

Towards a Quieter America

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- First major national noise policy revitalization program in the U.S. in the past twenty years
- The U.S. was a leader in community and environmental noise policies 30-40 years ago, but no major progress in decades
- New national program uses the November 2010 report, “Technology for a Quieter America (TQA)” by National Academy of Engineering (NAE) as its foundation – Report is available for free download at: http://www.nap.edu/catalog.php?record_id=12928
- Today’s presentation is based on presentations at Federal Agency Roundtable in Washington, D.C. in May 2011 by George Maling, Chair of TQA report Committee, Bill Lang, Noise Control foundation, and David Sykes, co-Chair of Towards a Quieter America Program
- New national program is based mainly on NAE TQA report, but also addresses additional efforts. NAE supports only the exact contents of their report

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- NAE TQA Report:
 - 2005 – Scoping workshop
 - 2006 – Prospectus approved; study committee and subcommittees appointed
 - 2007-2008 – Workshops
 - 2009-2010 – Writing, editing, peer review, response to review, and publication

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- Contents of NAE TQA Report:
 - Introduction
 - Community Noise
 - Metrics for the Assessment of Environmental Noise
 - Hazardous Noise and its Control
 - Technology
 - Product Noise Emission Standards and Regulations
 - Cost-Benefit Analysis for Noise Control
 - The Role of Government
 - Education Supply and Industry Demand for Noise Control Specialists
 - Public Information on Noise Control
 - Summary of Findings and Large Set of Recommendations

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- Noise Metrics -- Background
 - Started with Concern about Community response, mainly to aircraft noise from new jet engines in the 1950s
 - A-weighting and DNL Adopted
 - Schultz Curve for Community Annoyance Published in 1978
 - Currently, New Interest in Metrics other than DNL
 - Modern Instrumentation Supports use of Additional Metrics

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- Noise Metrics -- Recommendations
 - Adopt as a goal DNL – 55 dB
 - Federal agencies should fund the development of new environmental noise metrics to replace DNL
 - Supplemental Metrics (?)

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- Hazardous Noise and its Control – Issues & Recommendations
 - Noise in industry is a major national problem – Worker hearing loss results in decreased quality of life and very large financial impacts from compensation for hearing loss
 - TQA Report summarizes worldwide regulations for exposure to hazardous noise
- Recommendations
 - NIOSH/DOL should develop an electronic database of noise problems, solutions, and materials
 - Government agencies should show leadership in promoting “buy quiet” programs
 - OSHA should adopt the 85-dB (A) / 3-dB limit for exposure to hazardous noise to replace the current 90-dB (A) / 5-dB requirement

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- NIOSH should be the lead agency and tasked by its parent agencies (HHS and CDC) to develop new damage-risk criteria with assistance from the U.S. military services that have experience with high amplitude impulsive noise
- OSHA should revoke the “100 dB Directive” of 1983, which raised the requirement for engineering control of noise from 90 to 100 dB by allowing the substitution of hearing protectors for noise control up to 100 dB and devastated the market for quiet machinery and equipment. OSHA should reconfirm that engineering controls be the primary means of controlling noise in the workplace.

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- Technology – Aircraft Issues & Recommendations
 - Clearly a national priority
 - NASA and FAA have strong R&D programs, but considerable concern about tradeoffs regarding noise & air quality emissions
 - Challenges from Europe – night-time flights, Airbus versus Boeing
 - Goals must be long-term
- Recommendations – (1) Continue R&D efforts to lower airplane noise emission levels; (2) Actively pursue airport operational procedures to lower noise levels (Continuous Descent Approach, etc.)

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- Technology – Rail Transportation Issues & Recommendations
 - Railway noise impacts 10 million persons (6 million impacted by rail horns)
 - Sources of rail noise
 - Warning systems
 - Noise abatement and new technologies could be made available
- Recommendations – (1) Planning documents and careful design must be used in the development of new rail systems; (2) Development of directive locomotive warning horns should be pursued

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- Technology – Highway Noise Issues & Recommendations
 - Tire/Road Surface interaction is major source of highway noise
 - A problem that almost everyone experiences daily
 - New European Commission proposal for more stringent standards to reduce road traffic noise throughout Europe will affect U.S. auto manufacturers
- Recommendations – (1) FHWA should expedite work on new pavement design and development of new technologies. Durability of pavement surfaces has a direct effect on the application of quiet pavement technology, which can reduce noise where barriers are ineffective; (2) FHWA and EPA should compare the costs and benefits of using quiet pavement technology with the costs and benefits of noise barriers.

