in 2004, but was variable, and probably less in earlier years
- Use source clusters (polygons) to group emissions, and see trends by region
 - Finer-scale than lumping the whole channel together, but broader than looking at individual plants



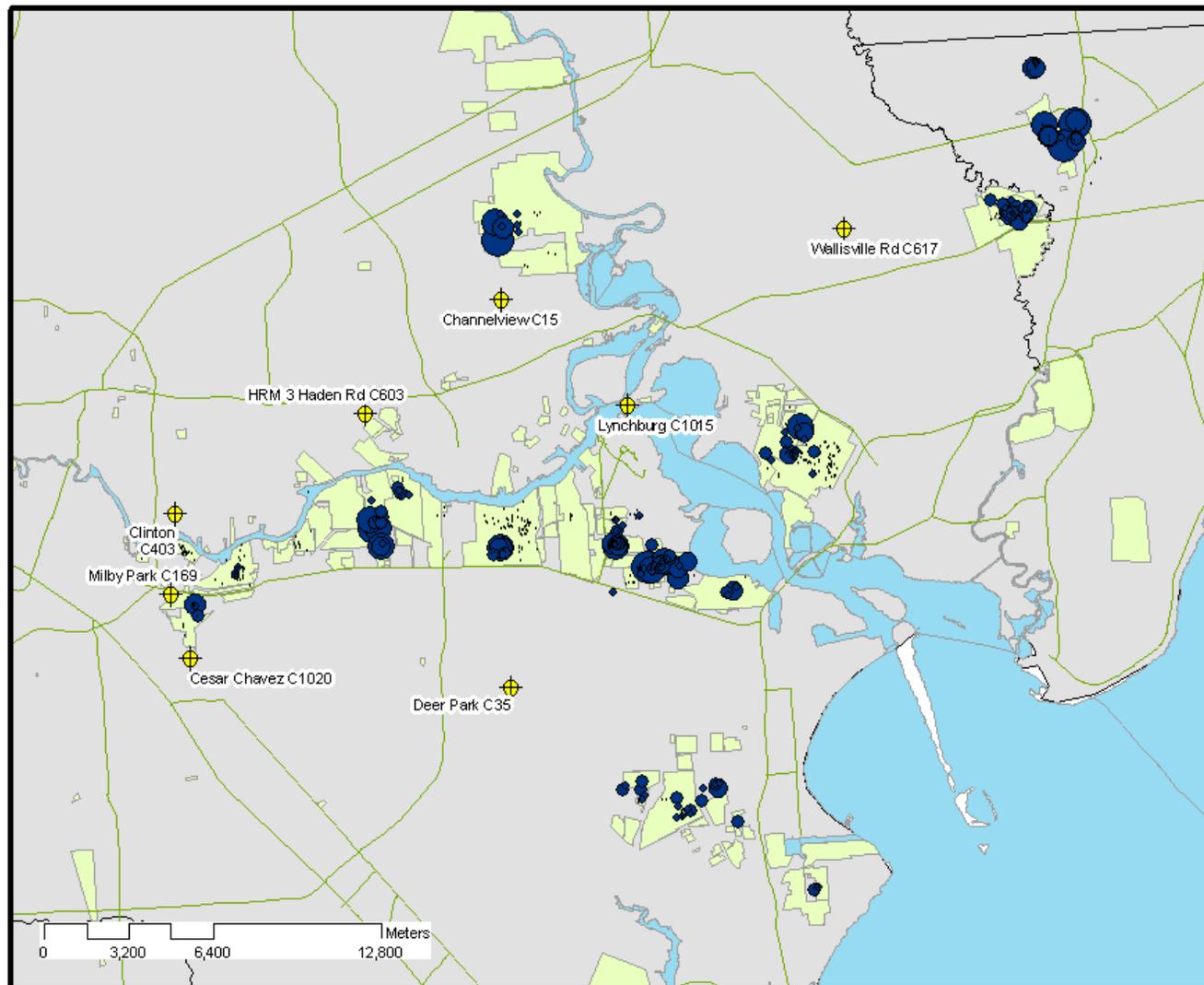
Study Questions

- Do reported HRVOC emissions show trends in the 2001 – 2004 annual emission inventories?
 - Heightened awareness of importance of industrial HRVOC emissions, by the 2001 reporting period
 - Ambient concentrations are mostly decreasing (longer time period)

