

Attitudes of Denver Region Residents on Environmental Issues



**U.S.
Environmental
Protection
Agency**

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on Environmental Issues

A Report to the U. S. Environmental Protection Agency,
Region VIII

This report provides a summary of the views expressed by Denver region residents in response to a program of public information and involvement implemented by EPA in connection with the publication of the draft Denver Regional Environmental Impact Statement for Wastewater Facilities and the Clean Water Program.

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TABLE OF CONTENTS

	<u>Page</u>
Introduction and Highlights	1
Perceptions of Environmental Quality.	3
Identification of Environmental Problems.	4
Air Quality.	4
Water Quality.	4
Land Use	5
Other Environmental Issues	6
Attitudes Toward Environmental Action	7
General Approaches	7
Growth control	7
Environmental re-education of the public	9
Institutional change	10
Approaches to Specific Problems.	10
Air quality.	11
Water quality.	13
Urban land use planning.	15
Other environmental issues	17
EPA's Role in Regional and Local Clean Water Planning	18
The Need for EPA Funding	18
Objections to EPA Involvement.	18
Environmental Impact Assessment.	19
The Public Information/Involvement Program	20
Opportunity for citizen input.	20
Content and presentation of public information materials	20
Outreach of public information program	21

APPENDIX

INTRODUCTION AND HIGHLIGHTS

The Denver regional office of the United States Environmental Protection Agency has undertaken a program of public information and public participation in connection with the Agency's publication of an environmental impact statement (May 27, 1977) on Denver regional wastewater facilities projects for which federal grants are being sought.

This public participation program has included audio-visual presentations to 20 public and civic groups, distribution of a pamphlet describing the proposed projects and potential regional environmental effects, the publication of a supplement to the Rocky Mountain News (July 6) and the Denver Post (July 10) with content similar to the pamphlet, and a formal public hearing on the draft environmental impact statement (July 18 and 19).

In addition to supplying information to the public, EPA has sought public input in a variety of ways, including comment at the group meetings, statements at the public hearing, written comments on the EIS, responses to a short questionnaire supplied to those attending the 20 group meetings, and responses to a short questionnaire which formed part of the newspaper supplements. Reference to earlier opinion research in the Denver region was also made. The sources referred to in the opinion review are described in an appendix to this report.

This report sets forth the major findings of the public information/participation program. These findings focus on the views expressed as a result of EPA's public participation program. However, EPA's findings were generally consistent with the conclusions reported by other researchers. EPA's attitude ascertainment focused on environmental issues to a greater extent than most of the earlier surveys, and was as a result more fruitful in providing the Agency with specific suggestions as to appropriate actions it might take in exercising its responsibilities for environmental quality in the Denver region.

Some highlights of the findings:

1. Air quality is perceived as the Denver region's most serious environmental problem.
2. Air and water pollution, the loss of agricultural land, and waste of energy resources are generally attributed to regional growth and to a regional land use pattern characterized as "sprawl".
3. Significant institutional changes are thought necessary to correct these problems. Consolidation of local service districts, improvements in land use planning (strengthened zoning, state assumption of responsibility for agricultural land preservation, more caution in extension of public services), and greater regionalization of certain functions (including establishment of regional service districts and regional tax base sharing) are widely seen as promising approaches.
4. Federal funding from the Environmental Protection Agency is greatly needed for water quality improvement; however, there is disagreement on whether federal funds should be used to pay for wastewater system expansions to accommodate growth.
5. Public ignorance and apathy about environmental problems is an obstacle to the solution of those problems. The education of the public, and public involvement in environmental decisions, is seen as critical to the success of environmental improvement programs.
6. The environmental problems the Denver region faces are seen as interrelated, and solutions to those problems will require a degree of coordination among jurisdictions and levels of government beyond that now existing in the region.

PERCEPTIONS OF ENVIRONMENTAL QUALITY

A 1974 report on community attitudes found that about one-third of the population found that life in the Denver region was improving, another one-third found it holding steady, and the last third found it going downhill. This division of opinion on the quality of life reflects the mixture of personal experience in the population, the optimism and the pessimism of regional residents, their economic and personal circumstances as well as their attitudes about the metropolitan environment. What may seem to be contradictory results - for example, 12% of the respondents to the 1974 survey volunteered that clean air was one of the most rewarding aspects of living in Denver, while 13% found pollution to be one of the most frustrating aspects of living in Denver - simply show the extent to which the same circumstances can be viewed differently by different people.

EPA's request for public input on environmental management shows considerably greater unanimity. The majority of those who responded to EPA's request for public input indicated shared beliefs that the region's environmental problems are serious and that improvements in the way the region is handling those problems are much needed. Of the 245 persons who attended the audio-visual workshops presented by EPA, 76% believe that expenditures for environmental programs should be increased, either by shifting expenditures from other types of programs (55%) or by increasing taxes (21%).

The workshop attendees also expressed doubt that existing environmental programs in the region are up to the job. In six specific areas - air quality, water quality, urban land use, recreation and open space, agricultural land use and energy - existing programs were found wanting in five, and barely passed muster in the sixth (recreation and open space). Those same six areas pose very significant problems to the region in coming years in the opinion of a majority of those responding to the newspaper supplement.

