

**U.S. Environmental Protection Agency
Region X**

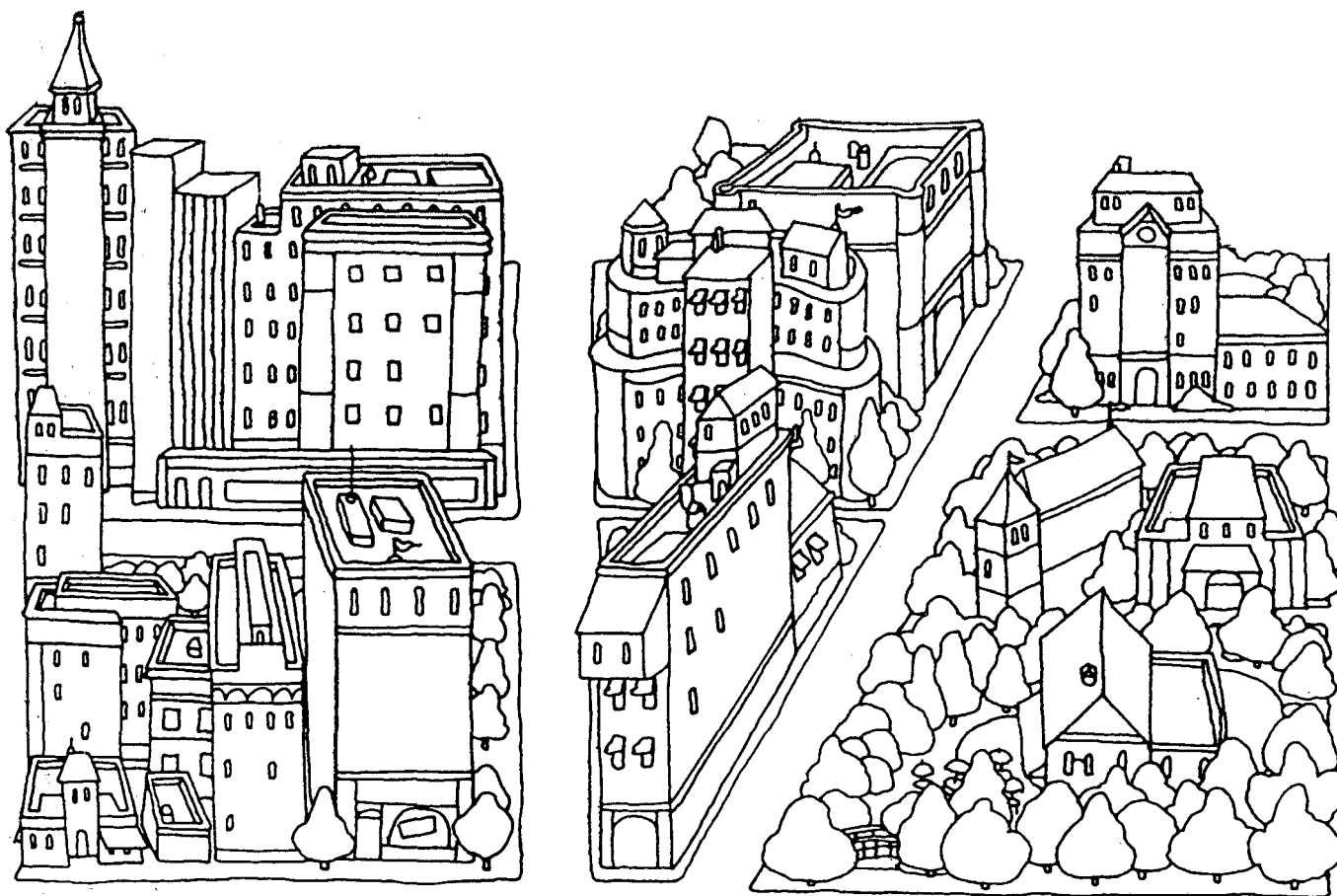
COMPARATIVE RISK PROJECT

BUDGET PROPOSAL

RISK MANAGEMENT STRATEGY

for

Indoor Air



September 1988

INDOOR AIR POLLUTION BUDGET PROPOSAL

Region 10 Comparative Risk Project

ABSTRACT

People spend nearly 90 percent of their time indoors and, for many pollutants, indoor air pollution levels are considerably higher than outdoor levels. National trends toward energy conservation, increased use of synthetic chemicals, reduction in air exchange rates, and increased use of household pesticides all have led to a rise in indoor air pollution. Estimated risks are quite high compared with other risks in the region.

