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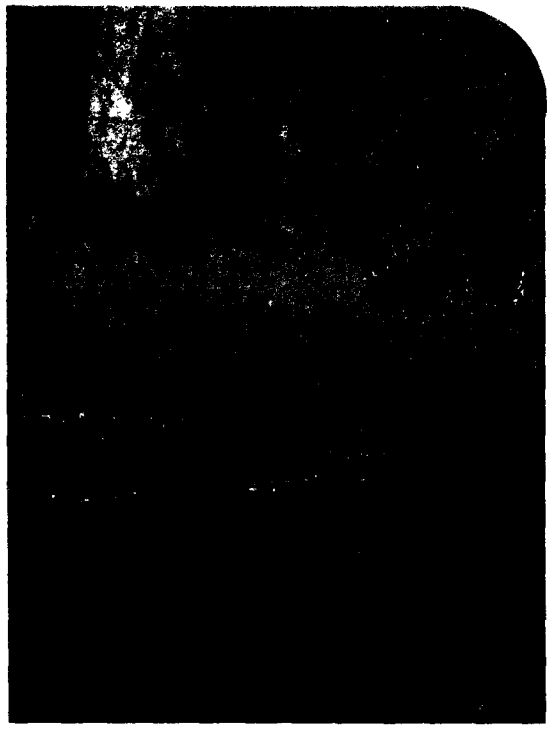
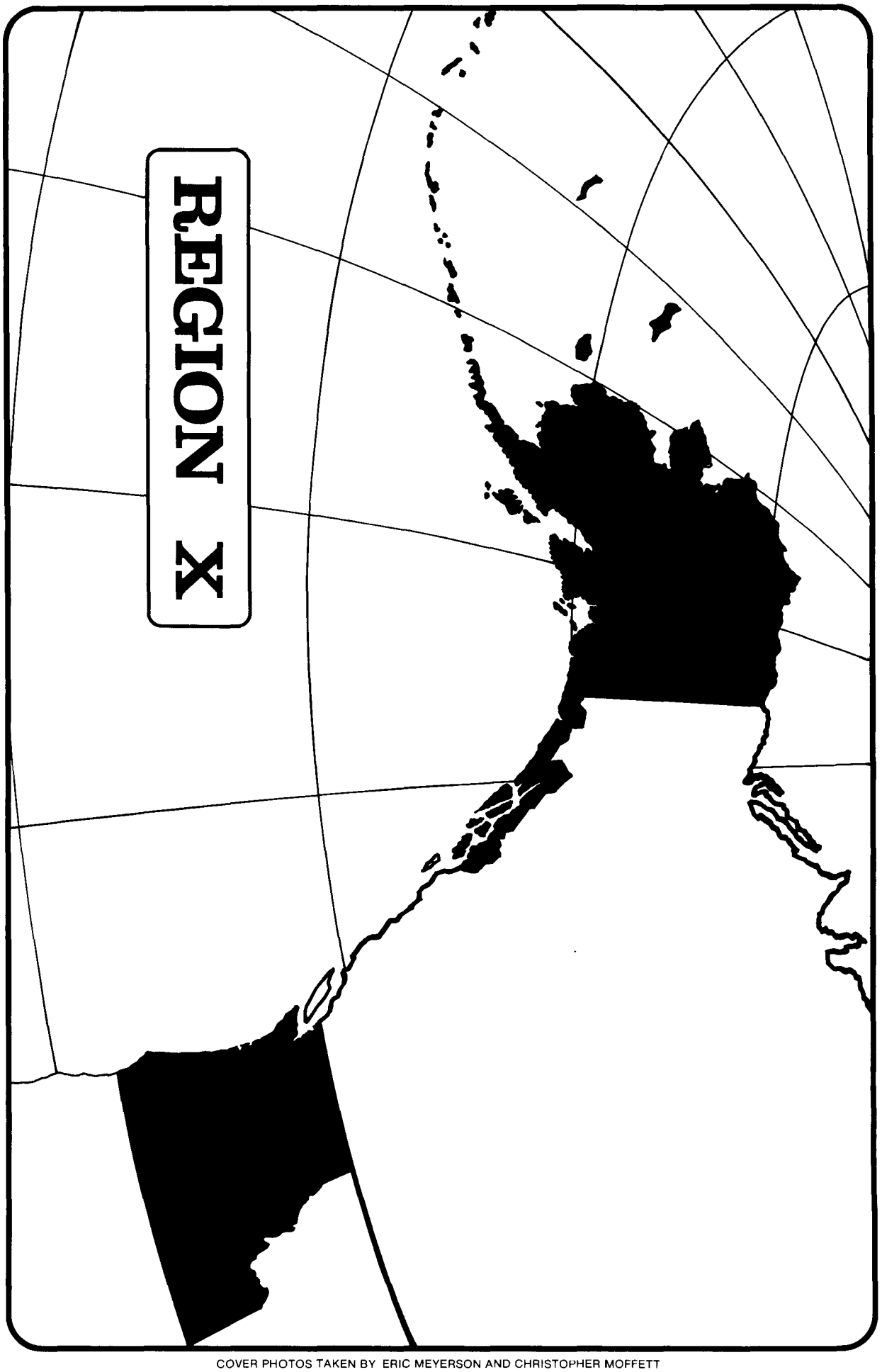


ENVIRONMENTAL QUALITY PROFILE 1976

ENVIRONMENTAL QUALITY PROFILE 1976

ALASKA IDAHO
OREGON WASHINGTON

REGION X
ENVIRONMENTAL PROTECTION AGENCY
1200 SIXTH AVENUE
SEATTLE, WASHINGTON 98101



COVER PHOTOS TAKEN BY ERIC MEYERSON AND CHRISTOPHER MOFFETT

PREFACE

When the President established by executive order the U.S. Environmental Protection Agency in 1970, one of the most significant mandates in that order was to keep the public informed on the quality of the environment. The purpose of this document is to provide an overview of the environmental quality of EPA's Region X — Alaska and the Pacific Northwest States of Idaho, Oregon and Washington. All of the basic data came from annual reports submitted by the States to EPA. Without this input the profile would not have been possible.

This document is directed to both the public and to Congressional, State, and local officials. It is intended to help develop an overall perspective on environmental issues as well as to assist in policy analysis, program management and program evaluation. This report is to be the first annual report to the people of Region X and their elected and appointed officials on the quality of our environment. Is it improving? Where are the problems? And what can be done to solve them.

The National Academy of Sciences recently stated that development of environmental indices is an "important and urgent matter" in our Nation. Unfortunately, the data and knowledge necessary for scientifically satisfactory indices are lacking in many environmental areas. However, sufficient data exist to formulate some useful indicators.

Formulating useful and accurate indices of environmental quality is a challenging task. Therefore, we would appreciate suggestions for improving the information presented in this document. Please direct your comments to the Office of the Regional Administrator, U.S. Environmental Protection Agency, 1200 Sixth Avenue, Seattle, Washington 98101.

This society has come a long way since the time when our daily struggle with climate and wilderness dominated our ancestors lives, challenged their spirit and energies, and shaped attitudes that served too well to forge a new Nation... We can be proud of the progress we have made in improving the Nation's environmental quality. Yet, we must meet additional challenges over the next few years. We must improve our understanding of the effects of pollutants and of the means and costs of reducing pollution. ... We also must continue the job of cleaning up pollution from existing sources.