The level of environmental concern evidenced by those responding to EPA's questionnaires probably is greater than that of the public as a whole. EPA's workshop respondents themselves think so - while 88% of them reported that they are very concerned or extremely concerned with environmental quality, they think the public as a whole is only moderately concerned.

Of those who made written personal comments to EPA on the state of the region's environment, most were not happy with the deteriorating conditions they see taking place. Some express this view with great succinctness:

Metro Denver must clean up its act!

while others responded at greater length:

As a transplanted easterner, I have seen in the Denver area the city blight which I left, growing. Native Denverites and long-time residents have expressed their dismay that water, air and even human behavior qualities have decreased alarmingly in recent years, and I concur.

Both EPA's research and investigation by other researchers identified certain nonenvironmental problems as being of serious concern. Rising housing costs, services to the elderly and crime were among these. But if we look at the variety and extent of environmental concerns expressed by the region's residents in all these studies, there appears to be a consensus that environmental problems, taken collectively, constitute the major impediment to the enjoyment of the good life in Denver.

IDENTIFICATION OF ENVIRONMENTAL PROBLEMS

Air Quality

Air quality is generally perceived as Denver's most severe environmental problem. Air and water pollution were indicated as the major regional problems in opinion surveys conducted by a Denver television station in the spring of 1973 and in the survey conducted in late 1973 for the United Bank of Denver. The latter survey found that 47% of the sampled population believe air quality to be a major problem facing the Denver region; younger respondents (25-34 years old) were more likely than other age groups to hold this view, while members of minority groups tended to find such problems as crime and the cost of living more severe than environmental problems. Nearly two-thirds of the respondents anticipated further deterioration in air quality over the succeeding five years.

The 1976 voter surveys also found air quality a major issue. The Denver Urban Observatory survey found 81% of the electorate believe air pollution a very serious (52%) or fairly serious (29%) problem; services for the elderly was the only other issue of as great concern. The Denver Metropolitan Study reported that a total of 57% of the voters find air pollution a very serious problem, which was the highest level of concern reported for any problem.

These opinions of a random sample of residents/voters are supported in EPA's workshop and newspaper questionnaires. Air quality was the topic on which workshop participants were most likely to express dissatisfaction with current environment programs, over 77% expressing that view. As far as the likely future effects of regional growth are concerned, citizens responding to the newspaper questionnaire found air quality a very significant growth impact, over 87% expressing that view, and about 40% found air quality the most important single impact of growth.

Water Quality

The public as a whole, as based on the random surveys of residents and voters, does not find water quality problems nearly as severe as air pollution. For example, sewage disposal was felt to be a very serious problem by only 18% of the respondents to the Denver Urban Observatory survey; water supply, on the other hand, was mentioned by 27% as a serious problem. In the Denver Metropolitan Study's survey (also 1976), the views reported were nearly parallel; on water supply, 35% felt there is a serious problem, while sewage disposal was recognized as a serious problem by 18% of the respondents.

In part this low level of problem recognition stems from the surveys' use of the narrow term "sewage disposal" rather than the broader term, "water quality".

However, even those closely involved in water quality planning have not found attainment of clean water objectives as a high priority need. The participants in DRCOG's water quality meetings in five basins generally split on this issue with about a third finding clean water an issue of medium importance; about 31% found it of high importance and 37% of low importance.

Of the six major areas of environmental concern covered in EPA's newspaper questionnaire, water quality was considered the most important impact of growth by about 21% of the respondents. Water quality ranked second on this measure, well below the 39% who felt air quality would be the most serious impact of growth.

Just over half of the workshop participants expressed strong dissatisfaction with water quality programs in the Denver region. However, some of the problems ranking lower in the scale of importance (energy and land use) prompted a higher proportion of responses of dissatisfaction with current programs. This means that while water quality may be seen as a serious problem by a significant portion of the public, other functional areas appear to the public to be less effectively addressed by current programs.

Land Use

Land use is the physical disposition of human activity. Land use decisions may relate to the type of use (residential, commercial, recreational, and so forth), the scale of the use (size and number of structures or operations) and how one use relates to other uses. In its most general definition, land use includes both open space and built space, and it includes transportation facilities as well as all the kinds of uses which would be destination points.

In the 1976 surveys of random samples of voters and residents, respondents were given a list of areas of government activity, and were asked to indicate which areas posed very serious problems; multiple answers were accepted. These "problem lists" included both planning and zoning with about one-fourth of the respondents selecting urban planning and one-fifth mentioning zoning. (These percentages cannot be added together because the respondents could select as many problem areas as they thought appropriate.)

The 1974 report by Bickert reports that a 1973 Junior League survey yielded similar results: about one-fifth of 111 local community leaders in the Denver region considered land use and zoning to be among the major problems facing the region.

EPA's survey responses broke land use into two categories, urban and agricultural. Dissatisfaction with urban land use programs in the region was higher (64%) than with agricultural (54%); both of these were higher than dissatisfaction with water quality programs (51%). Urban land use planning was considered by 20% of the newspaper questionnaire respondents to be the most important problem area faced by a growing Denver region, just slightly less than the 21% who found water quality the most important.