Region 10 proposes implementation of a two-part strategy as a demonstration of what can be done to mitigate the human health risks posed by this source of pollution. First, EPA Region 10 proposes to coordinate efforts with other agencies to provide a program of public information and outreach for both residential and commercial building owners. Second, EPA would provide support for establishment of a model state program in Oregon to deal with a wide range of environmental pollutants. The model program would work through building codes to establish standards for commercial buildings, establish product standards relative to indoor emissions, and accredit laboratories for indoor air testing.

The Region 10 Air and Toxics Division has 0.5 FTE available and a tentative commitment from the regional office for an additional 0.5 FTE in overceiling allocation to support a full time regional indoor air pollution position. From EPA Headquarters \$38,000 in additional travel and contractual funding is required, \$18,000 annually for the three year trial period (\$3000 in travel, \$5000 for a toll free hotline, \$10,000 in workshop and educational materials costs) and \$20,000 for FY 89 only (\$10,000 for a survey and \$10,000 additional for the first year brochure). We propose using approximately \$30,000 of the existing regional 105 air program grant funding to support the development and passage of a model state program in Oregon. The Oregon program, if passed, would be fee supported.

Summary of Comparative Risk Project Process

Region 10's Comparative Risk Project, the primary impetus for this proposal, is one of a series of regional adaptations of the national Unfinished Business study, a national comparative risk project initiated by EPA Administrator Lee Thomas in 1986. Like similar pilot projects in Regions 1 and 3, Region 10's Comparative Risk Project is modeled on the national study, and shares its fundamental objectives: to compare a wide range of environmental problems in terms of the risks posed to human health and the environment, and to incorporate that information into environmental decision-making and planning.

In Region 10, the project involved a four-step process which began with rigorous assessments of the actual and potential human health and ecological risks associated with the top 21 environmental problems in the Pacific Northwest, as identified by a diverse group of Regional experts. The participants used the results of these analyses, and their best professional judgment, to group and rank the problem areas in terms of the seriousness of the risks posed. Next, participants solicited and generated strategies for managing or reducing risks in all of the 21 problem areas. Finally, a team of experts ranked the strategies based on programmatic factors (such as legal and technical feasibility), effectiveness factors (such as the degree of risk being addressed and the likelihood to success), and cost factors. Of the more than 40 strategies generated, six are being actively pursued, including the one that is being presented here.

Risk Assessment Findings

Indoor air pollution was ranked in the highest category of human health risks by the Human Health Work Team, along with indoor radon, pesticides and air toxics (including PM-10). The ranking was due primarily to the relatively high estimated cancer incidence and numerous chronic and acute noncancerous effects (e.g., headaches, pulmonary irritation, increased infection) associated with this form of air pollution. That result was consistent with the national comparative risk study, in which indoor air pollution (other than radon) was ranked 7th of 31 problem areas assessed. The major pollutants of concern include environmental tobacco smoke, (i.e. passive smoke), formaldehyde, volatile organic mixtures, and microbiological contamination.

In addition, research conducted during the risk assessment indicated there were few established human health standards for indoor air pollutants and a dearth of information about how to achieve those levels in residential and commercial buildings.

Description of Strategy

The proposed regional program is a two-pronged effort to give EPA Region 10 a leadership role in coordinating efforts to provide public education and outreach, and to support development of a comprehensive state program to reduce risk from several pollutants of most concern. The public education and outreach program would require a full time regional office person to:

1. Establish a focal point for regional indoor air pollution control initiatives;
2. Develop a data base for determining public awareness and needs;
3. Establish a multi-agency communication network;

4. Publish a comprehensive list of resources and services available to the public; and
5. Initiate an active program of training, public information, and expertise for homeowners and public/commercial building owners.

Although a number of informative articles have appeared in the popular press (local and national), little information is available on specific actions the public can take to reduce the health risks associated with indoor air problems. After conducting a public awareness survey, a consumer oriented guide or booklet addressing mitigation practices for residential and commercial building dwellers and owners would be developed. Workshops, a toll free hotline, and public speaking engagements would be used to educate the public on ways to deal with specific concerns and who should be contacted if they have specific questions and concerns. A comprehensive guide to the resources available would be prepared.