——President Gerald R. Ford

CONTENTS

WATER QUALITY

Region X includes four States having 833,000 square miles. In that area are 35,855 miles of tidal shoreline, streams and inland bodies of water with 38,340 miles of riverbank and shoreline. Although this part of the country is relatively free of industrial water pollution, the majority of the principal river waters in the Northwest do not meet all water quality standards.

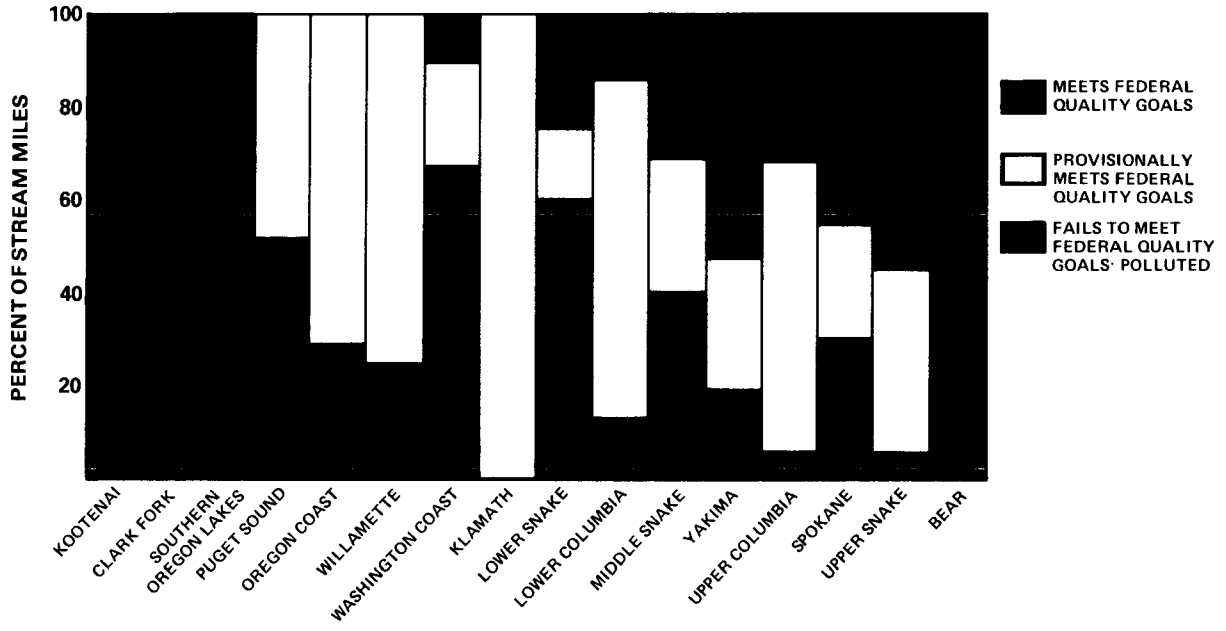
The index of water quality shown in the chart at right is based on the concept of percent of stream miles meeting the water quality goals of the Federal Water Pollution Control Act, according to criteria recommended by the National Academy of Sciences.

A common water quality standard violation in many of the Region's watersheds results from high bacterial concentrations. However, in many areas the levels are receding to the point that it is highly possible that surface runoff rather than sewage discharge is the principle problem. Violations of temperature standards are an additional widespread cause of standards violations.

A disturbing trend is the apparent widespread increase in presence of organic and inorganic toxins. These may be traced to increasing industrial output, but the significance of the trend is obscured by the fact that there was little sampling for such materials in the past. Thus, toxic materials such as PCB's may well have been far more common in water than was suspected before active monitoring began.

A continuing challenge is upgrading the quality of waste water treatment as required under the Federal Water Pollution Control Act. Construction, operation, maintenance and replacement of sewers and waste treatment plants and the modification of industrial processes will require millions of dollars a year in Region X states.

PRESENT QUALITY OF NORTHWEST RIVERS AND TRIBUTARIES



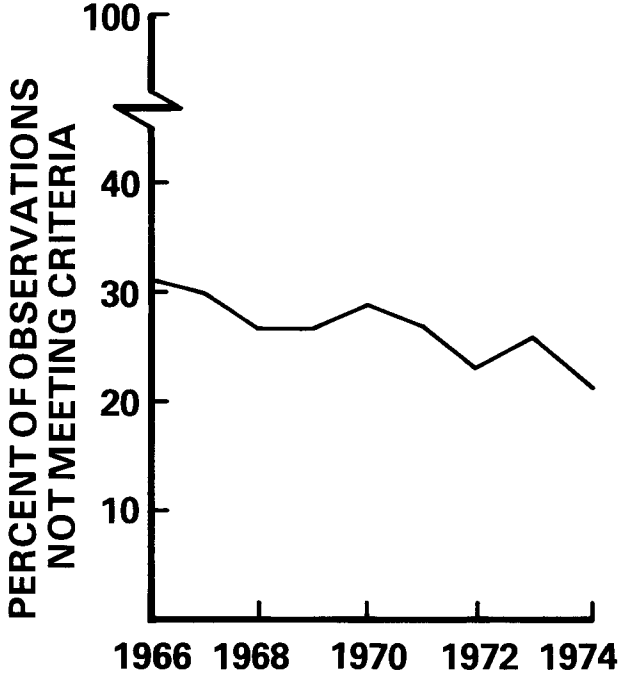
The chart above illustrates the relative quality of the Region's 16 principal river basins. The chart is shown in terms of percent of the river with differing water quality. The blue portions of the chart show the percentage of the river which meets Federal water quality goals, while the yellow shows the percentage of the river which provisionally meets water quality goals, and the red portion illustrates the percentage which fails to meet water quality goals.

WATER QUALITY

Comparison of the charts below illustrating "Point Source-Related Pollutants" and "River and Stream Miles Meeting Federal Goals" provides some interesting insights into water pollution trends in the Northwest. State and Federal pollution control programs are now heavily oriented toward controlling municipal and industrial waste discharges. The effectiveness of these programs is clear. Between 1966 and 1974 criteria violations of samples analyzed for discharge related pollutants declined from 31 percent to 21 percent, a 33 percent reduction.

If our evaluation of water quality is broadened to include parameters not discharge-related, such as pesticides and gas saturation, our picture of water quality is altered considerably. The chart showing "River and Stream Miles Meeting Federal Goals" indicates a perceptible decline in water quality in the Northwest during the past decade. The proportion of total stream miles that consistently meet Federal goals (blue) is decreasing. This is offset to some extent by increases in the total stream miles that provisionally meet Federal goals (yellow). The reasons for this decline are apparently related to the intensity of water and land use. Rivers east of the Cascades heavily used for power generation and irrigation account for most of the apparent overall decline in water quality. Federal and State pollution control programs have not addressed these problems and other non-point sources during the past ten years. As a consequence non-point source control programs are receiving increasing emphasis and will encompass a large part of the future thrust of pollution control here in the Northwest.