- Are there trends within certain geographical areas?
 - Use source clusters (polygons) to group emissions, and see if trends by region
 - Finer scale than lumping the whole channel together, but broader than looking at individual plants

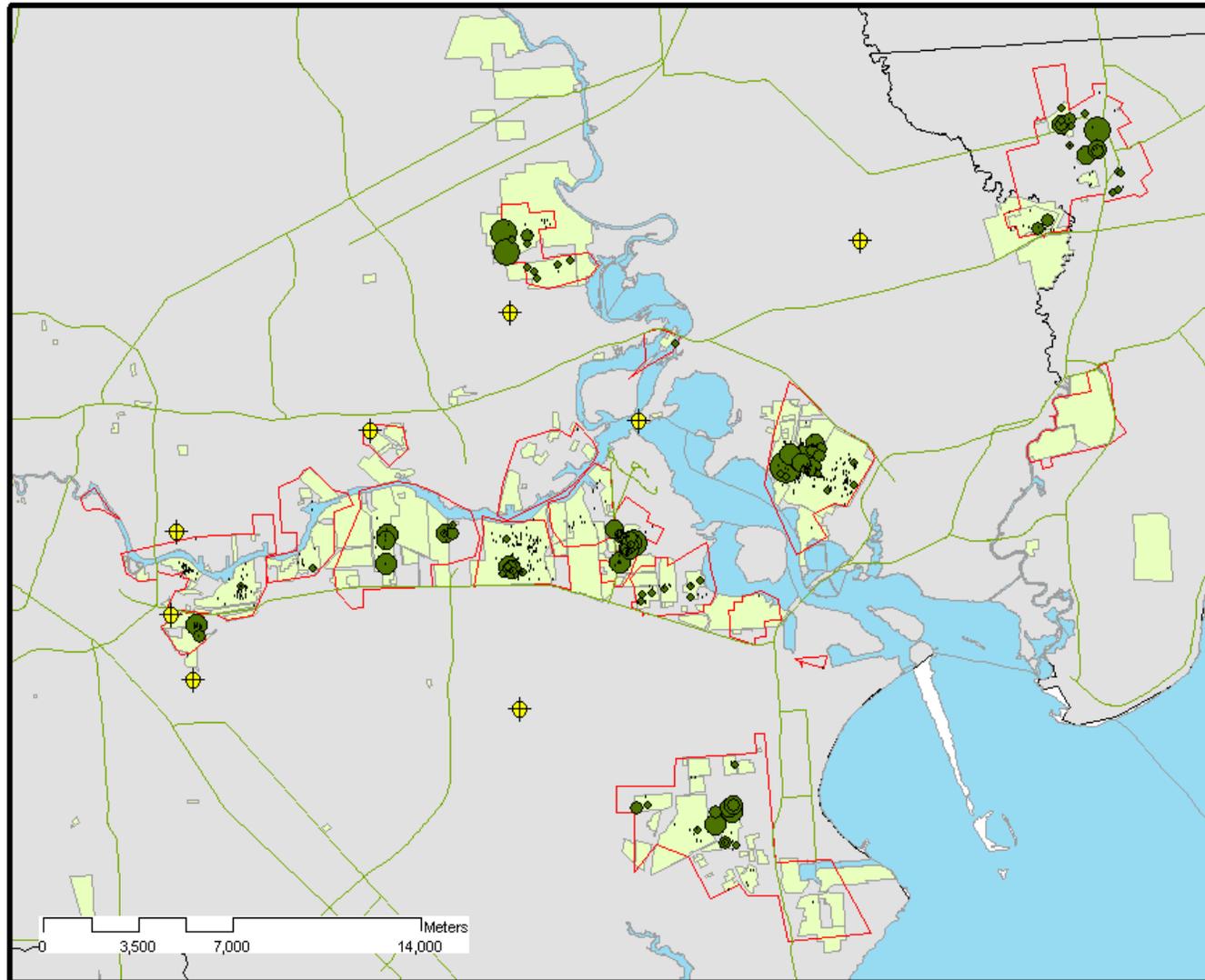


2004 Reported Ethene Emissions



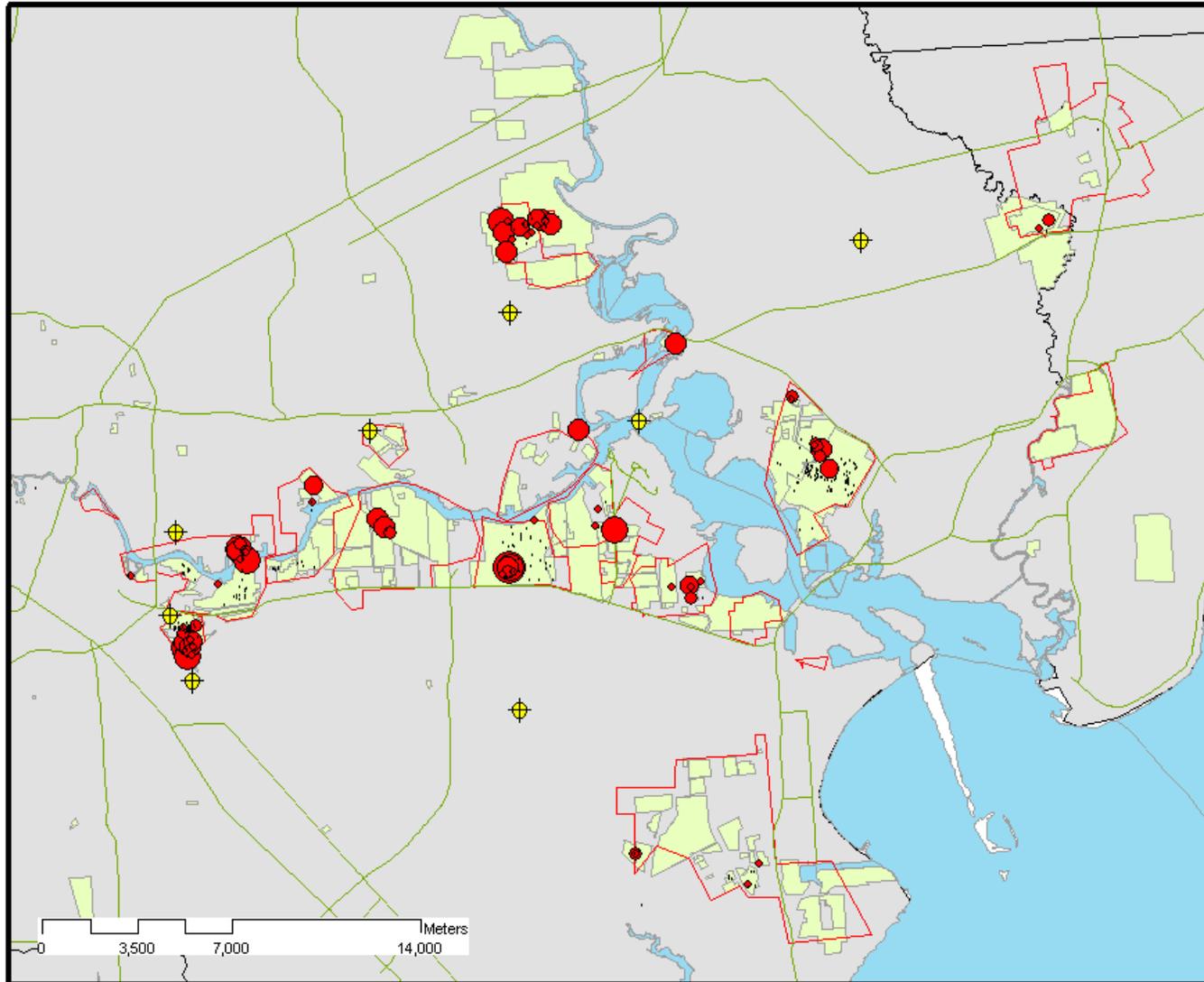


2004 Reported Propene Emissions



