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EPA JOURNAL

New Directions

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Anne McGill Gorsuch, Administrator
Byron Nelson III, Director, Office of Public Affairs
Charles D. Pierce, Editor
Truman Temple, Associate Editor

EPA is charged by Congress to protect the Nation's land, air and water systems. Under a mandate of national environmental laws, the Agency strives to formulate and implement actions which lead to a compatible balance between human activities and the ability of natural systems to support and nurture life.

Articles

Departments

Front Cover: Sun and clouds over the Rocky Mountains, by Henry Lansford. (See p. 2)
Opposite. Waterfowl at Blackwater National Wildlife Refuge, Md., adjacent to the Chesapeake Bay, by Susan Bournique. (See p 30)

Photo credits

Belinda Rain, Rick Lamoreaux; Bill Taggart; Mike Lien, James Pickerell, Bruce McAllister, Tom Dolan, Md. Dept. of Natural Resources.

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The sun bursts through dark clouds over Richmond Harbor, Calif.

Gorsuch Commends State Air Contributions

Excerpts from the first major address by EPA Administrator Anne M. Gorsuch to the Air Pollution Control Association June 22 in Philadelphia.

"As Administrator of EPA, I have had the primary responsibility for revitalizing the Clean Air Act. The Clean Air Working Group, which I chair, has considered the various options available for legislative action and EPA staff has produced all major support documents. The Cabinet Council on Environment and Natural Resources, of which I am a member for this purpose, will consider the options developed and make our recommendations to the President.

"In preparing recommendations, EPA has studied proposals from State and local governments, labor, industry, environmentalists, academicians, consultants and interested citizens. In developing the

Administration's proposal it was also important to look where we have been in order to put together a blueprint for the 80's.

"Between 1940 and 1970—the year the Clean Air Act was first enacted by Congress—emissions of air pollutants increased by 40 percent. Further, little was known about the effects of air pollution—or even how to define clean air. Regulatory schemes, where they existed, were largely inconsistent from State to State.

"Today, as we head into the 1980's, the situation is dramatically different. The Clean Air Act and government's responses have been largely successful in improving the overall quality of our Nation's air. Illustratively, in the last decade we experienced a 50 percent reduction in particulate emissions and a 20 percent improvement in particulate air quality levels. In our major cities, we have substantially reduced sulfur dioxide and carbon monoxide.

"Perhaps of greater importance, our ability to deal with air pollution at both the State and Federal levels has grown. Most States and many cities have developed sophisticated laws and have established environmental control agencies. At the State and local level air staff has tripled since 1970, to a current level of approximately 9,000 people—or about 9 for every 1 employed by the Federal government in air pollution control. Likewise, the private sector can be given a good deal of credit in assisting in the achievement of our national air goals. Scientists and engineers—so many of you on hand today—have joined with concerned industrial leaders to produce more effective technology, the application of which has created a remarkable contrast in air quality from 1970 to 1980 in America's industrial centers.

"We can be proud of our progress under the Clean Air Act. However, a frank examination of its implementation reveals staggering complexities and conflicts—sagas of intolerable time delays and investment losses—and a sad legacy of distrust between industry, States and the Federal government.

"Our *business* at EPA is to protect and improve air quality. Yet we've found that, in trying to implement the current Clean Air Act, in many instances we've actually delayed the process of cleaning the air.

"Truthfully, it has reached a point where the combined effect of these problems has actually subverted the very intent of the Clean Air Act. In light of this, I believe the time has come to make some necessary mid-course corrections.

"If we do not move quickly, the American people will continue to suffer needlessly from the unnecessary delays fostered by the current law.

"Delays fuel inflation and—unfortunately—delay can be found in EPA's permitting process for new construction—an often complex, lengthy and duplicative exercise. Another example is the fact that case by case technology requirements mandate air pollution control decisions at the end of the capital investment planning spectrum rather than at the beginning. The uncertainty over requirements creates a great deal of indecision and markedly inhibits capital investment. The present process in many instances discourages the roll-over of older, polluting facilities and actually prevents or impedes the construction of new and cleaner plants. It's bad environmental policy and it is bad economics.

"Perhaps we should review just how the process works today.

"All new plants must, as a minimum, meet EPA's new source performance standards. But in clean-air areas, best available control technology (BACT) must be used. Unfortunately, BACT can only be defined on a case-by-case basis. If the planned construction is for a dirty air area, then it must meet lowest achievable emission rates (LAER).

"Even after these complex initial questions have been answered, getting the actual permits can mean a torturous trip through monitoring, atmospheric modelling, 'increment' or 'offset' bookkeeping, and other formidable obstacles. The fact that much of the procedure may have to be duplicated at State and Federal levels serves to slow down the whole process.

"But even *more* confusion is possible. For instance, consider the case where a PSD class II area suddenly shows nonattainment. In that case, if the State's Clean Air Plan has yet to be approved, the ultimate limitation appears: No new plant can be built at all.

"The permit process can add two to three years of lead time for a typical manufacturing plant. This is bad public policy. Time is money; and such delays are definitely harmful to our economic well-being. But of primary significance to our concerns, there is no incremental environmental benefit attendant to the delay, duplication and uncertainty. In many instances there is environmental degradation.

"These frustrations are demonstrated by a recent case in Blytheville, Ark. There, a local plant, which emitted pollutants, had closed, resulting in the unemployment of 400 people. Another firm wanted to buy part of the old plant and move it to a new location nearby, saving 172 of the 400 jobs.

"But the air in the new area wasn't classified, and PSD regulations prevented the move until the new company conducted a year's worth of air monitoring. All this despite the fact that the move would have decreased the level of existing emissions in the area.

"Another key provision of the act that creates confusion concerns EPA's current role in approving State clean air plans and their revisions. Instead of approaching the implementation of the Clean Air Act as partners, the States and EPA have often developed a hostile relationship, with EPA being perceived as a didactic second guesser and meddler.

"In the mid-1970's, for example, the State of Massachusetts recognized the need to amend emission limitations for 70 individual sources. But, under the current law, each change had to pass individually through the SIP revision process. As a result, EPA has for five years been reviewing these changes and in many cases merely duplicating the State's own work.

"In Nevada, a debate over indirect source regulations has prevented final approval of the State's Clean Air Plan for eight years—eight years of litigation, changing signals from Congress on indirect source control, and changing policies at EPA. As a result, vital land use issues and longstanding interstate disputes have gone unresolved.