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- Technology – Consumer Product Issues & Recommendations
 - Demand for quiet products seems to be growing (One example is dishwashers)
 - Overseas demand for quiet appliances (global competitiveness)
 - Lack of a uniform system of labeling
 - Leadership is needed

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- Providing Information to the Public
 - Widespread dissatisfaction with the current noise climate
 - “Popular” writers in the 1970s raised the noise issue and helped to gain government support
 - Several recent books readable by the public
 - EPA should be the lead agency to provide information to the public
 - Engineering societies have a role
 - “Towards a Quieter America” Program is making a start
 - Possible briefing to U.S. Congress
 - Public Education & Awareness Program (Workshops at acoustics conferences, American Institute of Physics “series”, etc.

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- Program goals
 - Change perspectives through continuous, bi-partisan constituency-building;
 - Organize and mobilize a large and powerful constituency representing government, science, healthcare, law, engineering, education and industry;
 - Continue achieving science-based, incremental successes while avoiding confrontation.

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- New national level program to build on the NAE TQA Report and influence progress on improving noise policies in America
- 12-Member Organizing Committee, plus 12-Member Advisory Board
- Endorsed and/or supported by endorsed by the National Academy of Engineering, and by the National Research Council Transportation Research Board/ADC40 – Noise Committee, the National Hearing Conservation Association, the Institute of Noise Control Engineering, ASHRAE TC2.6, and ANSI S12 Work Groups 41 & 44

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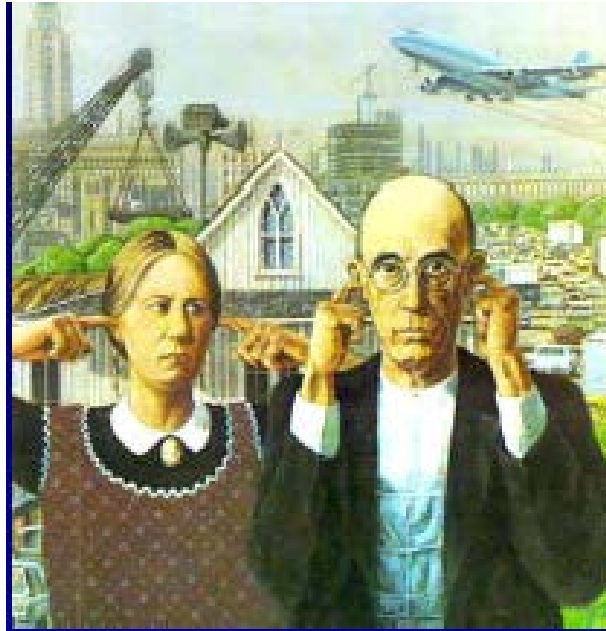
- Program Objectives
 - Identify and educate members of Congress;
 - Identify and educate leaders of federal agencies;
 - Identify and educate leaders of state and local agencies;
 - Identify, educate and mobilize stakeholders in the private sector including NGOs, professional societies, research institutions and industry groups;
 - Organize, encourage and support teaching, research and development related to noise, its effects and technologies for measurement and mitigation;
 - Identify and educate media and the American public;
 - Provide ongoing assistance to ensure that changes in noise policy are achieved..

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- Activities for 2011-2012
 - Federal Agency Roundtable to meet with leaders on May 12 in Washington, DC.
 - Individual meetings with members of Congress
 - Expansion of the “National Education and Awareness Campaign on Community Noise” through public workshops and presentations
 - Media campaign focused on dramatic demonstrations of noise effects
 - Stakeholder Briefing for professional societies, NGOs and industry followed by individual meetings with members of Congress

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- Activities for 2011-2012
 - Research Funding Workshop to explore joint public-private funding of research on noise
 - Congressional Briefing in Washington, D.C.
 - Ongoing technical assistance to members of Congress, federal and state agencies, research institutions, NGOs and private sector organizations to implement the recommendations in NAE “Technology for a Quieter America” Report and the World Health Organization (WHO) Report on “The Burden of Disease From Environmental Noise”
 - Current political and fiscal environment in not conducive to success, but more to follow...



Thank you for your kind attention...

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