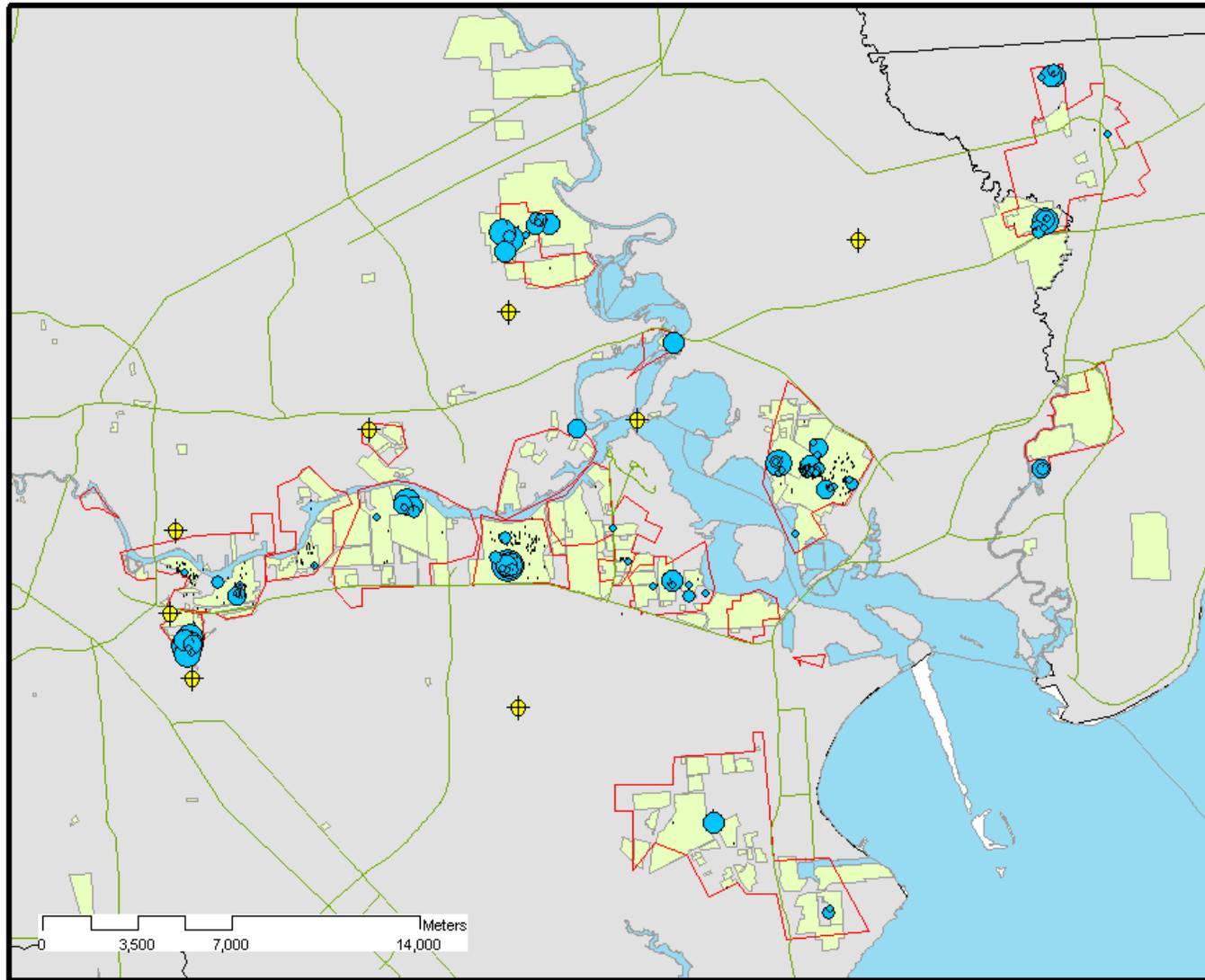


2004 Reported Butadiene Emissions



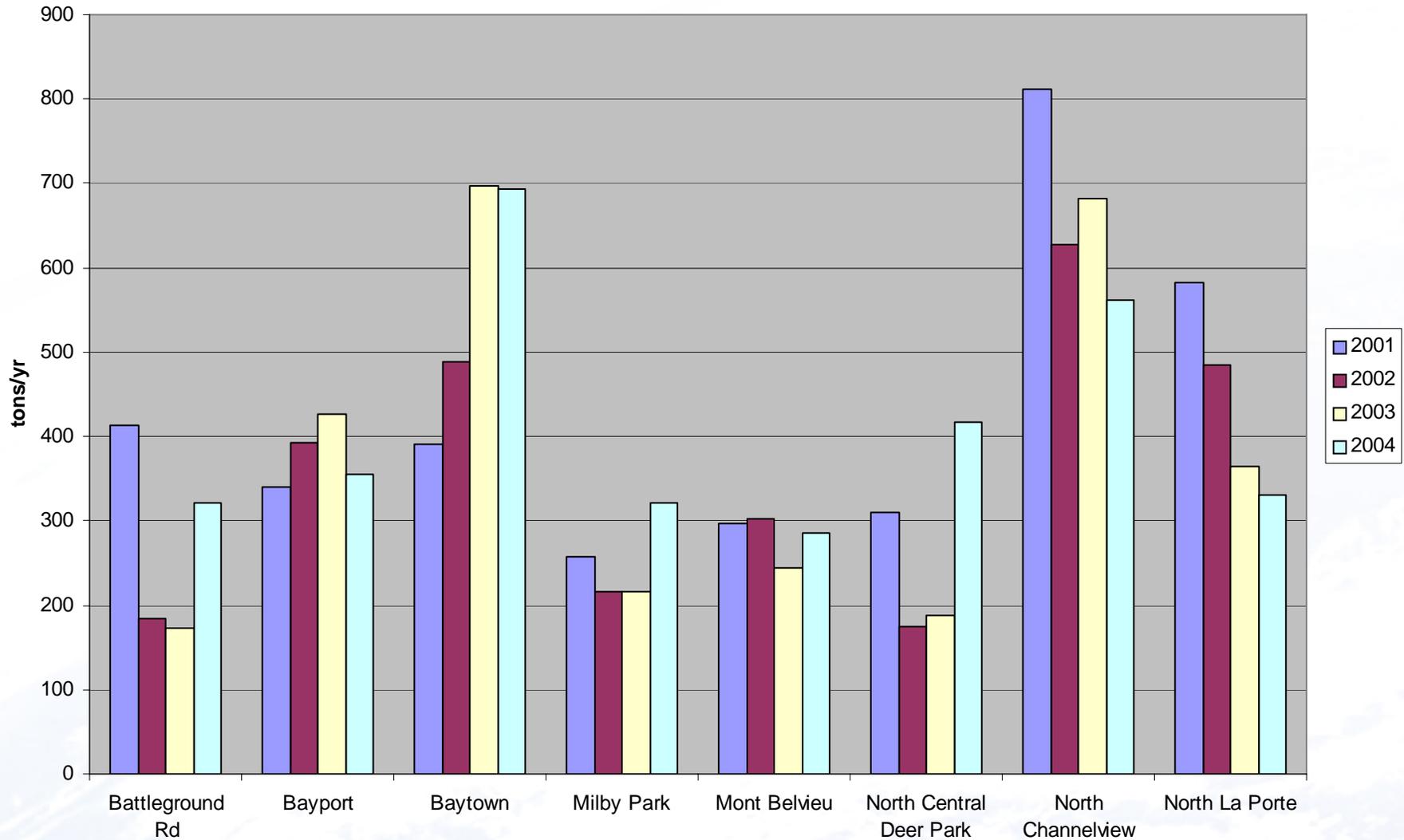


2004 Reported Butenes Emissions



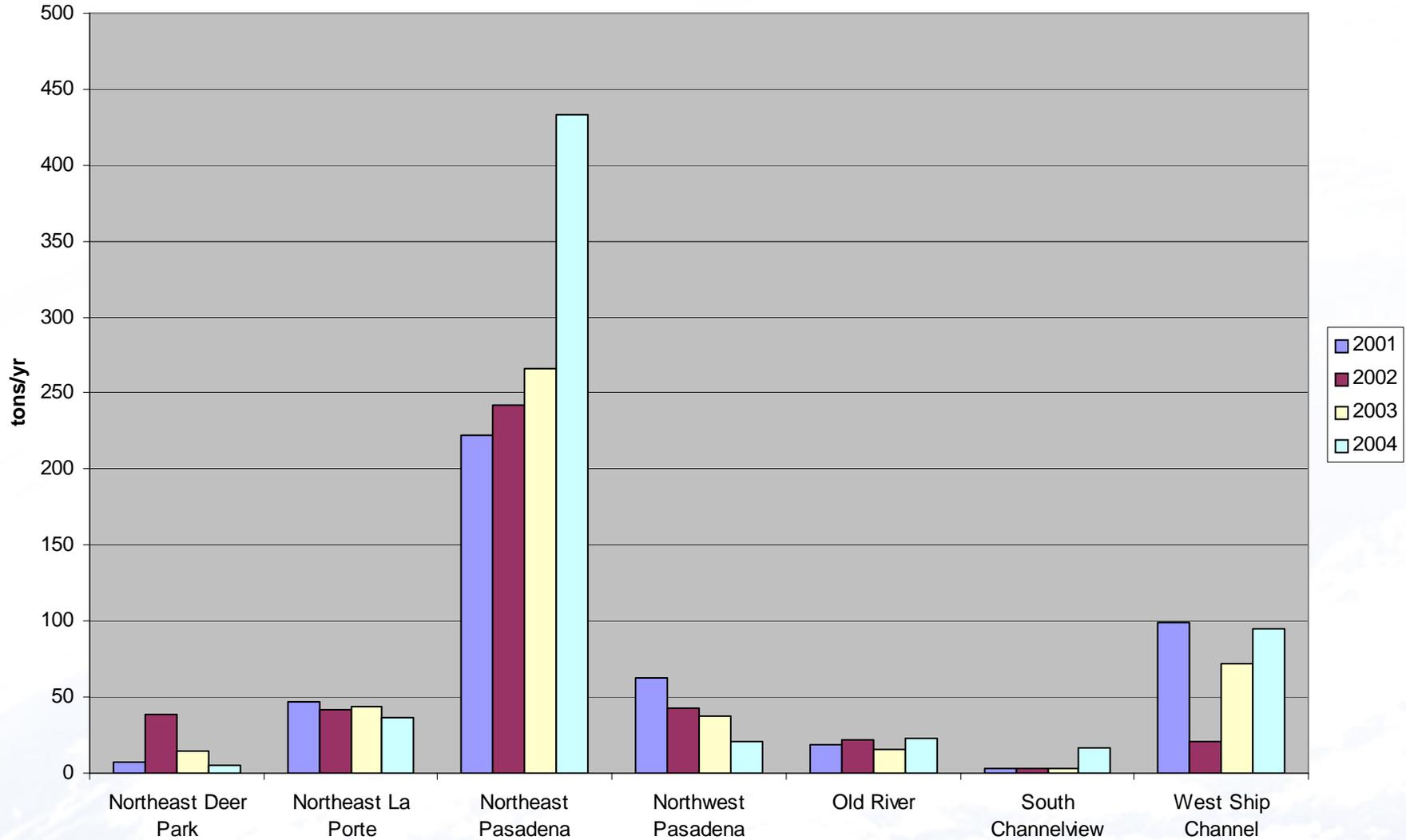


