Key Considerations for Compliance, Enforcement, and Institutional Reform

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Three Steps to a Successful Air Quality Improvement Program

- A definitive legal mandate to meet health based air quality standards
- Air quality management agencies with the technical and legal resources to meet the legal mandate
- A commitment at the air quality management agencies to get the job done

Critical Elements of a Legal Mandate

- Commitment to meet health based air quality standards
- Clearly defined attainment dates
- Standardization of emission limits for new sources regardless of where they locate
- Economic incentives for regions to meet air quality standards both positive and negative
  - Funding to aid small businesses to comply with regulations
  - Ability to withhold funding from local governing units if appropriate progress is not made

Helpful Elements of a Legal Mandate

- Interim goals
  - Example: 5 year emission reduction mandate
- Process to review progress and force adjustments to the regional air quality attainment program when interim goals are not met
- A framework to achieve equitable distribution of emission reduction requirements between major sources, minor sources, passenger vehicles, and cargo vehicles

Management Agency Requirements

- Technically capable
  - Must be able to carry out the five step air quality management process (see next slide)
- Legally capable
  - Must be able to write and enforce regulations to meet air quality improvement goals
- Adequate funding
  - Mechanisms such as emission fees, inspection fees, vehicle registration fees to support management agency
- Agency must have the necessary commitment
  - Committed to the goal of achieving the specified air quality improvement goals

Distribution of Regulatory Authority

- Need for clear lines of regulatory authority for involved agencies
- Distribution of regulatory authority between agencies in South America has been an impediment to progress
  - Guarding of enforcement prerogatives
  - Lack of information sharing