"Even simple, non-controversial SIP revisions seem to consume unconscionable amounts of time. In the past few weeks, I have signed several of these that—if the public were only aware—they would surely ask such questions as: Is it rational to take 17 months for EPA to approve a change of attainment status for Cleveland County, Oklahoma? And what could be so complex about a power plant consent order obtained by the State of Michigan that it took EPA 17 months to ratify it? Again, if time delays translate into environmental quality enhancement, then there might be some justification. But not one less particle is removed from the air as a result of time lags.

"In all of these cases, EPA was merely duplicating actions already carried out by the States. In none of them did the agency encounter public opposition to the State actions.

"The time has come for EPA to cultivate a working partnership with State and local governments in an atmosphere of cooperation—not confrontation. In our major environmental laws, Congress clearly intended the States to have a major share of the responsibility for cleaning up our air, land and water. This intent goes hand-in-hand with President Reagan's desire to shift control of public programs to State and local governments wherever possible. I am delighted that the President has given me the opportunity to carry out his call for a new partnership at EPA, and to apply this concept in the real world. There is so much that can and should be done to refocus our efforts on results.

"In order to begin a new era of partnership with the States, our way of doing business at EPA will change. First, our staff at *all* levels—consonant with the direction of the new administration—will conduct business with State and local officials with the presumption of good faith and regularity on their part, and a pledge to openness on our part.

"It is discomforting that so many in Washington believe that concern for environmental quality rests solely on the banks of the Potomac. They fail to understand the fervent desire of people throughout the Nation to protect the environment of each city and town. In turn, local citizens elect their officials who equally share their concern. In the new administration, these officials will become important partners with all EPA staff.

"Armed with this new approach and determined to abandon adversary attitudes, EPA staff will return to the field with a set of management principles in keeping with the goals of the Reagan Administration.

"The first of these goals is consistency, blended with a deep respect for the internal decisionmaking process of the Agency. It is certainly inconsistent for EPA staff to send conflicting signals by premature disclosure of unsubstantiated scientific studies, improper lobbying of Congressmen or State Legislators at budget time, or flashy press releases that upstage our State and local partners. It is unacceptable for costly decisions at the local level to be based on premature information which EPA later alters.

"Secondly, in the Administration our aim is to ensure the principle of accountability. No one is to represent our Agency unless they know what they are talking about, can speak with authority, and are willing to keep their commitments. We are going to practice accountability in our own house as well by avoiding divisive turf-fighting, which delays program implementation.

Administrator Gorsuch addressing the Air Pollution Control Association.

"All decisions of the Agency must be based on sound scientific research and the best technical information available. This has become a priority management goal in my administration.

"Of particular importance is the quality and reliability of the EPA data on which rulemaking, monitoring, and enforcement are based. In this regard, I am fortunate to have as Deputy Administrator, Dr. John Hernandez, who is the first person with a technical background ever selected for one of the top positions at EPA. Dr. Hernandez will develop a peer-review for all of EPA's scientific studies to make certain that decisions which could cost taxpayers millions of dollars are based on sound research.

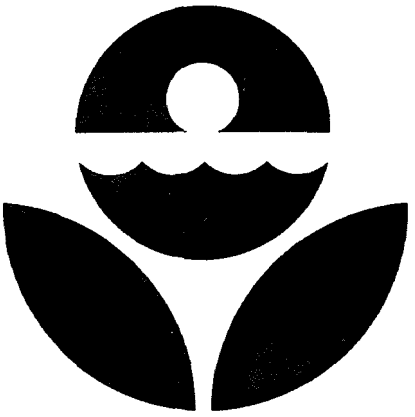
"Finally, I have called on all EPA employees to renew their pledge to be public servants. This means phone calls should be returned sooner. Letters will be *answered*, not just acknowledged; unnecessary paperwork is to be avoided, and every consideration will be given to cutting down on red-tape.

"In order to help our front-line managers apply these principles to their day-to-day operation, I have reorganized EPA in a manner which will consolidate all policy and budget analysis; centralize responsibility under one assistant administrator for all phases of an environmental program area; and unify the Agency's legal functions. Under this new plan, for instance, the new Assistant Administrator for Air will supervise all functions—rulemaking, monitoring, permitting, and the initiating of enforcement proceedings.

"And, at this point let me add, that EPA is committed to a strong enforcement doctrine. But success in enforcement will no longer be judged simply by counting beans—that is, by the number of suits or orders filed.

"Instead we will look for results—for real clean-up, and the best environmental bang for our buck.

"In closing, let me restate that EPA and the entire Reagan Administration are firmly committed to the goals of the Clean Air Act. As Administrator of EPA, I am pleased that this progress will take place in the context of another far-reaching Reagan initiative—regulatory reform. The new Administration has already moved dramatically forward in this field. By streamlining our regulations and procedures without sacrificing our environmental goals, our Agency can become a model of efficient and good government for the entire nation." □