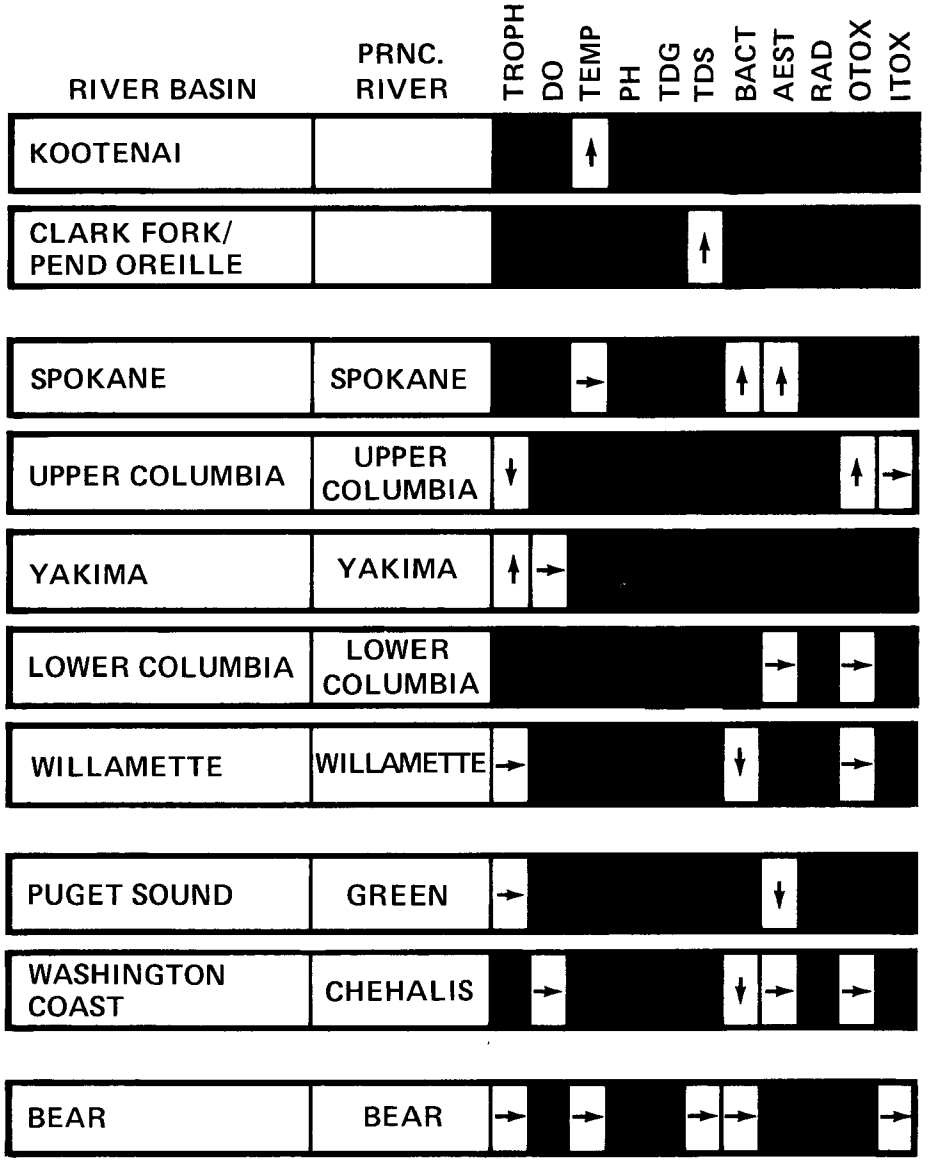
POINT SOURCE/RELATED POLLUTANTS

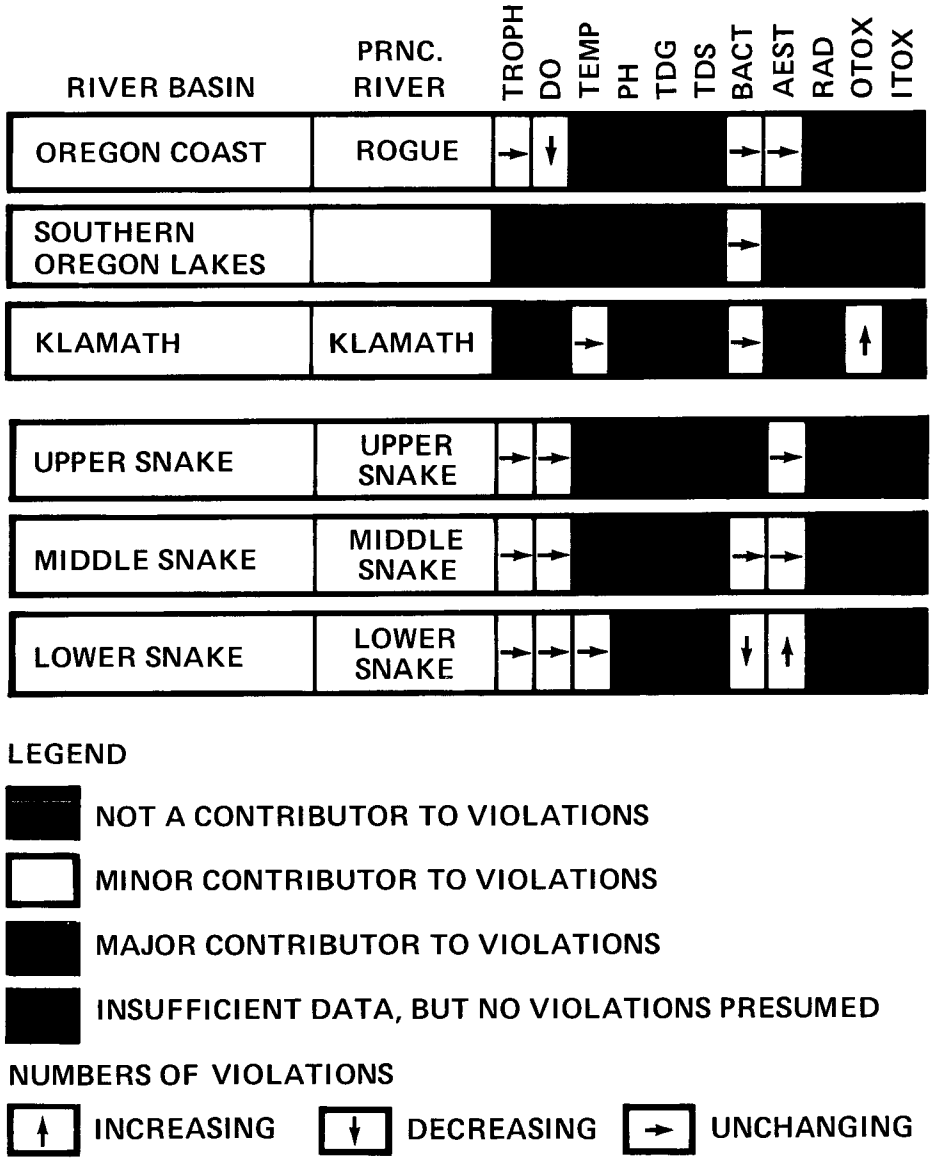


STREAM MILES MEETING FEDERAL GOALS

WATER QUALITY

Standards/Criteria Violations





WATER QUALITY

Definitions of Parameters

In order to understand the significance of standards violations it is necessary to know what characteristic of the water is not meeting the standard. While many factors are taken into consideration in the development and application of water quality standards, there are ten principal water quality characteristics that are of particular interest. These are:

TROPH (Trophic condition): This refers to the intensity of biological activity. Excessive biological activity is characterized by very murky, turbid water and nuisance-level growths of algae and aquatic weeds.