The EPA questionnaires did not list transportation separately from land use as a potential problem area. In the earlier opinion surveys, transportation had

been mentioned by a large majority of the respondents as an area posing serious problems: 58% in the 1973 Junior League surveys, over 60% in one of the 1976 surveys. (The other 1976 survey offered as separate items on the problem list parking and traffic, 36%; public transportation, 27%; and streets and roads, 23%.)

EPA's respondents, in their comments, frequently called attention to the relationship between transportation and environmental conditions. Most of the comments respondents made on the subject of transportation were in the context of air quality, with improvement of rapid transit and curtailment of auto use recurring recommendations. Many of the comments offered at the workshops and on their EPA questionnaires suggest that respondents considered the term "land use" to include transportation. For example:

We need better land use planning, particularly in relation to density, air quality and transportation.

The issue of agricultural land use was less stressed by EPA's respondents than the issue of urban land use, with less than 5% seeing the former as the most important problem facing the growing Denver region. Neither agricultural land nor open space in general had been included on the "problem lists" of the 1976 surveys.

Other Environmental Issues

The 1976 opinion surveys asked for respondents' evaluations of two other environmental problem areas, and the proportions identifying those problems as "serious" were about the same in the two surveys: solid waste disposal, 16% and 17%; recreational programs and parks, 9% and 17%. Animal control is not wholly a matter of environmental concern, although animal waste is one factor in nonpoint source water pollution. Interestingly, animal control was considered a serious problem by 74% of the respondents in one of the 1976 surveys.

The EPA questionnaire solicited views on two other specified environmental issues, energy and recreation/open space. Neither of these areas received many mentions as the most important problem facing the Denver region in the future, although over 80% felt energy to be a very significant problem. Only half thought recreation/open space very significant; that was the lowest percentage of the problem areas listed.

In soliciting comments, EPA also offered respondents the opportunity to indicate other areas of environmental concern which had not been specifically listed on the questionnaire. While most of the comments, both on the workshop questionnaire and on the newspaper questionnaire, focused on the issues already discussed, other issues were also identified. There were many comments on the need for improved public information and education on environmental problems. Research on environmental problems was also advocated, as well as training in environmental administration and management. Other environment problems mentioned by three or more respondents were: water runoff (including drainage and flood control); water supply, conservation and reuse; noise; solid waste; and wildlife protection.

ATTITUDES TOWARD ENVIRONMENTAL ACTION

Widespread agreement that Denver faces serious environmental problems and consensus as to what those problems are does not mean agreement on solutions to them, or even on the most promising approaches.

In this section, we shall consider first some of the more general recommendations for addressing Denver's environmental problems; we then will turn to approaches proposed for specific problems and attitudes on where responsibility for implementing change should lie.

General Approaches

Several recurring themes in the response to the regional EIS and the public information program could be characterized as "global"; that is, they do not relate to specific problems and they would require uncommon accord on objectives and significant coordination of implementation activity. Global approaches are of three main types: (1) growth control; (2) reform in human thinking and behavior with regard to the environment and (3) major institutional change.

Growth control. Growth control was the approach to regional environmental problems most frequently mentioned by EPA's respondents, with an overwhelming majority of affirmative comments and a much smaller number of negative comments.

At its most "global" range, the growth control approach was defined as birth control leading to zero population growth:

The only pollution problem is people pollution - start working on ways to motivate people to not have children.

On a regional level, this approach was typically described as establishing a maximum environmentally-sound population level for the front range and turning away excess in-migrants. One respondent suggested that distributing EPA's newspaper supplement in other regions should be considered as a way of discouraging new settlers; others argued for cessation of activities by public and private groups which encourage industry and people to relocate in Colorado.

While most of the suggestions concentrated on limiting new residents directly, some focused on halting the expansion of employment as the key to limiting future population. For example:

If limits were placed on the amount of new industry in the area, the regional growth problem would be solved. People don't come to an area where they can't find a job.

The range of opinion on growth management is broad. There are those who are altogether opposed to this approach and they offer reasons for their views based on law, equity and impracticability:

Growth is beyond regional control efforts due to legal implications.

It is unfair to long-time owners of land to forbid them profit by removing their land from the market.

We can't build a fence around Colorado; I cannot bar others from a state where I have lived for not quite a decade.

Others endorse a growth management policy which, however, falls short of stopping growth:

I don't want to see a no-growth policy. I would, however, like to see sensibly planned, limited growth at a rate where the highest environmental and life quality standards can be achieved.

The approach some advocate is to establish an environmental carrying capacity and accept no new residents beyond that level. A moratorium on growth was suggested by many respondents until a decision is made as to a desirable population level:

An attempt should be made to limit the growth of the area while problems are worked out. Then determine at what rate the area should grow if the public decides growth is required.

The best immediate policy is further study.

Finally, at the extreme, there are those who would like to reverse recent growth:

If the EPA would do its job, they would put a complete stop to any further urban growth...if EPA has the authority, they should require anybody who has moved into this area, or state, within the last 15 years to get out.

The means of stopping or controlling growth suggested by respondents were quite varied. Aside from miraculous intervention by EPA (the means suggested in the preceding comment) the proposals were practically oriented to facilities expansion policies and urban planning and zoning:

Limit the population increase via reducing housing permits, water and gas taps.

Hopefully state and local government will limit growth by restricting building permits, water taps, new highways, etc.

Limiting wastewater treatment facilities is one way to limit growth; this action must include limitation on sewer pipes laid.