EPA REORGANIZED

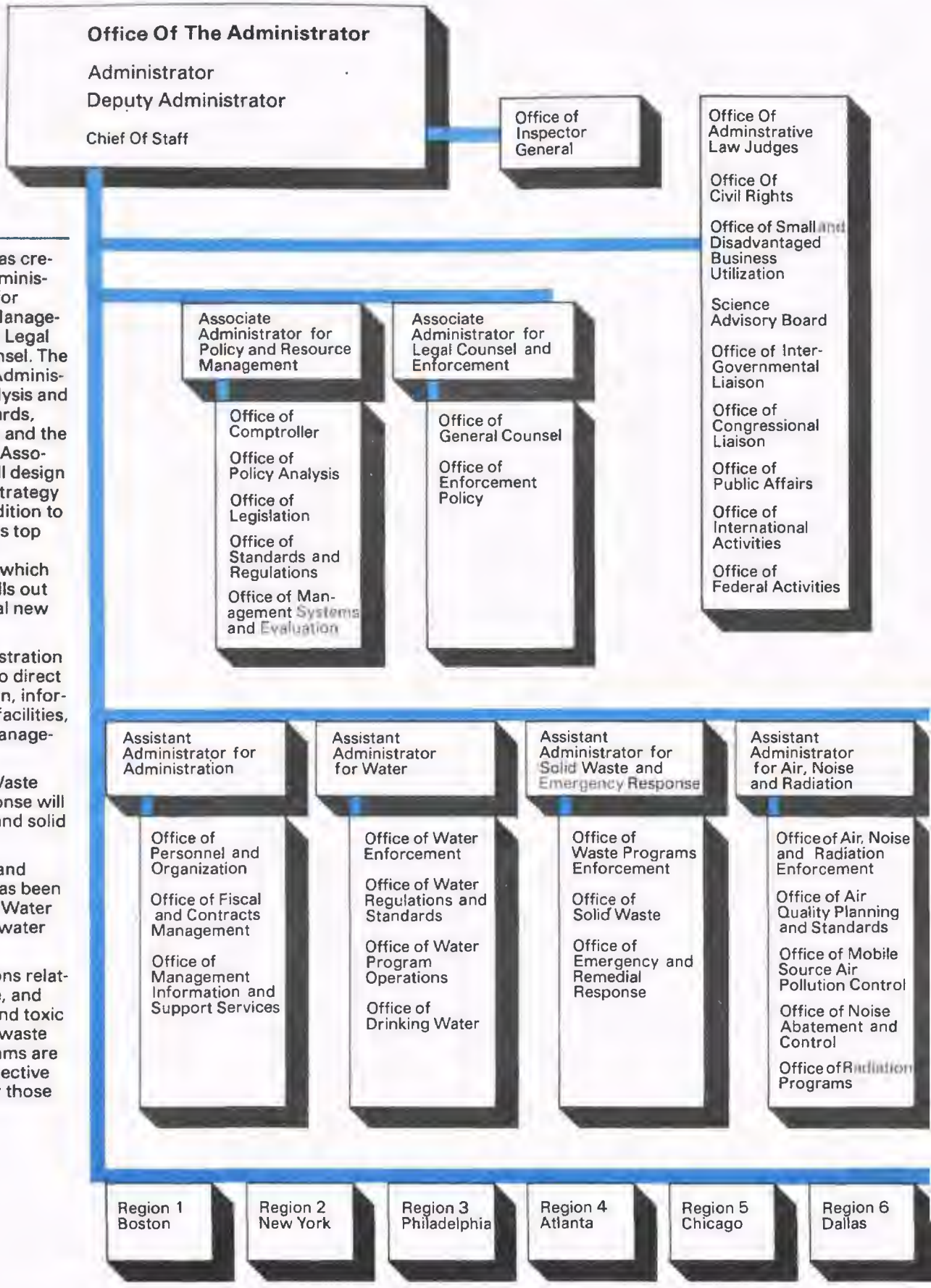
The EPA Administrator Anne M. Gorsuch has announced a restructuring of the Environmental Protection Agency designed to improve coordination in its policy and legal efforts and bring greater efficiency by integrating budget and policy units.

The Administrator emphasized that the changes will keep current programs intact with their personnel, and will not adversely affect any employee.

"With this realignment, I see the Agency, through stronger management, upgrading our ability to fulfill EPA's primary mission—protection of the Nation's environment," she said.

The plan designates six program areas headed by Assistant Administrators to be named by President Reagan. The areas are Water; Solid Waste and Emergency Response; Air, Noise and Radiation; Pesticides and Toxic Substances; Research and Development; and Administration.

U.S. Environmental Protection Agency



Mrs. Gorsuch also has created two Associate Administrator positions—one for Policy and Resource Management and the other for Legal and Enforcement Counsel. The new policy Associate Administrator will oversee analysis and development of standards, regulations, legislation and the budget. The new legal Associate Administrator will design and direct policy and strategy for enforcement in addition to serving as the Agency's top attorney.

The reorganization, which took effect July 1, spells out the following additional new functions:

- The Office of Administration has been established to direct personnel, organization, information data systems, facilities, fiscal and contracts management functions.
- The Office of Solid Waste and Emergency Response will direct the Superfund and solid waste programs.
- The Office of Water and Waste Management has been renamed the Office of Water and is responsible for water programs.
- Enforcement functions relating to water; air, noise, and radiation; pesticides and toxic substances; and solid waste and Superfund programs are established in the respective offices responsible for those programs.

• The Office of Planning and Management and the Office of Enforcement have been abolished.

• Regional offices will be directed at a later date to restructure their organization to reflect the Headquarters realignments to the maximum extent practicable.

The Administrator declared that with these changes she viewed EPA as "moving toward an organization with strong and consistent internal management control and an enhanced ability to define results-oriented environmental goals.

"It will be an organization that will work for us as we do our part in helping this Administration achieve its objective of a balanced budget. Our budgetary processes will be intertwined with our policy formulations; our attention will be directed to cross-media impacts; our focus on policy, standards, and regulations will be improved; and we, as an Agency, will be better able to use our allotted dollars for maximum mileage. Our people and facilities management functions and other administrative services will receive the increased attention they warrant," she added.

Under the plan, the functions of the former Office of Planning and Management and the Office of Enforcement have been moved into the new offices that have been created.

With operating divisions moving intact from the former Office of Enforcement into the various program offices and serving under the new Assistant Administrators, enforcement policy coordination will be the responsibility of the Associate Administrator for Legal and Enforcement Counsel.

"We are moving toward separation of the administrative aspects of enforcement from the legal implementation of enforcement decisions," the Administrator declared. She said that putting operating enforcement offices into the environmental program areas will foster more efficient operation with responsibility for success in these areas clearly in the hands of the individual Assistant Administrators.

"We will also have a new and better way of doing business in which we better articulate and assign accountability for environmental program results," she declared. "The integration of our enforcement and media program functions will clarify this accountability for specific program accomplishments, enhance the consistency and quality of enforcement actions, and simplify our interrelationships with State and local governments."