The chart at left shows trends for 10 principal characteristics of river water quality for the Region's 15 major river basins. An upward pointing arrow indicates that the pollution characteristic is worsening, a downward pointing arrow indicates it is improving, and a sidewise pointed arrow indicates no change in the recent past. The blue color indicates that the characteristics is not a contributor to standards violations for the river basin while the yellow and red colors respectively indicate relative minor and major contributions to violations.

DO (Dissolved Oxygen): Oxygen dissolved in water or sewage. Adequately dissolved oxygen is essential to the life of fish and other aquatic organisms that form the beginning of the life chain. Discharge of excessive organic solids generally are cause of low DO concentrations.

TEMP: Temperature of water governs both the nature of life forms and the rate of chemical reactions. In general, higher temperatures are undesirable for the types of fish and shellfish found in the Northwest and Alaska.

PH: This is a measure of acidity or alkalinity of water. Extreme levels of either can imperil fish life and speed corrosion.

TDG: Total Dissolved Gases—a measure of the concentration of gases in solution in water—can effect the metabolism of aquatic life forms. High concentrations of gases in excess of 120 percent can cause high mortalities in migrating fish.

TDS: Total Dissolved Solids is the measure of nongaseous minerals in solution in water—its relative "saltiness". Excesses affect water taste and cause mineral build-up in pipes and appliances.

BACT: Bacteria indicating the probable presence of disease-causing organisms and viruses not natural to water. They come from the intestine of mammals, including man.

AEST (Aesthetics): Refers to detectable oil and grease, sediment, and similar considerations.

RAD: Radioactivity may be present in water as a result of discharge of radioactive wastes or fallout. Its slow decay presents a direct threat to aquatic life and potential increase in the cumulative dose rate for other life forms.

OTOX: Organic Toxicants include pesticides and other poisons that have the same effects and persistence as pesticides.

ITOX: Inorganic Toxicants are heavy metals and other elements. Although naturally found in water and essential to life in low concentrations, excess concentrations are poisonous.

WATER QUALITY

Programs and Planning Efforts

NPDES—Under the *National Pollutant Discharge Elimination System* (NPDES) water pollution cleanup permits had been issued to most of 2,500 industrial, municipal and Federal dischargers by mid-1975. These permits, called "first-generation permits," virtually all require improvement in the quality of discharged water under schedules to be met within the next five years or less.

With the issuance of permits almost complete, the States and EPA will be monitoring compliance by the dischargers. During Fiscal 1975, enforcement actions were instituted against 54 violators in Region X.

AREAWIDE 208 PROGRAM—Local government planning agencies in 10 areas of Washington, Oregon and Idaho have launched two-year studies aimed at developing long-term comprehensive waste treatment management plans for areawide implementation. The areawide planning effort comes under Section 208 of the Federal Water Pollution Control Act. The agencies have been allotted $6.2 million in Federal funds to cover the cost of the planning program. The States are designing a companion planning program to cover the remaining areas under their jurisdiction. A major emphasis of the Statewide program will be on controlling nonpoint sources of pollution such as agriculture and forestry activities. Other point sources activities, water quality standards, and groundwater contamination will be addressed as well.

The State and local 208 programs provide significant opportunity for citizens interested in clean water to take part in decisions as to how the goals of the law will be achieved in their areas.

CONSTRUCTION GRANTS—This year, over $100 million will be awarded to municipalities in Region X to build waste water treatment facilities. Under this program, the Federal Government contributes 75 percent of the eligible costs of the facility. Priorities for project funding are established by the State agencies under authority of Section 201 of the Federal Water Pollution Control Act. The delegation to the States of responsibilities relating to the administration of construction grants has contributed significantly to Region X's National leadership in the program. As possibly the largest public works program in the country, great progress has been made toward reduction of waste discharges in municipalities, as well as providing approximately 4,000 jobs in the Northwest and Alaska to aid in deterring National unemployment.

WATER QUALITY

Drinking Water

The drinking water supplied to most homes in Region X is safe. Sources of water supply in the Northwest are of better quality than those found in most other parts of the country. Nevertheless, studies over the past 10 years indicate that drinking water quality may be deteriorating. The increasing volume, variety and complexity of pollutants that enter our ground and surface water sources pose new problems while our methods of water treatment remain tuned to contaminants of an earlier era.

Alaska, Idaho, Oregon, and Washington combined have more than 10,000 public water supply systems that must meet minimum National drinking water standards. Most current problems occur with smaller systems, and may be attributed to poor design, poor operating and maintenance procedures, and inadequate testing of water quality. In many cases, small systems do not generate enough revenue to provide the facilities, personnel, and services needed to ensure consistent high quality of drinking water. Region X will work closely with State and local health agencies to help identify solutions to problems that prevent these systems from providing safe water.

The chart below provides a profile of certain issues related to maintenance and improvement of safe drinking water supplies in the Region. Issues with a high priority need for attention are marked in red, while those with a lesser priority are marked in yellow and blue. Starting in 1977, data will be available to more accurately estimate the number or percentage of the Region's population served by water supplies meeting the National standards.

PROBLEM		STATUS
PLANNING, COORDINATION AND DESIGN OF FACILITIES		
OPERATION AND MAINTENANCE OF FACILITIES		NEEDS IMPROVEMENT
HEALTH STANDARDS	BACTERIA	
	INORGANIC	SOME WORK NEEDED
	ORGANIC	
MONITORING		NEEDS IMPROVEMENT

AIR QUALITY

Many urban residents are more concerned with air quality than any other environmental feature. This is evidenced by the frequent reporting of air quality indices on radio, television and in the press in many large cities. The Clean Air Act of 1970 gave EPA authority to establish ambient air quality standards which specify, for the principal and most widespread classes of air pollutants, limitations necessary to protect the public health and welfare.

These pollutants are: particulate matter, sulfur oxides, hydrocarbons, carbon monoxide, photochemical oxidants, and nitrogen oxides. The standards are further divided into two categories: **primary standards** which are set at levels required to protect the public health; and **secondary standards** which are set at levels intended to prevent the many other undesirable effects of air pollution.

EPA Region X has identified 20 areas in the four States which comprise the principal industrial and populated urban areas of high pollution potential. In each there are a number of sites at which the concentration of air pollutants are measured. These sites are selected both to provide general air quality information and to monitor existing or potential problems.

In order to characterize the air quality problems of the Region, the number of days per year during which the primary air quality standard was violated is shown in the charts. Accordingly, the chart is not representative of the entire county but of the worst known problem site for each pollutant type, i.e., it shows the "worst case".

The first chart opposite shows days of standards violations for each of the 20 priority counties in Region X. The chart is color-coded to show the days of standards violations for carbon monoxide, particulate matter, oxidants, and sulfur dioxide.

The lower chart shows days of standards violations for each of the 20 counties in Region X in terms of the severity of the violation. The yellow area of each bar on the chart represents days in which the primary standard was violated but the "alert" level was not reached. The red area of the bar shows the number of days for which the "alert" level for any one of the principal air pollutants was exceeded.