Air Quality Management Process

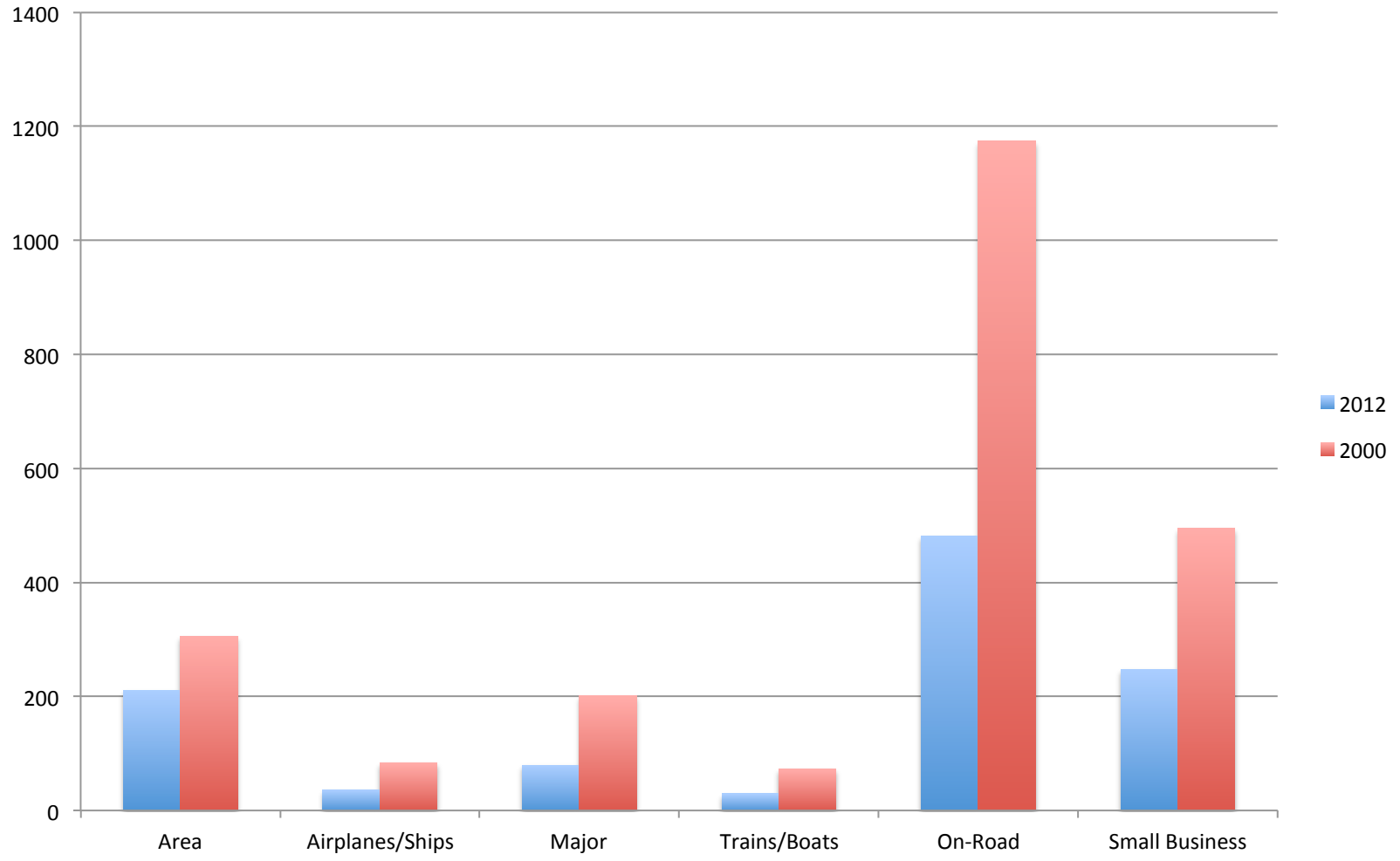
Air Quality Improvement Failures

- Often begin at steps 3 and 4 of the air quality management process (inventory and planning)
- Without a clear vision of the sources of the air quality problem and how it will change in the future, improvement efforts can not be appropriately defined

Different Sources Necessitate Different Regulatory Approaches

- Mobile sources normally require a national response
- Large stationary sources require regular observations and swift and predictable responses to violations
- Small sources require predictable responses to violations but also support in meeting regulations
- Residential/Public sources require options

Los Angeles Inventory Overview



Combined Hydrocarbon, NOx, SOx, PM2.5 emissions (tons/year)

On-Road Mobile Sources

- Best controlled at the national level with emission limits set to support clean air in the most polluted urban areas
- Allowing California to set separate on-road mobile source standards proved very successful

Trains/River Navigation

- Best controlled at the national level of government with emission limits set to support clean air in the most polluted urban areas
- Support equipment at depots in urban areas can be successfully regulated at the local level of government

Major Stationary Sources

- Best controlled at the local level
- In-stack monitoring with data transmitted to central monitoring office for enforcement
- Frequent on-site inspections (weekly/ monthly)
- Fines at a level to deter violations
- A good opportunity for market based emission reductions once emissions are well understood

Small Businesses

- Best controlled at the local level
- Annual on-site inspections
- Financial and technical support likely needed to reduce emissions to meet air quality management plan requirements

Area Sources (Residential/Public)

- Best controlled at the local level of government
- General studies needed to establish levels of compliance
- Requirements must be set on manufacturers of equipment and supplies used at area sources

International Sources (Airplanes and Ocean-Going Vessels)

- Best regulated by international compacts with emission limits set to protect most polluted urban areas (difficult for Los Angeles)
- Support equipment at depots in urban areas can be successfully regulated at the local level of government
- Might be a good opportunity for market based regulations (emission fees)

Resources

- U.S. Clean Air Act
  - http://www.epw.senate.gov/envlaws/cleanair.pdf
- California Clean Air Act
  - http://www.arb.ca.gov/bluebook/bb12/bb12.htm
- California Motor Vehicle Regulations
  - http://www.arb.ca.gov/msprog/levprog/leviii/leviii.htm
- Los Angeles Stationary Source Regulations
  - http://www.aqmd.gov/home/regulations/rules/scaqmd-rule-book/table-of-contents
- Discussion of Air Quality Management Practices
  - http://www.aqbook.org