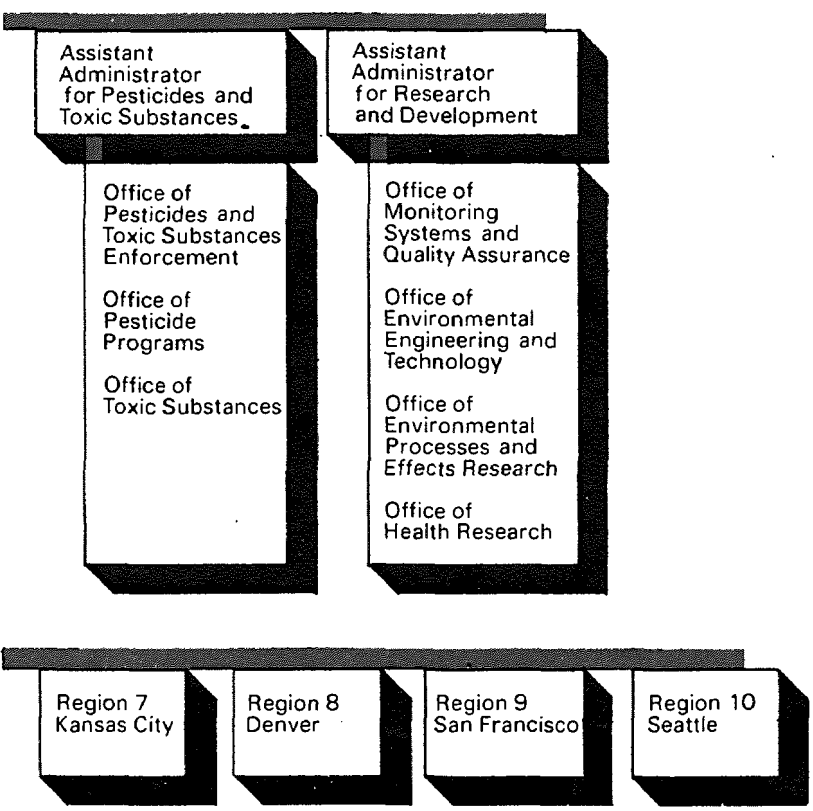
Included in the new Office of Policy and Resource Management will be the Offices of the Comptroller, Policy Analysis, Standards and Regulations, Legislation, and Management Systems and Evaluation. Previously these had been, with somewhat different titles, under the now-abolished Office of Planning and Management.

The new Office of Legal Counsel and Enforcement will include the Offices of the General Counsel and Enforcement Policy.

The Agency reorganization also combined the Offices of Press Services and Public Awareness into a new Office of Public Affairs.

The Administrator added that consolidation of the solid waste management and Superfund functions would permit specific attention to these programs consistent with their relative importance.

"All in all, the reorganization will increase our functional effectiveness, reflect the priorities of our time, and facilitate our ability to respond to the needs of this country," she said. □



Kathleen M. Bennett

Dr. John Horton

Dr. John A. Todhunter

Frank A. Shepherd

Key EPA Officials

Three Assistant Administrators have been nominated by President Reagan. John Horton, a New Jersey engineer and businessman, was nominated to be EPA Assistant Administrator for Administration. John A. Todhunter was nominated to be Assistant Administrator for Pesticides and Toxic Substances, and Kathleen M. Bennett to be Assistant Administrator for Air, Noise and Radiation. The Presidential nominations are subject to Senate confirmation.

Drawing from the ranks of management in public and private sectors, Administrator Gorsuch made appointments to fill new posts created as part of her reorganization plan and also named some special assistants.

The appointees, the Administrator declared, "will provide EPA with a wealth of practical experience in environmental, governmental, and private sector affairs. They all bring impressive credentials to their jobs. Their counsel, advice, and support will be most valuable to me in carrying out EPA's mission of environmental protection."

Named to fill the new position of Associate Administrator for Legal Counsel and Enforcement was Frank A. Shepherd, a lawyer from Miami. Nolan E. Clark, a Washington attorney, was appointed to the new post of Associate Administrator for Policy and Resource Management.

Other appointments by Mrs. Gorsuch were:

William A. Sullivan Jr., a lawyer and consultant to steel communities, as Deputy Associate Administrator for Legal Counsel and Enforcement;

Robert M. Perry, a Houston corporate trial attorney, as EPA General Counsel;

John E. Daniel, a lawyer and Washington representative, as Chief of Staff for the Administrator;

Thornton W. Field, an attorney and regulatory affairs specialist from Denver, as the Administrator's special assistant for hazardous wastes;

Kitty Adams, environmental consultant and former U.S. Senate legislative assistant as special assistant for regulatory reform;

Joseph A. Cannon, a Washington attorney, as special assistant for regulatory reform.

Christopher J. Capper as a Special Assistant and for an interim period to be EPA Acting Assistant Administrator for Solid Waste and Emergency Response.

Paul Milbauer as Special Assistant to the Administrator, serving as advisor on a range of subjects with emphasis on toxic substances.

Byron Nelson III, former journalist and Senatorial press secretary, as Director, Office of Public Affairs.

Dr. Horton, 56, began his career 30 years ago in pollution control work. He received a doctorate in sanitary engineering from Massachusetts Institute of Technology in 1951. Previously he attended the U.S. Naval Academy 1945-47 and MIT, where he received a Bachelor of Science degree in 1949. During the past decade he has been a businessman and director of 16 companies including several involved in manufacture and distribution of mechanical sweeping equipment and industrial supply. He has served with the American Public Works Association, the New Jersey Clean Air Council, New Jersey State Planning Task Force, and the State Council for the Future. He is the author of more than a score of technical articles, holds a dozen patents on his inventions, and is a member of several research and engineering honor societies.

Dr. Todhunter, 31, has been Chairman of the Biochemistry Program and Assistant Professor of Biology at The Catholic University of America in Washington, D.C. since 1978. Previously he was a Fellow in the Department of Biochemistry, Roche Institute of Molecular Biology, Hoffman LaRoche, Inc., in Nutley, N.J. 1976-78. He served as a teaching assistant, research assistant, and Regent's Fellow at the University of California at Santa Barbara 1974-76. Earlier he was an instructor at California State University in Los Angeles. Dr. Todhunter received a B.S. degree from the University of California in 1971, an M.S. from California State University in 1973 and a Ph.D. from the University of California in 1976. He is a native of Cali, Colombia, South America.

Since 1977 Mrs. Bennett, 33, has served as Federal Affairs Representative for the Crown Zellerbach Corp. She has been a member of the American Paper Institute Air Quality Committee and Chairman of the Air Quality Subcommittee on Prevention of Significant Deterioration.

Nolan E. Clark

William A. Sullivan Jr.

Robert M. Perry

John E. Daniel

She has served since 1978 as faculty member of the environmental law series of Executive Enterprises, Inc., lecturing on the Clean Air Act and on Congressional environmental policymaking. She was Director of Legislative Affairs for the American Paper Institute 1974-77. She served as Washington representative of Public Affairs Analysts, Inc. 1972-74, and as Administrative Assistant, Office of Congressional Affairs, General Services Administration, 1971-72. Previously she was Executive Secretary, Office of the Governor, Chicago, Ill. 1970-71 and Executive Secretary to the Director, Citizens to Elect Senator Ralph Tyler Smith, in 1970.

She received an A.B. degree from Manhattanville College, Purchase, N.Y. in 1970. She is married, has three children, and lives in Alexandria, Va.