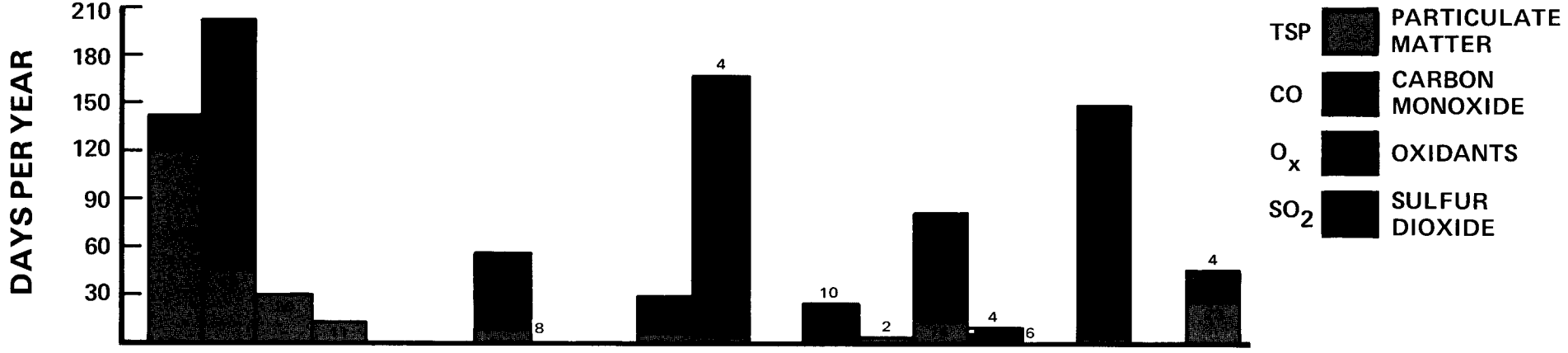
An "alert" level is the level at which the public is notified that there is an air pollution problem.

The lack of SO_2 violations shown on the tables at right should not be construed to suggest there are no problems with SO_2 in Region X. There are several areas where primary SO_2 standards are being violated within the Region, but they are single source related and do not fall within the high population areas.

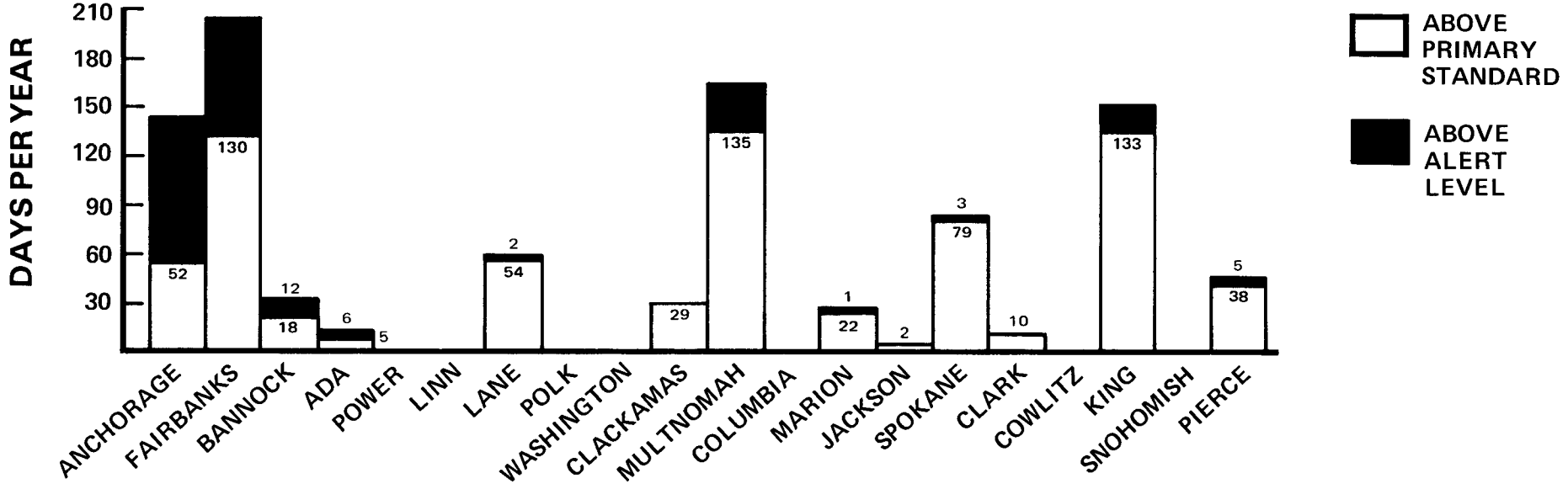
AIR QUALITY

Standards Violations

DAYS OF STD'S VIOLATIONS BY TYPE OF POLLUTANT



DAYS OF STD'S VIOLATIONS BY SEVERITY



AIR QUALITY

Region X has relatively few heavily populated urban centers (only 6.5 million residents in the four States combined). But where there are major urban centers, air pollution problems exist.

The Seattle and Spokane metropolitan areas still have significant carbon monoxide problems too many days of the year. Carbon monoxide (CO) is a major threat to the residents of Fairbanks, Alaska, during its long winter and is becoming an increasing problem in other Alaska cities such as Anchorage. Developments associated with the Alaska Pipeline are expected to compound this latter problem.

Portland, Oregon, has frequent CO problems and other air quality problems. In other communities, such as Tacoma, Washington, and Kellogg, Idaho, the problems stem from industry. Heavy metals and sulfur oxides emissions from smelters have long been difficult problems in both areas.