Second, EPA Region 10 would support development of a model state program using 105 grant funding. Currently there is public support in Oregon for dealing with this problem and the Oregon Department of Environmental Quality (DEQ) has the approval of the Governor to develop indoor air pollution legislation for the next session of the legislature. EPA Region 10 should provide maximum support toward development, passage, and implementation of a model program in Oregon. If the legislation is not successful, the momentum established can be used to see what can be done to get a program established within existing legislation. Again Oregon would probably, but not necessarily, be the key state in such an effort.

Preliminary thinking in Oregon is that legislation for a program would include:

- establishment of a public information, education, and assistance program.
- identification of acceptable concentrations for selected indoor air pollutants.
- initiation of a regulatory program to achieve compliance with ventilation and pollutant concentrations in commercial buildings.
- authorization for establishment of product standards relative to indoor emissions.
- requiring building code modifications to protect indoor air quality in new and remodeled residential buildings.
- accreditation of laboratories for indoor air testing.
- low cost passive monitors to Oregon residents.

The Oregon Department of Environmental Quality envisions a fee supported program to accomplish these objectives.

Measures of Progress

For EPA Person:

- Establishment of a multi-agency task force or working group
- Strategy for the EPA effort (an effort coordinated with other agencies)
- Preparation and distribution of a consumer oriented booklet (or booklets since commercial and residential issues need separation)
- Evaluation of program effectiveness 3 years after initiation

For Oregon Model Program:

- Submittal of model program to Oregon legislature
- Passage of legislation
- If legislation passes, evaluation 3 years after initiation
- If legislation is not passed, strategy for dealing with indoor air problem under existing legislation.

Current Regional Efforts in Indoor Air Pollution

The current effort consists of answering any phone calls which arise (nothing is done to solicit calls) and referrals of individuals with indoor air asbestos problems to testing and removal agencies.

Resources

Resources Required

- 1 FTE for a regional indoor air person
- \$38,000 initial year contractual and travel funding (\$5,000 for a hotline, \$20,000 in contract funding for the brochure, \$10,000 for a public survey, and \$3000 for travel), with \$18,000 in subsequent years (hotline, travel, small materials, brochure and educational expense fund)
- 1 state person (Oregon) funded by 105 special project funds

Proposed Sources of Resources

The Air and Toxics Division has a tentative commitment from the Regional Office to allocate an additional 0.5 FTE to add to a 0.5 FTE of Air Program Branch resources for a new position. Anything less than a full position will not be effective in development and implementation of a program of this magnitude.

EPA Headquarters is being asked to provide \$38,000 initially and \$18,000 in two subsequent years to support the travel, hotline, and educational materials support costs for the public outreach program.

The Air and Toxics Division will work with state agency directors to secure grant support for at least 1 FTE in Oregon to develop and work with the state legislature on passage of model state legislation. The Governor supports development and passage of such legislation.

The Region 10 air program is at a minimum core level so additional internal reallocations are not possible without severe program disruption.

Attachments

- Attachment 1 Overview of the Comparative Risk Project
- Attachment 2 Summary of Ecological Work Team Process and Results
- Attachment 3 Summary of Human Health Team Process and Results
- Attachment 4 An Overall Summary of Ranking Process and Results

SCHEDULE - INDOOR AIR

TASK	FY89				FY90				FY91			
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
<u>For EPA Person</u>												
- Hire Position	<div></div>											
- Establish Multi-Agency Task Force Work Group												
- Work with Task Force/Work Group to Respond to Public									<div></div>			
- Develop Strategy for EPA Effort	<div></div>											
- Prepare Consumer Oriented Booklet												
°For Residential (Homes)					<div></div>							
°For Commercial Apartment Buildings					<div></div>							
°For Offices					<div></div>							
- Distribute Booklets									<div></div>			
- Evaluate Program Effectiveness									<div></div>			
<u>For Oregon Model Program</u>												
- Submit Model Program to Oregon Legislature	<div></div>											
- Passage of Legislation					<div></div>							
- Evaluation of Legislation									<div></div>			
- If Legislation Fails												
°Develop Strategy for Program under existing Legislation					<div></div>							
°Implement Active Outreach Program									<div></div>			
°Re-submit Legislation									<div></div>			