In his new post, Shepherd, 35, will design and direct policy and strategy for enforcement activities as well as serve as EPA's chief legal officer. He previously was with the law firm of Kimbrell, Hamann, Jennings, Womack, Carlson, and Kniskern of Miami which he joined in 1972 and where he has been a partner for the past four years, representing many large corporations. A graduate of the University of Michigan law school in 1972, Shepherd holds a master's degree in government from the University of Massachusetts and a bachelor's degree from the University of Florida. He is a native of West Palm Beach, Fla.

Clark, 40, will oversee analysis and development of standards, regulations, legislation and the budget. He has been associated with the Washington, D.C. law firm of Kirkland and Ellis since 1969 and has been a partner there the past eight years, specializing chiefly in government regulation of business. He is a native of Montpelier, Idaho, and received his law degree from Stanford University School of Law in 1968. He was awarded the Order of the Coif for finishing in the top 10 percent of the graduating class. He graduated magna cum laude in 1962 from Harvard College with a degree in economics.

Sullivan, 41, previously was with FSI, Inc., a consulting firm he organized in 1979 that guided redevelopment of industrial property after Jones & Laughlin and Youngstown Sheet and Tube Companies closed their steel mills in the Mahoning Valley in Ohio in 1977. He also has been president of Western Reserve Economic Development Agency and the Steel Communities Coalition, both of which were involved in solving problems in a steel-dominated economy. Sullivan received a law degree in 1964 from Columbia University and a bachelor's degree from Trinity College in Hartford, Conn., in 1961.

Perry, 46, has been a trial lawyer since 1969 with Exxon Corp. in Houston. He was an attorney with the Justice Department's Land and Natural Resources Division 1964-69. He received a law degree in 1961 from Georgetown University and a bachelor's degree in 1959 from St. Mary's University in San Antonio, Texas, his hometown.

Staff Aides

Daniel, 37, will direct the activities of the Administrator's immediate staff. He has represented Johns-Manville Corp. before a number of regulatory agencies since March 1980. He was director of environmental and legislative affairs for the American Paper Institute 1976-80. He headed the Ohio Attorney General's environmental law section 1975-76, and served as attorney for Alabama's Environmental Health Administration 1970-73. He helped develop enforcement programs for the former National Air Pollution Control Administration in 1968-70. He received a law degree in 1968 from the University of Alabama and a bachelor's degree in 1965 from that university's College of Engineering, where he studied sanitary engineering and structural design.

Field, 32, has been regulatory affairs coordinator and analyst with Adolph Coors Co. of Golden, Colo., since 1979. Previously he was a law clerk with AMAX Environmental Services, Inc. of Denver, the environmental arm of AMAX, Inc., an international mineral development corporation. He received a law degree from the University of Colorado School of Law in 1979, and a bachelor of arts degree from that university in 1976, graduating magna cum laude.

Kitty Adams, 31, served as legislative assistant to Sen. James L. Buckley 1973-77 and helped draft amendments to the Resource Conservation and Recovery Act and the Clean Air Act. She was associated in an environmental capacity with the Business Roundtable 1977-78, and has been a private environmental consultant since 1978. She graduated from Sweetbriar College in 1972.

Cannon, 31, was on the staff of the 1980 Reagan-Bush Committee in 1980 during the Presidential campaign. He graduated cum laude from the J. Reuben Clark Law School at Brigham Young University in 1977 where he was an editor of the school's law review. He subsequently was with the Washington, D.C. office of the Houston, Texas, law firm of Andrews, Kurth, Campbell & Jones.

Nelson will serve as Director of the newly created Office of Public Affairs. The Offices of Press Services and Public Awareness were combined into this single entity as part of the Administrator's reorganization plan. Nelson, 32, served as press secretary for Senator Frank Murkowski of Alaska earlier in 1981, for Senator Roger Jepsen of Iowa 1979-80, and for Representative Frank Evans of Colorado 1975-77. He was general manager for Binns and Associates of Dallas, political consultants, in 1978. He was a journalist with the Los Angeles Times in 1973 and the Denver Post 1973-75. Nelson received a Bachelor's degree in journalism in 1970 from East Texas State University and later pursued graduate studies in journalism at Southern Illinois University.

Continued to page 12

Science and EPA

Interview with Deputy Administrator John W. Hernandez

Q As the first scientist to serve as EPA's Deputy Administrator, will you tell us what you consider to be the Agency's main scientific goals?

A I think basing our decisions on careful, precise evidence has to be our principal goal. We must have high-quality science. This is absolutely imperative. We can't have an organization founded on less than the best technical investigations possible.

Q What is your understanding of the phrase "peer review" and how useful do you think this procedure could be for EPA?

Internal—and occasionally—external peer review by qualified scientists is an absolute must for all of EPA's publications. This is not true just of our Research and Development documents that people have come to recognize as belonging to EPA, but it's also true of all of the many other kinds of publications that are issued. Unless scientific deductions really survive rigorous testing and interpretation, we're going to make the mistake of taking data out of context, away from their qualifying assumptions,and putting them in EPA publications that are read by many, many people. Our reputation suffers when we print information that people cannot trust because it proves to be false in isolation. Peer review to a good scientist means, "I'm going to ask my fellow researchers to look over what I've done and to give me their advice on the validity of its hypothesis, method, and interpretation." If we stick to this approach in EPA, basing our policy decisions and statements on sound research, we're going to have an effective organization, because the basic talent is there.

Q In your view how serious is the problem caused by acid rain?

A I dislike the term, which has come to bear the connotation of dead fish and dying lakes.

Well, I think that it is unfortunate that the phrase has come to mean so many things to people in the Northeastern part of the United States. The general hypothesis is that precipitation that falls across the country has a lowered pH because of a measurable increase in the hydronium ion due to chemical transformation of sulphur dioxide and nitrogen oxides into sulphates and nitrates respectively. This phenomenon has always occurred in nature to some degree; it can be observed on remote islands where no industrialization exists but is accelerated over industrial regions of the globe. There has been an observable increase in modern nations since the advent of the Industrial Revolution. A great deal of uncertainty exists, however, over U.S. monitoring data used to indicate that the pH trend has markedly accelerated within the last thirty years. We can make few judgments on the information we have gathered in a relatively short period. Congress has suggested that we extend our investigation over a ten-year term, seeking the areas where this change seems to be happening and assessing its impact on the environment. Are streams and lakes in igneous bedrock areas really becoming more acidic? Has something changed noticeably from, say, 1950 to the current time? Or has something happened that has been a part of man's progress since the nineteenth century, with the phenomenon gradually increasing over time? What kinds of repairs are possible? What, in fact, is happening? What else in man's management of the earth have we done that may also have altered the quality of our small lakes and the quality of the runoff from our watersheds? We have to look at all of those questions and evaluate our current activities in the context of what are the possible solutions to the problem. Are they causes starting from long distances away? If they are from long distances, can we pinpoint them? What in fact are they? I don't think we're anywhere near the point of solving many of these questions at this time.