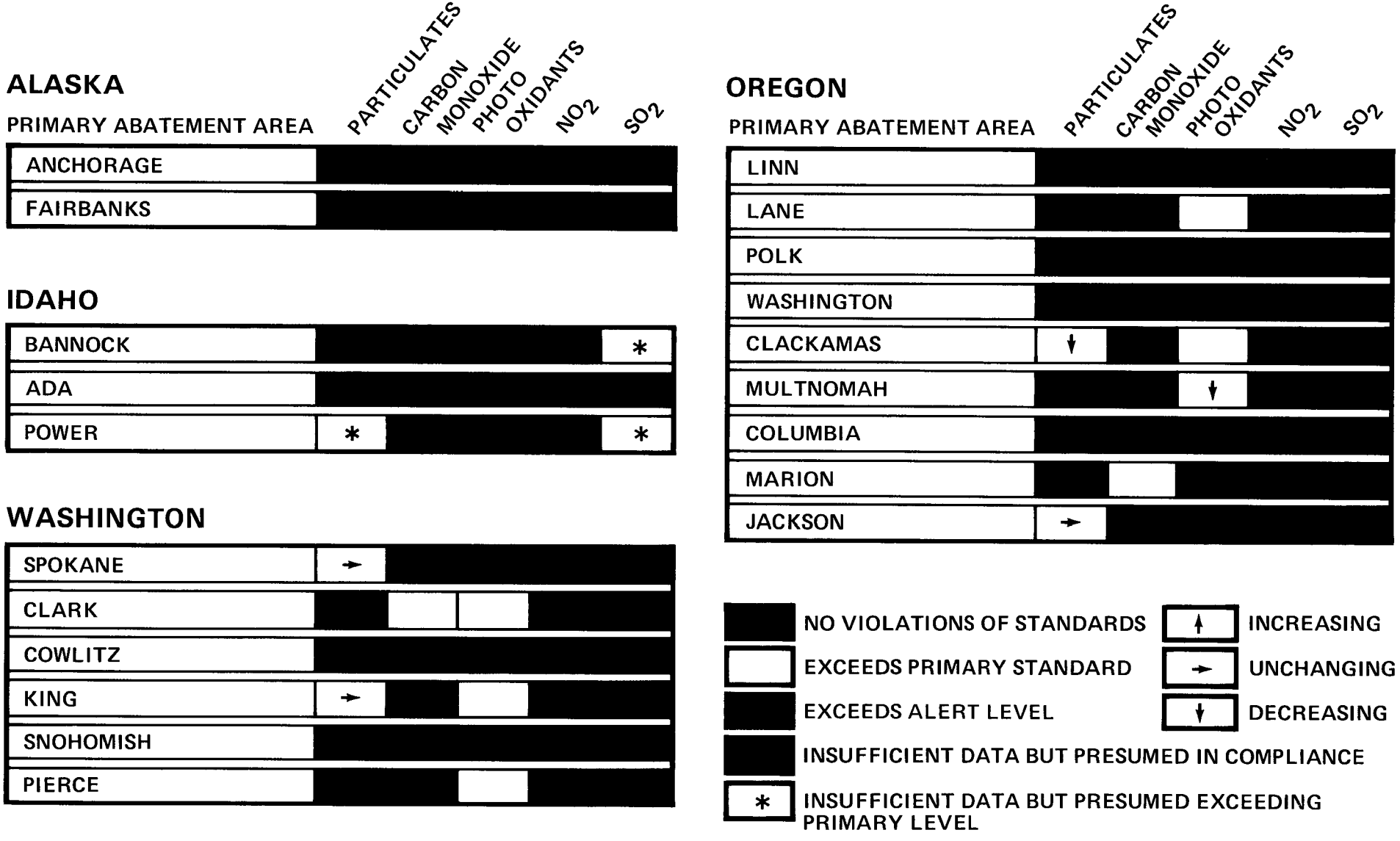
EPA is working closely with the States of Alaska, Washington and Oregon to establish mechanisms to reduce the CO levels in problem areas. This includes measures to reduce emissions from vehicles as well as measures to reduce the number of vehicle miles traveled in urban centers having high levels of CO.

The combined monitoring and surveillance systems of EPA, the State and local air pollution control agencies in Region X have nearly 200 monitoring stations throughout the Region. These stations are backed up by a recently built mobile monitoring facility utilized for emergency, short-term requirements.

These charts show trends in each of the priority counties for Region X. The direction of the arrows indicates whether the number of days of standards violations is increasing, decreasing, or remaining the same. Blue colors indicate the pollutant is not a contributor to days of standards violations. Yellow and red indicate relative severity of the problem.

AIR QUALITY

Trends in Air Pollutants in Primary Abatement Areas



RADIATION

Awareness of the potential for radiation problems is greater in Region X than in many other areas because of the Hanford (Washington) Atomic Works, the Arco (Idaho) nuclear facility, the forthcoming Trident submarine base at Bangor (Washington) and the increasing number of nuclear power plants. Similar to the rest of the Nation is the awareness that applications and uses of radiation are rapidly increasing.

Two types of radiation contribute to the problem of control: ionizing, which is produced by radioactive materials and radiation-producing machines such as X-ray equipment; and non-ionizing, produced by television receivers, radar, lasers, etc. Primary threats to health associated with these types of radiation are carcinogenic effects and physiological changes due to heat.

The environmental risks, such as contamination of land, air, water and natural resources also are of concern.

The number of nuclear power plants is projected to increase significantly by the year 2000. Protection of the public health and environment requires that the impact of radioactive releases into the environment be prudently examined as more power reactors and associated facilities are developed. Waste materials must be isolated from the biosphere until their radiation has decayed or been removed to levels of insignificance. No suitable technology for the ultimate disposal of these wastes has been developed. Until a solution is obtained interim waste management procedures must be monitored to assure waste containmnet.

EPA is working closely with State officials in Washington and Oregon to establish a workable emergency plan should there be an accident at a nuclear power plant. (Note: The table's reference to per capita radiation dose rate from nuclear power plants averages a fraction of a millirem per year. The table deals with the normal plant operation and does not take into consideration the possibility of an accident.)

EPA's role in radiation is primarily one of setting environmental ambient standards and monitoring.

RADIATION

SOURCE OF RADIATION EXPOSURE	PAST	CURRENT	NEAR-TERM (1-5 YR.)	LONG-TERM (5-50 YR.)
FALL OUT				
INDUSTRY				POTENTIAL FOR INCREASE

The chart at left shows the trends for radiation exposure. The total radiation dose to the population from ionizing radiation is increasing. This is due to a number of factors including increasing population, increasing variety of radiation applications, the expansion of existing applications, and changes in lifestyle resulting in increased exposure to certain types of sources.

RADIATION DOSE RATE FROM VARIOUS SOURCES*
SOURCE OF EXPOSURE IN MILLIREMS**

	1960	1970	2000
NATURAL	130.0	130.0	130.0
Occupational	0.75	0.8	0.9
Nuclear Power	0.0001	0.002	0.2
Fuel Reprocessing	— —	0.0008	0.2
AEC Activities Other Than Open-Air Weapons Testing	0.01	0.01	0.01
Open-Air Weapons Testing	13.0+	4.0	4.9
TV, Consumer Products, Air Travel	1.6	2.6	1.1
Diagnostic Radiology	72.0	72.0	72.0
	217.	209.	208.

*From Environmental Protection Agency (1972)
**The millirem is a unit of biological dosage related to the amount of energy deposited in tissue by various kinds of ionizing radiations.
+1963

The table to the right helps put the radiation exposure problem in perspective by comparison to what every individual receives from **natural** radiation exposure. As the table indicates, there is a significant, continuing per capita radiation dose rate from medical uses of ionizing radiations, and it is believed this rate will continue.

PESTICIDES

The decline of agricultural use of chlorinated hydrocarbon pesticides has necessitated a greater reliance upon organophosphates and carbamates for insect control. These chemicals degrade rather quickly, which is of long term importance to the environment. They are often extremely toxic and therefore more dangerous to apply. This has resulted in applicator certification and training, safe reentry practices, public education programs and accident surveillance.

In addition to participating in primary and ongoing National programs such as pesticide registration, certification of applicators, etc., EPA Region X is also currently involved in several other major pesticide-related issues.

Perhaps the most pressing of these at this time is the problem of disposing of used agricultural pesticide containers. The Region has recently awarded a contract to a private research concern to identify the extent of this problem.

Accidental herbicide damage to non-target crops is also an area of great concern. The Region has recently developed a pilot program designed to inform Chicano migrant workers about pesticide safety and use. The prime thrust of this effort, one of the first of its kind in the country, has been to provide educational programs for workers.

Monitoring and laboratory research in pesticides is at a high level in this Region. For several years, major facilities in Wenatchee and in Boise have been conducting epidemiological and laboratory studies on the effects of chronic pesticides on man and his environment.

The majority of pesticides in current and recent use can be divided into two general defined categories: "persistent" and "non-persistent". Persistent pesticides have chemical properties that are comparatively resistant to natural breakdown processes. This group includes most of the chlorinated hydrocarbon insecticides (DDT, dieldrin, etc.), and some of the mercury-containing fungicides. The non-persistent group consists of naturally derived as well as synthetic substances used to control pests. Pesticides of this type are usually either more easily degradable (such as organophosphates and carbamates), or relatively more selective as to target pest affected (such as pyrethrins, biological controls, etc.).