The establishment of regional land use planning policies is a practical solution to some of the problems we face in the Denver metro area.

Proper land use planning and standardized regional controls would go a long way towards holding potential problems to a minimum.

But others see problems in using facilities policies to control growth - they think such an approach may be more costly to the public in the long run:

We can't decide to limit growth simply by not supplying treatment facilities that we know we're going to need anyhow.

I would not favor failing to build adequate wastewater facilities now while cost and time are on our side.

Of those responding to EPA's newspaper questionnaire, a majority (55%) accepted the concept of facilitating growth by supplying wastewater treatment facilities to outlying areas. But, 45% found that policy unacceptable. Judging from EPA's respondents - who, of course, were not a random sample - there is no regional consensus on this issue.

Environmental re-education of the public. Of those who commented on public attitudes toward the environment, many pointed out the efforts they themselves make to conserve water, limit automobile use and otherwise minimize their own impact on the environment; however, they tended to view others' attitudes and behavior as needing change.

I am interested in getting Americans to change their energy-wasting behavior.

There should be permanent and large (federal) funding for a permanent nationwide campaign for public education on these issues.

A great many respondents pointed to the need for educating the public on environmental issues and many complimented EPA on undertaking a public information program so extensive. A comparable level of concern for public involvement and awareness was found in DRCOG's water quality workshops, where participants overwhelmingly (84%) agreed that a lack of information and awareness on the public's part is a major difficulty in achieving the goals of the Clear Water Program.

However, many respondents seemed discouraged by public apathy and ignorance:

Regional government and mass transit certainly seem reasonable, if not imperative, but Denver residents seem to have little interest in either.

We have to educate and change attitudes to such an extent that I fear only a dictatorship could succeed in getting people to change certain wasteful and extravagant lifestyles.

Opinion appeared to be about evenly divided between those who held hope for change in the direction of more environmental concern and those who are very discouraged:

I don't see much hope for Denver or the state. This brochure has further convinced me to get out as soon as I can.

Institutional change. The endorsement of significant change in regional organization, but which would fall short of the establishment of a regional government, was the most typical view of EPA's respondents. The consolidation of service districts into a single metropolitan service district, or several such districts with separate functional responsibilities; the establishment of a regional authority for land use planning; and the establishment of regional tax base sharing were some of the intermediate steps recommended by the respondents. The extreme views were advocacy of regional government at one pole, and strenuous objection to regional government at the other:

We have long been aware that multiple jurisdictions are compounding our problems . . . people are fearful that giving up any aspect of local control means giving up all aspects. People need to know that regional government need not add to the complexity of government, but can simplify it.

The suggested "regional government" would continue to remove from the people local decision making and control. There are already too many bureaucrats.

And, as in the case of the environmental attitudes of the public, we find here too considerable doubt that change can be accomplished:

Metropolitan government is probably not a valid idea at this time.

What can be done about the shortsighted self-interested legislature?

Comprehensive planning is the answer, but it will not proceed due to the multi-layers of state, federal and local bureaucracies . . . {which} will engage in their typical contest and we all will suffer. You know this, so why offer the illusion that the citizen's voice will be heard?

Approaches to Specific Problems

EPA's workshop questionnaire asked respondents to consider both the distribution of expenditures among various types of environmental programs and the level of government - federal, state, regional or local - most appropriately responsible for action in each area. In general, the respondents

divided their hypothetical environmental budgets about equally among the six areas specified, although air quality received a slightly higher allocation than the other areas.

In two cases, there was general agreement as to which level of government should take responsibility: the federal government for energy and the state government for agricultural land use. In the other four areas, there was no consensus, as the following percentage distribution of responses shows:

<u>Area of Environmental Concern</u>	<u>Level of Government</u>			
	<u>Federal</u>	<u>State</u>	<u>Regional</u>	<u>Local</u>
Air Quality	25%	34%	37%	4%
Water Quality	21%	39%	34%	6%
Urban Land Use	1%	23%	37%	39%
Recreation/Open Space	3%	25%	39%	33%

In the cases of air and water quality, support is about evenly divided between those who see planning responsibility most appropriately lodged with the state and those who see it at the regional level; the federal government is a distant third, while the local role is considered negligible.

Urban land use is the only area in which local government gets the nod, but regional responsibility was advocated by almost as many respondents. The state ran a poor third with the federal role negligible. Recreation/open space was seen as a regional responsibility, with local government trailing by 6% and the state a distant third. Again, few respondents saw a strong federal role in this area.

Air quality. This problem, the most serious environmental concern of Denver region residents, was addressed by many respondents to EPA's workshop and newspaper questionnaires. Their suggestions were generally along the same lines as those raised by respondents to the 1974 Bickert survey, which identified four major obstacles to solving the problem of pollution: excessive traffic, uncooperative industry, uncooperative citizens and weak local government.

The range of views on how to achieve air quality improvement is narrower than with other issues, as there is general agreement that more effective measures are needed. EPA respondents, like those in the 1974 survey, were most likely to suggest solutions involving expansion of mass transit opportunities and stricter enforcement of existing pollution regulations.

I am in favor of cracking down hard to require municipalities to conform to rigid, high standards. . .