Q Do you believe EPA should place more emphasis on having research work done by private companies or other government agencies in order to conserve funds?

A I don't think the policy on outside consultants is simply a matter of conserving funds. EPA has a talented in-house staff that for years has had far more to do than its capacity to accomplish. EPA has high-quality scientists, but the workload has been so heavy it's been necessary for us to go outside to obtain additional technical support. We're also going to need outside help in the future. I'm not sure whether it'll be to any more or less extent than we have in the past. I think that we will do two things in the future. One of them is that we'll go back to asking the university community to do research work for us. I come from that part of our scientific society and understand that universities must have relatively long contracts with more general kinds of guidelines than we give our traditional consultants and contractors. Universities don't function on three-month, six-month, and nine-month periods. They need a year, a year and a half, two years, because

the availability of graduate students in a particular area fluctuates. They need to have a little wider leeway in what they agree to do for us. The other thing I think that we'll go to is closer coordination with other government agencies. There's been a lot of redundancy in the Federal Government with respect to funding for research and monitoring. I think that we should make every effort to coordinate our projects with those of the U.S. Geological Survey, with NOAA, and with the Department of Energy, so that we don't do things that the Bureau of Standards may in fact already be doing, or that State agencies already have under control. We need to do them in concert to pool our common resources. So I think that we will be seeing a greater level of coordination with State and other Federal agencies.

Q Do you think that any laboratories or field stations should be consolidated or cut back?

A One of the disturbing aspects of a cursory review of our various laboratories is that many of them seem to serve duplicative functions. For example, an office in R&D or in the programs will have groups working on a project at many different labs. This doesn't seem to be the most efficient way of getting the job done, but it will require more than a cursory review to determine how and when we might wish to consolidate or cut back. How we will do so will most certainly be a function of the quality of research being produced, the relationship of that research to an improved understanding of what constitutes a sound scientific and technical foundation for regulation and guidance to the States, and budgetary prioritization.

Q How can EPA meet the demands for *swift* high-quality scientific findings while funds for R&D in the agency are being trimmed?

A One of the key words in your question is *swift* scientific information. And that's almost one of those double negatives. I'm thinking of the words of Representative George Brown of California who wrote an article in *Science* recently that discussed EPA's research endeavors. One of the things that he said, referring to our problems, was that EPA has to recognize that "If you want it bad, you get it bad." The idea that we have to produce something very quickly to support a regulation, or a court case, has led us in the past to making some bad decisions, very temporary decisions that had to be overruled and changed because the directions changed when additional information became available. I'd rather see us go along at a much slower pace in terms of new regulations and new initiatives until we have the scientific foundation for a proposed action well in hand and well understood. When we undertake an activity, we should be fully confident that its scientific basis is going to withstand challenge. When we are questioned, and we always will be, we must be able to reply, "Here's the basic information, here's what we acted upon, and we made rational decisions on that basis." I hope we don't fall back into the days of the "quick fix" again, and I would expect to tell Congress before the fact, if we could not anticipate being able to provide a scientifically and technically rational basis for regulation.

Q As a former State official, do you think the States can do more than they are doing now in environmental protection?

A I think a lot of things have changed over the last 15 years. When I worked for a State agency, we had only one or two State laws that were designed to guide and help us manage and enforce our activities. We had virtually no regulations at all. We had one on milk, a couple on food, and had one on swimming pools. The rest of it was done, by and large, by "jaw-boning," by providing the technical assistance the communities needed, by giving industry our best advice on how they should solve a problem that they were faced with. I think it worked well considering the resources available. Since that time, most States have adopted a full complement of environmental laws and regulations, much as we have here at the Federal level. They've built up their staffs. Most States can, want to, and will manage their own environmental protection programs. The Federal government has supported the States quite well over the last four to six years with grants for key programs. Today, State money is much harder to come by when the total State responsibility is considered. Some States, because of a relative reduction in taxes, have had to reexamine what they are doing in the environmental arena. However, I believe that by and large, with the technical advice that EPA will continue to provide, all States can and will wish to enter a new era of responsibility in carrying on current environmental programs for which we now have so much momentum.

Q In view of your long service on national committees on drinking water, do you have any opinion on whether EPA is taking adequate steps to ensure the protection of our public water supplies?

A You know I've had a long-time concern that our drinking water program is placing such an emphasis on a relatively narrow band of problems with drinking water that the American confidence in our public water supply could be damaged. In fact, that has happened. Not necessarily through the actions of EPA, but through the actions of people who have questioned whether or not, on the basis of what we've done, whether our public water supplies are safe. I believe our municipal water supplies are the best in the world. We have by far the best water-supply systems in the world. When the Safe Drinking Water act was passed, one of my concerns was whether it would become the mechanism, the driving force for sending many Americans to drink bottled water. Sure enough, that has in fact happened, and we see people not using public water supplies that are indeed safe, and instead drinking bottled water that for a long time was itself not well regulated.

Q What do you see as EPA's greatest research strength?

A I really believe that EPA has a wide variety of strengths. I think in my testimony at the Senate Confirmation I claimed that EPA scientists were among the best in their fields. And I don't think this excellence is restricted to one narrow area. We have a great deal of outstanding scientific leadership.

Kitty Adams

Thornton W. Field

Joseph A. Cannon

Byron Nelson III

Regional

Mrs. Gorsuch also named Steven J. Durham as Regional Administrator of EPA's six-state Region 8, headquartered in Denver, and Charles R. Jeter as Regional Administrator for the eight-state Region 4, headquartered in Atlanta.

Durham, 33, was elected to the Colorado House of Representatives in 1974 and re-elected in 1976 and 1978. Last fall he was elected to the Colorado Senate with 74 percent of the vote. He has served on a number of committees during his legislative career including Health, Environment, Welfare and Institutions; Business Affairs and Labor; Finance; Appropriations, and Game, Fish and Parks. He was voted Outstanding Freshman Legislator in 1975 by his colleagues.