The accompanying chart illustrates the general status of these agriculturally important substances; several trends are apparent. Because of their residual properties, concentrations of persistent chemicals build-up in the systems of animals as one moves up the food chain. Little is known of the possible consequences that might result from long-term exposure to even very small amounts of these substances in our everyday existence, and the use of many of these persistent substances has recently undergone a marked decline. This is perhaps best illustrated in the case of DDT, which can now be used only under very special and necessary circumstances.

PESTICIDES

The chart below illustrates the trend in the concentrations of two categories of the principal types of pesticides in the environment. Because of the restrictions on the use of DDT, aldrin, dieldrin, etc., this classification is in a decreasing trend. The organo-phosphates (non-persistent), which have been substituted for the chlorinated hydrocarbons, are increasing in use. But because of their short life, their concentrations in the environment do not significantly increase.

GENERAL TYPE	AMOUNT USED	CONCENTRATION IN			
		AIR	WATER	SOIL	FOOD AND FEED
PERSISTENT PESTICIDES (CHLORINATED HYDROCARBONS, MERCURIALS, ETC.)					
NON-PERSISTENT PESTICIDES (ORGANOPHOSPHATES, CARBONATES, BIOLOGICAL, ETC.)	↑	→	→	→	→

SATISFACTORY CONDITION

AREAS OF CONCERN; MORE ACTION NEEDED

INCREASING

DECREASING

UNCHANGING

SOLID WASTE

Waste management presents a spectrum of problems, from extreme health and environmental hazard to the efficiency of collection operations. The diverse nature of the wastes (dead animals, mercury-rich industrial sludges, dredge spoils, abandoned cars, septic tank pumpings, residential solid waste, infectious hospital wastes, demolition debris, feedlot wastes, etc.) and their occurrence makes the challenge of waste management as complex as its sources.

Many disposal methods pollute the land, air or water. For example, burning dumps contribute to air pollution and some disposal sites, especially west of the Cascade mountains, are so situated that leachate and drainage waters aggravate the pollution of rivers and streams.

The long-term solution to solid waste management problems lies in the development of systems that will wisely control the quantity and characteristics of wastes. This can be done by efficient collection, creative recycling, recovering energy and other resources, and properly disposing of wastes that have no further use. In the near term, the development of environmentally acceptable methods of disposal on land is one of our objectives. Current programs and projects include:

State solid waste grant program. Region X provides annual grants to States to serve as the catalysts for the development and improvement of State solid waste programs. State Solid Waste Management Plans have been developed in all four States; hazardous waste inventories have been published in three States (only two other States have completed hazardous waste inventories); hazardous waste management programs have been established in two States; Oregon has hazardous waste regulations and Washington is preparing a State Resource Recovery Plan.

Disposal site information system. Region X developed a computerized disposal site information system in three States and the fourth State plans to join the system during the next fiscal year. The system provides a mechanism for storing, updating, and retrieving information on both active and inactive solid waste disposal sites. This system is now being set up in other EPA Regional Offices based on the Region X experience.

Status of hazardous waste management. Region X contracted with a consulting firm to develop a report "Status of Hazardous Waste Management in Region X." This project will tie the existing types of industrial processes in Region X to the specific types and quantities of hazardous waste they are likely to produce. The product of this study will be a report that will assist both EPA and the States of Region X in expanding and improving their hazardous waste programs.

Enforcement. There is no specific Federal solid waste regulator power, but Region X has been able to use air and water pollution laws and the 1899 Refuse Act to eliminate the envionmental insults from offensive solid waste practices.

Federal facilities. EPA is empowered to develop various guidelines for solid waste management practices which are mandatory for Federal agencies. In addition to land disposal guidelines developed earlier EPA is now publishing several guidelines that will require resource recovery at Federal facilities. Agencies will be required to recycle paper, use resource recovery plants, and use deposit type beverage containers.

SOLID WASTE

Resource Recovery; Landfills

Resource recovery systems are in operation only in Cowlitz County, Washington, indicated by a blue dot. Yellow dots indicate location of counties and municipalities committed to undertaking resource recovery activities. Black dots indicate counties and municipalities where resource recovery planning is in progress.

RESOURCE RECOVERY ACTIVITIES

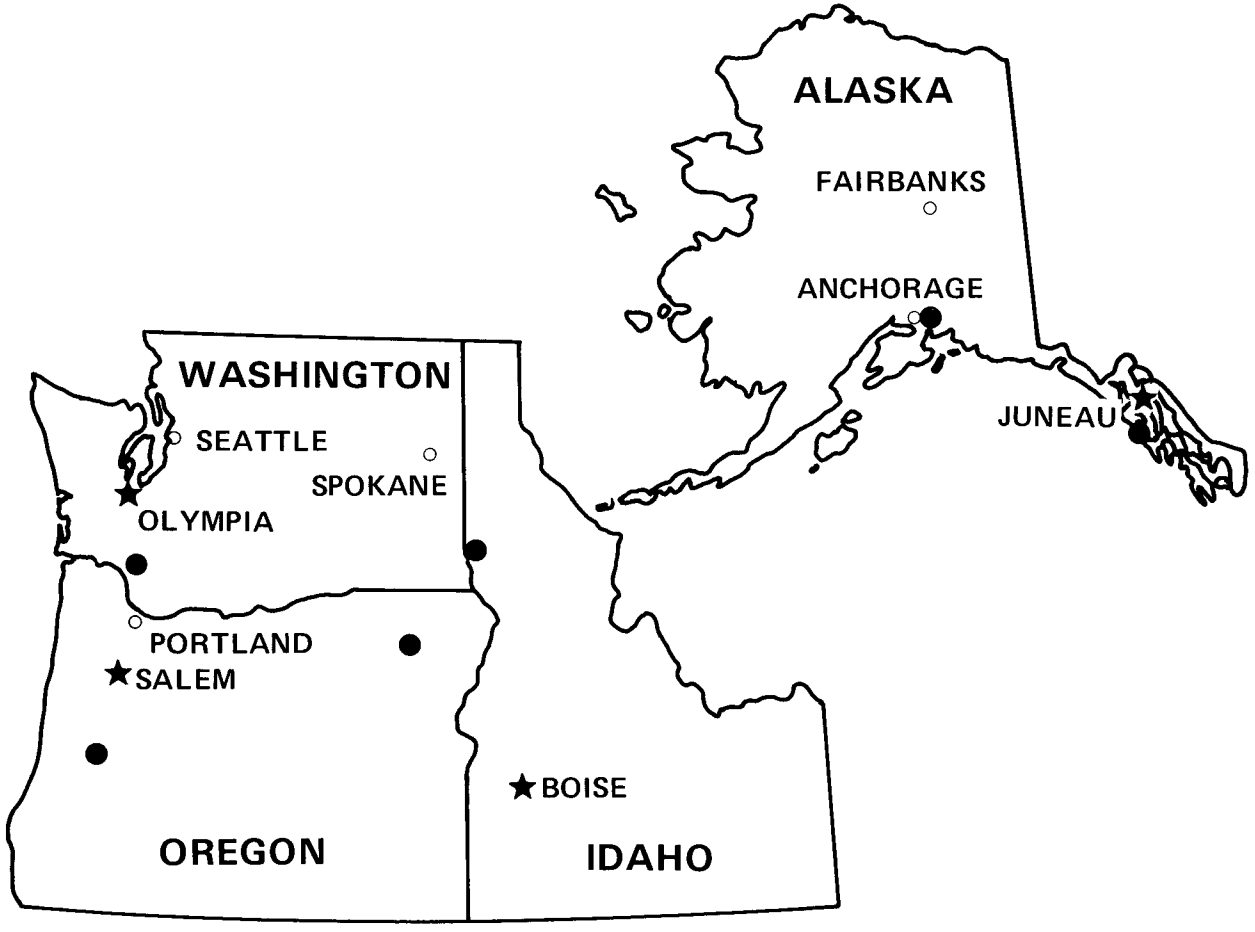
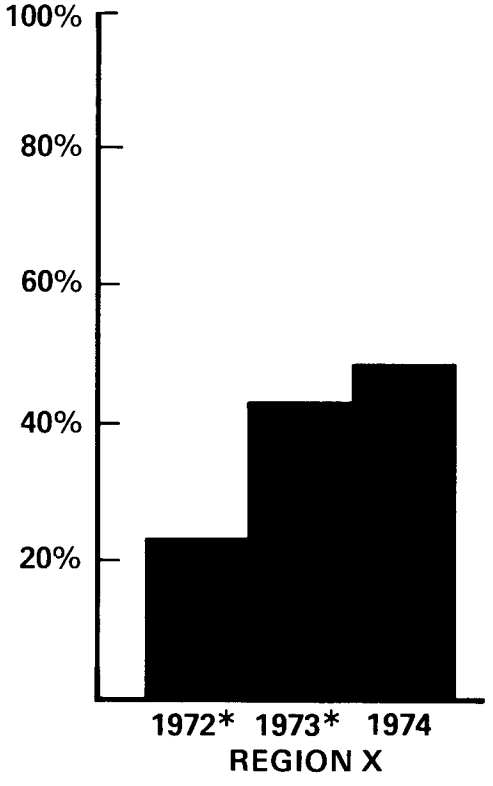