When asked whether there were other programs on which major expenditures from a hypothetical environmental budget should be made, the transit system led all other suggestions five to one. Extended and more frequent RTD service

was a typical recommendation. However, some respondents recognized the difficulty of providing rapid transit efficiently to a dispersed land use pattern. Reduction of sprawl (as distinct from growth) and encouragement of more concentrated development forms - more development at higher density in downtown Denver and clustered development elsewhere - were also suggested:

With better land use planning, we could use more high density clusters in planned unit developments and design away from the need for so much reliance on personal automobiles.

We are five miles from church, $3\frac{1}{2}$ miles from the nearest food store and eight miles from the post office that serves us. Next to Los Angeles, this is the most auto-dependent population we have lived among.

Many respondents are prepared to impose more rigorous air quality controls and would accept an expanded federal role in air quality maintenance:

Why couldn't an emissions test be required as part of the annual vehicle inspection system? Standards would be set according to the year of the car and those not passing would not get a sticker. Perhaps federal funds could be used to equip inspection stations with testing equipment.

Use of the automobile should be severely restricted by law. After the screaming public outrage, people would adjust and would find alternate, healthier methods of transportation. We sorely lack the necessary restrictions and leadership we need from the federal government to clean up the air.

Others deplore past inconsistency in the federal air quality record and apparent lack of commitment to making regulations stick:

What can be done about air pollution when federal congressmen and women continue to grant the auto industry extensions on emission standards?

The government is much too lax in enforcing clean air and water standards and too easily intimidated by the automotive industry and leading manufacturers.

One government agency tells us car emissions are creating excess ozone, while another tells us planes and hairspray are destroying ozone! One government agency tells us carbon dioxide is a problem, while everyone knows that vegetation converts carbon dioxide into oxygen.

And there is a minority who object to EPA's intervention in air quality matters:

I think that EPA's emission control program favors the wealthy who can afford new cars and is unjust.

The involvement of EPA is not needed beyond the setting of national policy.

In summary, the EPA respondents - not a random sample of the population - recommended a package of approaches to (1) increase opportunities for use of rapid transit systems, (2) take rapid transit service and reduced auto dependence into consideration in making land use decisions and (3) step up enforcement of clear air requirements, including vehicle emission controls.

Water Quality. Readers of the EIS, workshop participants and public hearing attendees seemed well aware that the projects proposed for EPA funding in the Denver region would include expenditures for accommodation of projected growth as well as for upgrading of effluent treatment. As discussed above, a slight majority accept a policy of accommodating growth through planned facility expansion. However, many did object to what they see as EPA subsidization of growth:

I am strongly against EPA spending 50% of this water money for growth! The money should be spent for improving water quality.

I would fully support an EPA decision that would limit wastewater treatment plant size in the metro area. I think we should concentrate on upgrading and maintaining the quality of what we already have instead. . .

Although EPA does not have power to stop growth, it has power to stop subsidizing growth. EPA should fund projects to meet water quality goals for existing populations. It should not subsidize future growth through construction grants for growth.

Others felt EPA's most promising approach would be a contingent approval of proposed projects:

I believe EPA should give conditional approval of the eight facilities plans and the overall clean water plan based on the solution of certain issues. That would direct governmental attention to those issues.

We expect Uncle Sam to pick up more and more of the tab. Perhaps Uncle ought to set some standards of reasonableness before he pays the bill.

Public subsidy should not go to those who don't control public impacts.

With regard to point source control, there appeared to be a consensus that enforcement of standards and federal expenditures to improve treatment facilities are sorely needed. Indeed, this opinion was nearly unanimous, the few dissidents simply giving more stress to the need for money and less stress to EPA as an enforcement agency.

A number of other water quality issues were addressed in respondents' comments, with a much less focused content. There appears to be a dawning recognition on the part of the public, as well as those directly involved in water quality planning, of the magnitude of the nonpoint source pollution problem. Among the nonpoint controls suggested by the respondents were:

- . animal waste controls, both for pets and for livestock
- . improved collection of storm water runoff through separated public sewer systems
- . street cleaning
- . banning detergents; banning use of toxic substances by agriculture
- . incentives to developers to incorporate runoff control into site planning. (For example, one respondent suggested that all new development be required to have on-site detention of storm water runoff for the two-year storm and that erosion control measures should be a precondition to the issuance of building permits.)

Considering the magnitude of water quality problems and the dispersed sources of those problems, some observers felt that surface water quality standards may be unrealistic:

It is gratifying to see a realization in the EIS that non-point sources of pollution rather than point sources are the real problem in attempting to achieve the 1983 goals of fishable and swimmable waters, and also that the cost of both point source and nonpoint source treatment would be much out of proportion to the minor improvements in water quality which could be expected from such treatment.

Must all streams be drinkable and fishable? Couldn't some be designated for agricultural use since they are so full of nutrients?

Too much concern over the ability of streams running through Denver to support high quality fishing, swimming, etc. Fishing can be done in the mountains and swimming in swimming pools. You are beating this issue to death.

Raising fish in the lower South Platte should not be one of our objectives, nor should we ever try to swim in it.

Those with reservations about surface water quality standards seemed to be in the majority among those EPA respondents who addressed this issue directly; but there were also many who were highly critical of current water quality and strongly advocated improvement:

I think water and wastewater and fishing and swimming water should be upgraded constantly.