During the 1981 session he was Vice Chairman of the Senate Appropriations Committee and served on the Joint Budget Committee. He was a prime sponsor of a bill requiring legislative approval of State agency rules and regulations and of tax reductions bills in 1979 and 1980.

The Administrator said that Durham's "background in business and his broad understanding of issues relevant to Colorado and the West—gleaned from six years of service in the Colorado General Assembly—will bring to EPA determination to involve State and local governments as full partners in meeting our environmental goals in the Rocky Mountain West."

A graduate of the University of Northern Colorado, Durham is a resident of Colorado Springs where he has managed the Seven Falls Company, operators of a scenic tourist attraction there.

Jeter, 39, joins EPA after 14 years with the South Carolina Department of Health and Environmental Control. He has managed a staff of 170 and a budget exceeding $3 million for the past five years as Director of the State's water pollution control program. Last year he also served as national president of the Association of State and Interstate Water Pollution Control Administrators.

"Charles Jeter is a solid professional whose expertise and dealings at various levels of government will contribute greatly to our efforts to create a full federal-state partnership in attacking pollution problems," Mrs. Gorsuch said.

"His experience runs a gamut of environmental concerns, and his knowledge of regional environmental issues gives him an exceptional background for his new position," she added.

Rebecca W. Hanmer, Region 4's Regional Administrator since 1980, will return to Washington, D.C. to serve on an EPA Task Force on Regional Reorganization.

As head of the water pollution control effort in South Carolina, Jeter was involved in the engineering design of treatment systems, managing the National Pollutant Discharge Elimination System permit program —a responsibility delegated to the state—compliance and enforcement activities, municipal grants administration, water quality management planning, environmental impact studies, and many other aspects of pollution control.

Jeter joined the State environmental agency as a chemist in 1967. In 1972, he was named Director of the Industrial and Agricultural Wastewater Division.

He graduated from Clemson University in 1963 with a B.S. degree in chemistry and biological sciences, and earned his Master's degree in 1971 in environmental engineering. From 1965 to 1967, he served as a lieutenant in the U.S. Army Medical Service Corps.

Capper, 41, has been with the government of Montgomery County, Md., a suburb of Washington, D.C., for the past decade, first in the Office of the Director of the Department of Environmental Protection and more recently in that Department's Division of Solid Waste. He has specialized in disposal techniques, including landfill design and operation, and incineration of municipal solid waste, as well as hazardous waste. "His experience in handling these at the State and local levels," Mrs. Gorsuch declared, "will be invaluable to EPA as the Agency begins to work more closely with the States to implement effective solid and hazardous waste programs."

Capper graduated from Manhattan College, N.Y., in 1962 with a B.S. degree in chemical engineering and is presently pursuing a Master's degree in Government-Public Policy at Georgetown University. He is a member of the Society of American Value Engineers, the American Management Association, and the American Public Works Association.

Milbauer, 28, has been since 1980 a partner in Campaign Systems Management, a public policy/political research and consulting firm which provides polling and research services to Republican candidates for U.S. Senate, U.S. Congress and State legislatures. The firm also conducts independent research for trade associations, businesses and private non-political public policy organizations.

From 1978 to 1980, Milbauer was an associate with the New York City law firm of Dewey, Ballantine, Bushby, Palmer & Wood. He worked in the firm's Corporate Department.

Milbauer received his law degree from the Harvard Law School in 1978. While there, he was awarded second prize in the Nathan Burkan Memorial Competition for papers in the field of copyright law. He was also managing editor of *The Harvard Journal of Law and Public Policy* during his final year. Milbauer received a B.A. degree in political science and history from Columbia University in 1975, graduating cumma cum laude.

Denver Wins its River Back

Techniques for transforming an urban river from an ugly and malodorous disgrace into a striking and dynamic asset are described in a new publication about the South Platte River as it flows through Denver, Colo.

Entitled 'Returning the Platte to the People,' the book offers insights into how these procedures might be applied to help rescue other urban rivers around the country.

Written by Joe Shoemaker with Leonard A. Stevens, the volume reports on the role played by a citizen committee in making the river a major attraction.

With an initial seed grant from Denver's Mayor William H. McNichols, Jr., and the city council, the Platte River Development Committee, headed by Shoemaker, first began work in 1974.

Three pilot projects were initiated which restored more than two miles of the river. After this demonstration the committee and its affiliate, the Greenway Foundation, built the initial $2 million seed money into more than $8 million by earning contributions from the Federal and State governments and from thousands of private donors.

The improvements include numerous riverfront parks, picnic areas, boating facilities, nature exhibits, playgrounds, and outdoor gathering areas. All are linked by a 10-mile waterfront hike and bike trail and a boating course extending through the city.

In describing a raft trip through Denver on the river, Shoemaker reports in the following excerpt from the book about the progress in river rehabilitation:

Paddlers whip through the white water course in downtown Denver.

"Early one lovely Monday morning in June, I left home in southeast Denver to join several colleagues on an all day river trip in a ten-man inflatable raft. We were certain to get wet because we were headed for a great deal of white water, so I wore a pair of old sneakers, blue jean shorts and a tennis shirt. The Colorado Rockies, dominated by Long's Peak, were beautiful in the morning sun as I drove to my destination. The mountains were brilliantly white, for their snowpack was deep this year. The rising temperatures of late spring were causing a heavy snowmelt, which increased the white water we would navigate during the day. It was to be an exciting, exhilarating trip. I was anxious to get onto the river.

"The drive to our launching site took less than fifteen minutes, and I never left the city of Denver. Indeed, during the entire day's boat ride we would remain in the city limits. We would be floating down the South Platte River, embarking where it enters Denver from the south and following it through the city to where it flows off to the north at Franklin Street. Our voyage would cover some ten miles.

"I stopped at Frontier Park, near the city line, and crossed the street to the river where several of my fellow sailors had already inflated our raft. One of them, Joan Mason, came forward to greet me.

"'Have you seen this?' she asked, holding out a page clipped from the *Rocky Mountain News*. The piece, titled 'The Greening of the Platte,' had been published while I was out of town, so I hadn't read it. The author was Peter Warren, a

professor at the University of Denver and member of Mayor William McNichol's Commission on the Arts.

"'Much has been said about what cannot be done about Denver,' the long article began. 'Yet we have in our backyard one of the most remarkable examples of urban revitalization in the United States. In a brief space of five years, the Platte Greenway Project has transformed a blighted, degraded river—little more than an open sewer—into a major amenity for Denver.'