Chart indicates percentage of population served by disposal facilities meeting State requirements in Washington, Oregon, Idaho, and Alaska.

PERCENT OF POPULATION SERVED BY FACILITIES MEETING STATE REQUIREMENTS



*EXCLUDES ALASKA

NOISE

Sound, so vital a part of our existence, is growing to such disagreeable proportions within our environment today that it is a very real threat to health. The problem is not limited to occupation noise and hearing loss, but also includes community noise, which affects us not only physiologically, but psychologically (nervousness, tension, etc.) as well.

In view of these facts, Congress passed the Noise Control Act of 1972 which gives EPA authority to set standards on new products that are major sources of noise (cars, trucks, etc.) and existing noise sources (interstate railroads, trucks and aircraft) which need national uniformity of treatment.

However, the primary responsibility for control of noise rests with State and local governments. EPA provides technical assistance to States and communities that need help in writing legislation and establishing noise control enforcement programs.

Technical assistance is provided in areas such as:

- Developing model legislation
- Reviewing proposed legislation and regulations
- Training of State and local officials in writing laws and ordinances and in noise enforcement measurement techniques

Some examples include assistance to Oregon and Washington in developing noise regulations, assistance to the cities of Anchorage, Seattle and Portland in developing noise control ordinances, and the monitoring of noise levels from railroad locomotives, ferries and auto and motorcycle racetracks.

Future trends indicated on the facing page reflect expected developments due to EPA product-related activities and the effect of noise-control efforts in Oregon and Washington. Idaho and Alaska, the latter undergoing a population increase, presently lack noise control regulations.

NOISE

Areas and Trends

PRINCIPAL AREAS OF NOISE CONTROL

TYPE OF CONTROL	FEDERAL	STATE	LOCAL
INTERSTATE VEHICLE STANDARDS	■		
CONSTRUCTION NOISE STANDARDS (ORDINANCES)			
BUILDING CODES (INSULATION & LOCATION)			
AIRPORTS/AIRCRAFT	■	IMPLE-MENTATION NEEDED	IMPLE-MENTATION NEEDED

TRENDS IN NUMBERS OF PERSONS EXPOSED TO UNACCEPTABLE NOISE LEVELS

SOURCES OF NOISE	CURRENT
GROUND TRANSPORTATION	■
AIRPORTS/AIRCRAFT	■
CONSTRUCTION	↑
INDUSTRIAL	→

LEGEND

- ■ SATISFACTORY CONDITION
- □ AREAS OF CONCERN; MORE ACTION NEEDED
- ■ SERIOUS PROBLEM
- ↑ INCREASING
- ↓ DECREASING
- → UNCHANGING

SUMMARY

This first Environmental Profile of the four States comprising Region X of the U.S. Environmental Protection Agency is based on data compiled over a number of years. Both State and Federal sources of data were used.

This profile is intended to help the public and its elected and appointed officials at all levels of government better understand the state of the environment in the Northwest and Alaska.

One of the principal difficulties in developing an overview of environmental quality lies in selecting measures that do not overly simplify or mask complex and important underlying issues. Each of the topical areas treated in this document can be discussed in much greater detail.

Additional information is available from

Office of Public Affairs
U.S. Environmental Protection Agency
Region X, Mailstop 605
1200 Sixth Avenue
Seattle, Washington 98101

The chart opposite provides a synopsis of trends for certain environmental quality parameters for Region X as a whole.

SYNOPSIS OF ENV
INDICATOI

COMPONENT		INDICATO
WATER	RIVER MILES NOT MEETING STANDARDS	
	SEVERITY OF VIOLATION OF STANDARDS	
AIR	DAYS OF STANDARDS VIOLATIONS	
	SEVERITY OF POLLUTION IN DAYS IN WHICH STANDARDS VIOLATED	
RADIATION	NEAR-TERM EXPOSURE	
PESTICIDES	CONCENTRATION IN FOOD, WATER, AIR	
SOLID WASTE	PERCENT POPULATION SERVED BY SANITARY LAND-FILLS	
NOISE	NUMBER OF PERSONS EXPOSED TO UNACCEPT-ABLE NOISE LEVELS	

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SYNOPSIS OF ENVIRONMENTAL INDICATORS 1976

COMPONENT		INDICATOR	TREND
WATER	RIVER MILES NOT MEETING STANDARDS		IMPROVING
	SEVERITY OF VIOLATION OF STANDARDS		IMPROVING
AIR	DAYS OF STANDARDS VIOLATIONS		IMPROVING
	SEVERITY OF POLLUTION IN DAYS IN WHICH STANDARDS VIOLATED		IMPROVING
RADIATION	NEAR-TERM EXPOSURE		NO CHANGE
PESTICIDES	CONCENTRATION IN FOOD, WATER, AIR		IMPROVING
SOLID WASTE	PERCENT POPULATION SERVED BY SANITARY LAND-FILLS		IMPROVING
NOISE	NUMBER OF PERSONS EXPOSED TO UNACCEPT-ABLE NOISE LEVELS		WORSENING

LEGEND

- SATISFACTORY CONDITION
- AREAS OF CONCERN; MORE ACTION NEEDED
- SERIOUS PROBLEM

...l Agency
Regi...
230 S...
Chicago, Illinois 60604