A great many respondents made a connection between improvements in wastewater treatment processes and the water supply problems the region is facing. The recommendation of exploring water reuse was one of the most frequent comments. Use of recycled water was advocated for ground water recharge, for industrial processing, for irrigation of agricultural lands and for other uses. Structural changes, such as the development of a dual water system, were suggested; comments indicated that some regional residents are already implementing such a system on a household basis:

My family is doing everything possible to conserve. . .
Every drop of wash water is recycled for garden and lawn use,
to wash floors, cars, etc.

In summary, EPA's respondents generally support federal funding of clean water facilities, are open to a variety of measures to control nonpoint source pollution, advocate improvements in water conservation and increased reuse of treated wastewater; however, opinion is divided on EPA's role in specific local enforcement (especially of nonpoint source pollution) and in the funding of growth-related facilities.

Urban Land Use Planning. Of the six major areas of environmental concern described in the EPA questionnaires, this was the only area in which the most respondents saw primary responsibility as lying with local government. However, there was recognition that actions of the federal government significantly affect land use patterns, and respondents made specific mention of this fact, particularly with regard to waste treatment facilities which, in size and layout of collection systems, are a key influence on the pattern of growth which develops.

Furthermore, respondents recognized the "interrelatedness" of the areas of environmental concern:

The entire list of subjects is so interwoven that they must form part of an overall plan for the Denver metro area . . .

I'd like to know if there's a section in EPA that is involved in educating the public to the interconnectedness of these environmental issues.

Thus, a number of recommendations as to how to deal with specific air and water pollution problems included land development controls. Several of these have already been mentioned: clustering development to reduce automobile dependence, imposing development controls to minimize runoff, revitalizing downtown areas where public services already are available, and so forth:

EPA should offer incentives to avoid sprawl development.
It should provide penalties (such as stricter discharge standards) for low density development.

Control of sprawl was a recurring theme in the comments:

In no way should regional development be permitted to take the form of the careless uncontrolled growth of the last 10 years. Driving through southeast Denver is one of the most depressing experiences next to looking at the Climax Mine.

Many respondents seemed to equate sprawl with growth and are directing toward growth their negative feelings about sprawl; one respondent aware of this confusion offered the comment:

Urban growth and urban sprawl are two different things!

Some respondents attributed to government action and inaction the kind of sprawled growth Denver has experienced: laxity of zoning; failure to retain agricultural land use in its own designated zoning category; road, water and sewer system extensions; and other governmental decisions were cited as contributing to sprawl. Rezoning was a common suggestion as to how to control sprawl through legal means. Interestingly, most of the comments suggested a strong role for regional and state agencies in land use planning, even though the preponderance of responses to the question of where responsibility should lie was the local government. Sometimes individual respondents themselves were undecided or inconsistent with regard to where responsibility for planning should lie:

Local government should do wastewater facilities planning, with less control by federal and state agencies. Regional growth should be controlled by state land use laws if needed in some areas.

Others think the private sector can do a better job at land use planning than can government:

Banks and appraisers are more astute and knowledgeable of land use and the risks of land investment and development than the public and politicians . . . land use legislation is unnecessary and costly to the public.

But this was a minority view.

In summary, the relationship between land use and the environment is increasingly recognized. EPA's respondents tend to see growth and sprawl as

synonymous, but that is a reflection of their own observation in the Denver region. The lack of confidence in local and regional government's ability and commitment to control sprawl and its environmental consequences is one factor in the anti-growth views of many of the respondents.

Other Environmental Issues. The three other issues mentioned specifically in the EPA questionnaires were agricultural land use, energy conservation and development, and recreation/open space. These issues prompted far fewer responses than the issues discussed separately above.

Comments on energy and agricultural land use were quite close in tone and content; what concerns the respondents is that we not waste resources we may need in the future. Thus, minimizing needless automobile trips and arranging living and working places so as to reduce automobile dependence were seen by many as strategies for energy conservation. These strategies - and the energy conservation objective to which they would contribute - received general endorsement.

Agricultural land preservation was advocated, not for its open space value, but to avoid depletion of valuable food-producing resources. However, while energy resources were generally thought by EPA respondents to be in short supply, that evaluation did not apply to agricultural resources. Respondents advocating agricultural land preservation make their argument on the basis of potential future need, recognizing that the need for the resource is less than the present supply. But retention of options for future food production is what they advocate. A small minority argue against that position, stating bluntly that we have an agricultural surplus and that the land uses which replace agriculture in the course of urbanization create more economic opportunities and contribute more to regional income than agriculture does. Still, the clear majority of EPA's commentators were on the side of agricultural land preservation.

Finally, recreation/open space was not a subject prompting much comment. Those who did mention it agreed that recreational facilities should keep pace with population growth. A small number of respondents expressed concern at the location of open space within the Denver region, finding that open areas are too remote from their homes to be of value to them. No role for EPA in this area was suggested by any respondents.

One issue which did not appear on the issues list in the EPA questionnaires, but which was the focus of numerous comments, was water supply. As has been mentioned, consideration of the water shortage was one factor behind the widespread advocacy of recycling and reuse of wastewater. Another suggestion as to how EPA might act in accord with water supply considerations is to tie water conservation requirements to wastewater facilities grants.