Reported HRVOC Emissions by Year and Cluster – Part 1



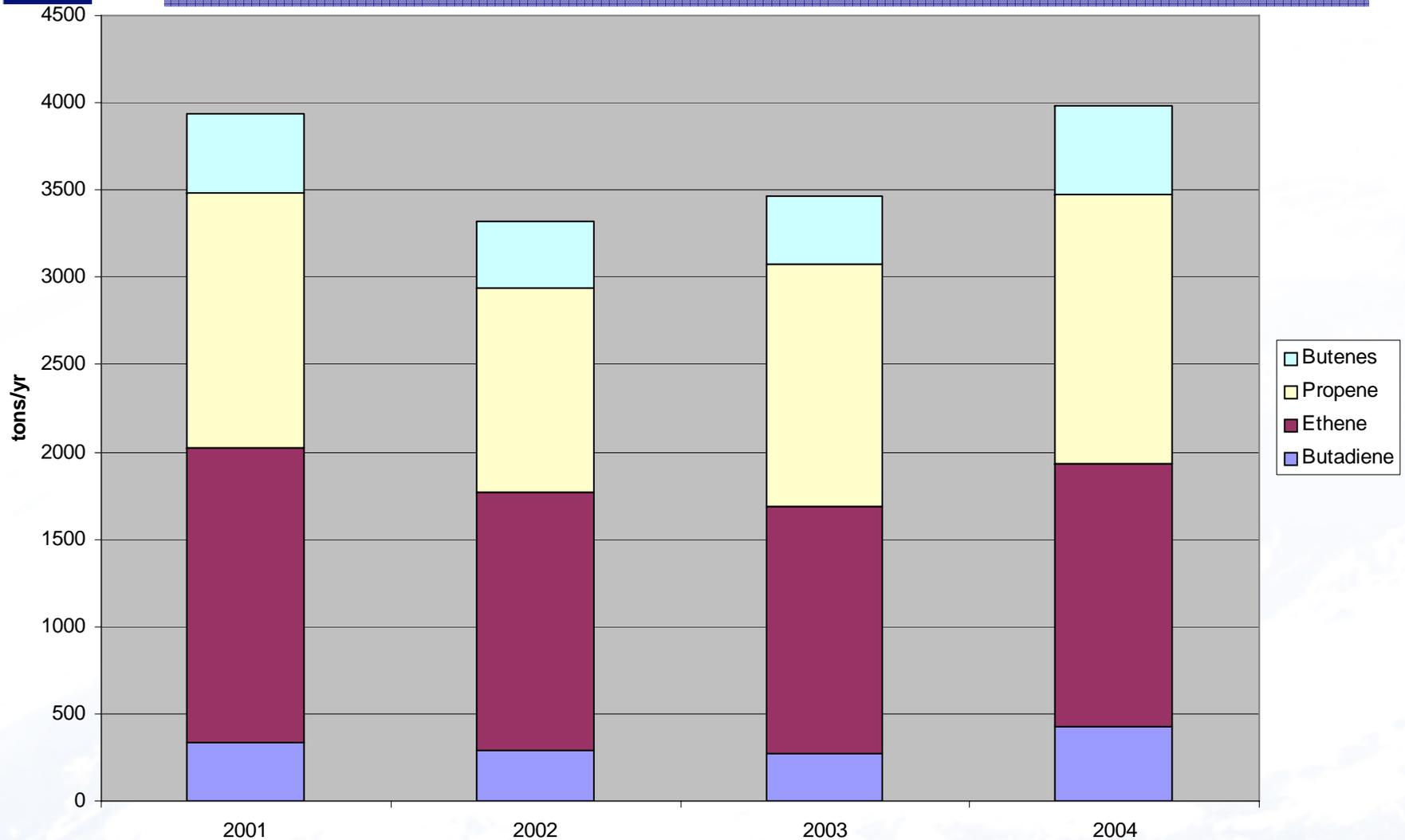


Reported HRVOC Emissions by Year and Cluster – Part 2



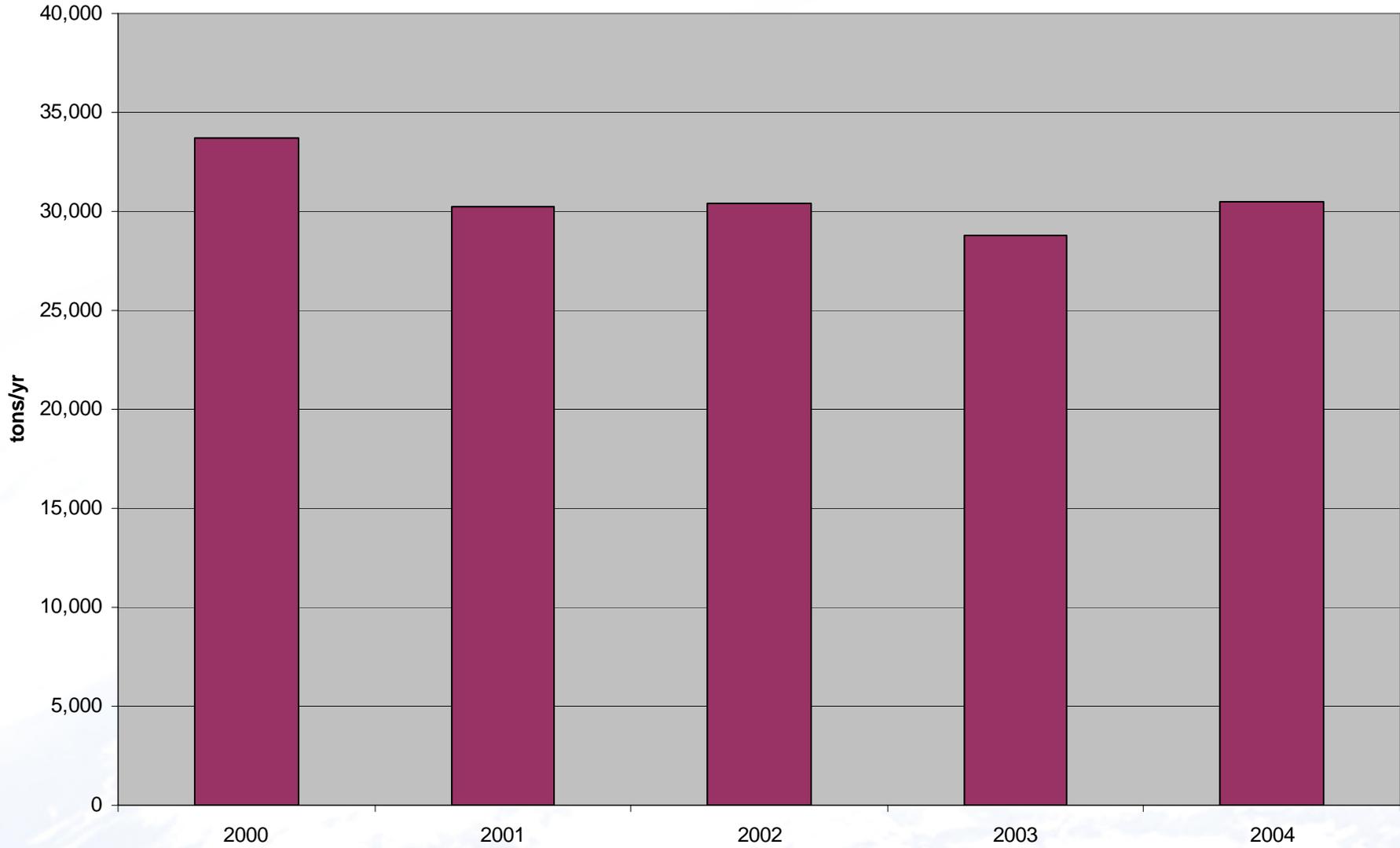


Reported Point Source HRVOC Emissions by Year, Harris County





Reported Total Point Source VOC Emissions by Year, Harris County





Conclusions / Next Steps

- Little or no apparent trend in reported HRVOCs
 - Source cluster totals show increases, decreases, or varied trend, depending on cluster
 - Reported HRVOCs/VOCs have essentially not increased, relative to the degree of underestimation seen in 2000
- TCEQ EI group continues to address potentially underreported sources (PURPS)
 - Many excess emissions believed to be due to tanks
 - E.g. tank degassing
 - tank degassing/venting on 9/15 which resulted in 6400 ppmC butadiene at downwind monitor