Besides conservation, respondents offered few ideas as to how to alleviate the water shortage:

New technology may solve the energy problem, but I've yet to see a nuclear, wind or solar-powered water maker.

Additional diversions of water from the western slope are advocated by some respondents. A few respondents expressed the view that EPA is attempting to inhibit action to increase the region's water supply, and much of the expressed hostility to EPA's Denver activities appear to stem from perceptions that EPA is obstructing growth-accommodating actions which regional residents are thought to want.

The present water situation in Denver points to the fact that we are already behind. Now that anyone can stop a water project, just because they don't like it, we are in for serious problems. EPA should not be in the very time-consuming business of saying yes or no to plans for future preparedness.

EPA'S ROLE IN REGIONAL AND LOCAL CLEAN WATER PLANNING

The use of federal funds for clean water planning and facilities construction activates the requirement for environmental impact assessment under the provisions of the National Environmental Policy Act of 1969, including the preparation of an environmental impact statement, public review of that statement and the holding of a public hearing prior to EPA's taking action. Public review, in this case, was characterized by wider than typical participation due to EPA's having implemented an extensive public information/involvement program. The comments evoked, both by the EIS and the public information/involvement program, did not focus solely on the environmental impacts of actions described in the document, but reacted as well to the public information/participation program itself.

In this section, reactions of the public to EPA and its role in clean water planning are reviewed and citizens' views about the accuracy and usefulness of the environmental assessment and the means chosen to bring issues to the attention of the public are discussed.

The Need for EPA Funding

There is general recognition that the costs of providing needed clean water facilities are beyond the financial capabilities of local governments and service districts. Only a handful of those who commented to EPA recommended that the agency not fund proposed wastewater treatment projects, although some suggested that only the water quality improvement portions of projects be federally-funded (with the growth accommodation portions to be funded locally). The general view is that denial of funds due to projected environmental impacts or anticipated failure in achieving clean water objectives is short-sighted because water quality will continue to deteriorate in the absence of upgraded facilities.

Objections to EPA Involvement

Objections to EPA's actions in the region stem primarily from concern about the delays EPA is thought to cause in the implementation of needed programs. A number of respondents voiced the view that less study and more prompt action are needed:

Would EPA please reduce its legal staff and get some workers in to do the cleaning of our water.

A million hearings could be held and a billion questionnaires constructed, but what actions are ever taken in the present?

A handful of those who commented on the newspaper supplement were very negative about EPA, indicating profound lack of confidence in the agency:

I have done my own economic and environmental impact study of the problems and have identified significant point source of continuing harassment and ineptness in EPA.

The entire concept of EPA planning anything for me chills me.

We cannot trust EPA to dictate to us!

Others recommended that EPA simply provide the funds, and leave planning and implementation totally in local and regional hands. At least one person attributed his low confidence in EPA to disillusionment with the work of other federal agencies over time:

After watching the "clowns' dens" (Bureau of Land Management, Army Corps of Engineers, Republicans, Democrats, etc.) for over 40 years, I do not hold much hope for your ideas, but who knows?

Environmental Impact Assessment

Most of the public comments - both on the EIS and on the materials used to publicize the EIS (the pamphlet, the slide show and the newspaper supplement) - were affirmative:

May I say that this statement presented me with a detailed examination of the problems facing the Denver area recently unavailable from any other source.

There were a number of criticisms of the EIS both in terms of content and focus. These criticisms will be taken into account in the preparation of the final EIS and will not be reviewed here. The most common of these was that the EIS is a negative document, pointing out accurately the environmental problems the region faces without adequately identifying solutions. Still, simply asking the right questions was considered valuable:

Your draft summary is informative, yet negative. Keep asking the right questions!

Some individuals questioned the need for environmental impact assessment:

Environmental impact statements require ridiculous red tape and paperwork.

Spending years evaluating projects increases their costs in both dollars and social suffering.

The Public Information/Involvement Program

The overwhelming majority of comments on EPA's public information/participation program were affirmative. The program itself was one of the major subjects of comment by respondents. Their comments tended to focus on three areas: the opportunity for citizen input the program provided, the coverage and presentation of public information materials, and the distribution of those materials.

Opportunity for citizen input. The general view was appreciative. A good many respondents expressed their reaction with such terms as "thankful", "grateful", "thrilled", and, in one case, "bravo!". While some registered opposition to the use of tax dollars for the newspaper supplement, such negatives were definitely a minority, and a number of respondents indicated their pleasure at seeing tax dollars spent for the supplement:

Thanks for spending some of our tax dollars on this type of advertising.

Content and presentation of public information materials. Again, most of the respondents praised the materials (the newspaper supplement in particular). The majority felt the supplement a good approach to informing the public. Typical comments were "valuable", "informative", "excellent", "superb" and "effective".

There were, however, a significant number of reservations. While some readers found the material "thorough, concise and well written", others held opposing views:

The idea of the insert is excellent. However, you must remember most of us are not very educated to the problems. Write more simply and in plain, interesting language. The pamphlet is much too long and much too dull. Keep the pamphlets coming, though.

The supplement is a great idea; the material in it is bogged down by too much verbage and too much jargon.

On the other hand, some recognized that complicated issues demand some effort by citizens to educate themselves. The following pair of comments define the opinion range on this point:

I doubt if this supplement could be read by one of ten newspaper readers.

The issues were summarized clearly, sufficiently short for most people to read, I hope. If not, forget trying to make sense out of public decisions.

With regard to content, there were few charges of bias. Some said they felt EPA was "looking for answers to support your recommendations" which in fact

was a major reason for the public information program. The suspicion of bias ("I can't figure out what kind of information you expect to get") was more common than the specification of actual instances of bias, though several did characterize the materials as "one-sided" and "anti-growth". But the more common view was that the public information handouts were "comprehensive and fair".

Outreach of the public information program. Many respondents commented on the need for on-going public information efforts similar to what EPA has implemented in this case. Such efforts should, in the view of some, have a broader outreach than just the Denver Post and Rocky Mountain News:

Publications such as this should be more widely distributed. I found it only by chance. I think local and state officials should be required to solicit public input through the media with means such as the newspaper publication. Federal officials should also utilize it more.

EPA purpose, goals and funding decisions should be circulated to local newspapers instead of only the Denver Post and Rocky Mountain News. Articles of major importance tend to get lost in the latter papers.

In addition to wider circulation, respondents advocated more frequent opportunities to become informed and to make their views known.

The supplement was an excellent production to alert average citizens to issues and summarize alternatives. This should be done periodically as major decision points are reached, even though there is some cost to taxpayers.

Information such as this material should be presented to the public more frequently.

APPENDIX

DENVER CITIZEN ATTITUDES ON ENVIRONMENTAL ISSUES: SOURCES

REGIONAL ATTITUDE SURVEYS

A number of regional attitude surveys have been conducted in recent years and made available to EPA.

Bickert, Browne, Coddington & Associates completed a survey for the United Bank of Denver in 1974. Personal interviews were conducted with 517 randomly selected residents of the five county region between October 17 and November 9, 1973.

A September, 1976 report by the Denver Metropolitan Study, National Academy of Public Administration, presents findings of a survey of a random sample of 627 voters in Denver, Adams, Arapahoe and Jefferson Counties.

A 1976 report of the Denver Urban Observatory (Warren Weston et al.) presents findings of a survey of 1090 randomly selected voters in the region.

An April, 1976 report to the Denver Regional Council of Governments by The Research Group, Inc. presents an assessment of areawide water pollution management issues, attitudes of public officials and alternative approaches to water quality planning and management. The attitude data is based on personal interviews with 40-50 public officials in the region.

WORKSHOPS

EPA made presentations in a workshop format to about 20 public and civic organizations in the Denver region (a list of EPA workshops appears at the end of this appendix). The workshops, which took up a half hour to an hour of the scheduled meeting time of each group, consisted of a slide presentation of about 20 minutes with taped commentary, a brief presentation by an EPA representative of the issues involved in the region's future water quality decisions, and an opportunity for the participants both to make oral comments and to respond to a two-page questionnaire (the "workshop questionnaire"). Responses were tabulated from 245 workshop questionnaires.

In the fall of 1976, the Denver Regional Council of Governments (DRCOG) held a series of five public meetings on the Clean Water Program. Attendance totaled about 110 persons, of whom about 10% were elected and 30% appointed officials. A questionnaire was distributed eliciting views on water quality management issues; findings were summarized by DRCOG in an undated report titled "Results of Public Meetings in Five Basins".

NEWSPAPER SUPPLEMENT

The Denver Post (July 10) and the Rocky Mountain News (July 6) carried supplements in which the environmental issues discussed in the draft Environmental Impact Statement were identified, and the actions under consideration by EPA reviewed. The supplement included a five-question survey (the "newspaper questionnaire") to facilitate the reader's response to EPA's solicitation of public input. About 250 questionnaires were returned to EPA.

PUBLIC HEARING ON THE ENVIRONMENTAL IMPACT STATEMENT

A public hearing on the draft EIS was held on July 18 and 19, 1977 and was attended by about 200 persons. Written and oral testimony were presented to a hearing officer. Attendees received copies of EPA's workshop questionnaire, and their responses were tabulated with those of workshop participants.

DENVER EIS WORKSHOPS

Local Public Agencies

Boulder County Planning Commission	July 20
City of Broomfield Planning Office	July 21
City & County of Denver Planning Office	July 13
City & County of Denver Wastewater Control Division	July 14
Denver Water Board Planning & Water Resources Division	July 26
Jefferson County, Environmental Health	July 19
City of Lakewood Planning Division	July 13
South Adams Water & Sanitation District	July 26

Regional Agencies

DRCOG Citizen Advisory Committee	July 7
DRCOG Program Committee	July 6
DRCOG Regional Planning Advisory Committee	July 8
DRCOG Water Quality Management Task Force	July 20
DRCOG Water Resources Advisory Committee	July 15
Regional Transportation District	July 29

Other Public Agencies

State of Colorado, Governor's Policy Coordinating Committee, Staff Working Group	June 27
U.S. Bureau of Outdoor Recreation, Mid-continent Regional Office	July 21
U.S. Bureau of Reclamation, Lower Missouri Region	July 18

Civic Groups

Arvada Optimist Club	July 27
Brighton Rotary Club	July 25
Denver Metropolitan League of Women Voters, Natural Resources Committee	June 24

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