"Joan and I were delighted with the piece. Both of us had worked hard at the transformation of the Platte, she as a member of the project's three-person staff, I as Chairman of a nine-member Citizens' Committee appointed by Mayor McNichols in 1974 to bring about the river's improvement. Also, knowledge of our experience could be valuable to dozens of communities where disreputable, repulsive rivers could be restored and returned to the people.

"Now, I only had time to scan Warren's piece, but I noticed that he had caught onto how our unusual Committee had worked: '. . . A fascinating prototype . . . operating outside the creaky city bureaucracy, without mandated powers or limits, the Committee has been able to act quickly and effectively.'

"At the raft I was greeted by Kenneth R. Wright whose 'water-oriented' engineering firm, Wright-McLaughlin, was responsible for designing and supervising construction of a great many of the projects that were turning the blighted Platte into an amenity. Ken was wearing a fabulous straw hat he had brought back from a business trip to southeast Asia. Behind him, on his knees fitting out the raft, was William C. Taggart, a young Wright-McLaughlin engineer. He had been the firm's man most directly responsible for its work on the river.

"'Three thousand c.f.s., ten times the normal flow,' said Ken, referring in engineering parlance to the cubic feet of water per second rushing down the Platte. I stepped out to the bank and saw a churning torrent of water.

"'Hope you're ready for a good ride, Joe,' said Bill, who would serve as our helmsman while the rest of us paddled to his commands. 'I've checked a number of the roughest spots. We'll have a few portages, but I think we'll do okay.'

"As I greeted the other passengers who were assembling, I was suddenly distracted by a great white truck lumbering toward us.

"'Hey, hey, what do we have here?' I asked Ken, well aware that both of us knew the answer.

"The vehicle was a large tank truck from Denver's Waste Water Management Division, and I assumed it was full of some potent liquid. Moreover, I guessed that the driver was hoping to discharge his load into the South Platte, probably at our launching site. The truck, as white as it was, made me see pure red. For a half decade we'd enjoyed a lot of success shutting off discharges of pollutants into our river, but still there were those who kept on seeing the Platte as Denver's receptacle for anything they wanted out of sight, out of mind. Most disturbing, this philosophy was still prevalent where it should be found least of all, in certain city agencies. It was lodged there like the instincts of an animal: 'If you have something to dump, down to the river it goes!'

"The truck driver sensed my perturbation as I hailed him to stop. 'What's in there?' I asked.

Joe Shoemaker

"'Water and stuff, vacuum pumped from the city's storm sewers,' he explained. The man's discomfort became most evident when I asked where the load was going, but instead of answering he drove on down the street. He stopped in about fifty yards and studied us in his rearview mirror.

"'He's waiting for our departure,' said Ken.

"'Sure and then into the river it'll go,' I added. 'Let's talk to him.'

"The driver made a U-turn and crept back toward the city. I stopped him again and asked where his load was going. He admitted the river was in his mind.

"'It's just water,' he said. 'Won't hurt anything.'

"'Then why don't you dump it right there in Frontier Park?' I said. 'The grass can always use water.'

"'Well, no, it would smell,' the driver replied, then demanded to know who I was.

"'You'll find out when you hear about this from your boss,' I replied. The driver shoved his truck into gear, and it soon disappeared, as I memorized the number stenciled on its side.

"Shaking my head I returned to our group of boaters. Our last three passengers had arrived. One was Pat McClearn, a new member of our Committee who is with the University of Colorado at Denver and well known for her work with 'Trees for Today and Tomorrow,' an organization that distributes and plants trees throughout Denver. Finally, there were the other two of our three-member staff, Rick Lamoreaux and Robert Searns. Both young men are intensely committed to the improvement of the Platte.

"As we were about to board the raft, I looked around to see Denver's Manager of Safety, Elvin Caldwell, arrive in his car. He had officially closed the river through the city to boating because of the high water, but had issued a special permit for our trip, which was organized to check the impact of the currents on our various projects. Caldwell's visit pleased me, for it seemed symbolic of an ongoing change in the feelings of politicians for the river. Not long ago many had treated the Platte virtually as abandoned territory.

"In a few minutes the seven of us had bid Caldwell goodbye and were bobbing on the turbulent water in the large, bulbous raft. Everything that could

suffer from getting wet, from wallets to cameras, had been stowed in waterproof pouches lashed to the raft's inflated crossmembers. Bill Taggart was on the stern giving instructions to the rest of us sitting sidesaddle on the gunwales. He quickly defined the orders he would be calling out—to paddle, backpaddle or hold—and immediately began issuing the commands that kept our craft on the course Bill was plotting from his intimate knowledge of the river.

"'I can't think of anything I'd rather be doing,' I told Ken Wright sitting in front of me. 'I really and truly love this!'

"Ken knew me well enough to realize this expression was not vacuous sentimentality. He knew that my work on the Platte had become one of life's most rewarding experiences. That included the frequent opportunity to get into the river itself where I could sense the differences we were making in behalf of one of our most precious but long neglected resources. Furthermore, a raft trip was a lot of fun.

"In short order the vigorous cold currents were carrying us past the first of a series of parks that our Committee had built or improved on the river. Before the day's ride was over, we would see nearly a dozen and a half parks with various sizes and facilities that were dressing up the river in scarves of green growth. This park that we were passing was Pasquinel's Landing, named after James Michener's pioneer character, Jacques Pasquinel. In the best seller, *Centennial,* the colorful Pasquinel opened the west paddling his birch bark canoe up the South Platte. Here on a three-acre site beside the river, we built a park with playground equipment, picnic tables, parking area and a boat launching ramp. Our new park complements an older city park across the river, Ruby Hill Park, laid out around a high bluff which offers one of the best panoramas of Denver, the mile-high city graced with magnificent views.

"Just beyond Pasquinel's Landing I caught a glimpse of an early morning jogger, a middle-aged man heading north from the start of our Greenway trail. If the fellow's stamina and energy allowed him to run the entire length of the trail, it would take him some ten miles through the city. He would always be a few feet from the river, as the trail parallels or

dump shows the way ... campaign to ... Platte

bridges the waterway. When it was completed, the trail became a major attraction for bringing Denverites back to their river. It returned the rich citizen to mingle with the poor, the old with the young, walking, running, biking, roller skating, or riding in baby carriages or wheelchairs.

"'First portage!' announced Taggart. 'We'll pull off to the right and land down here by the Florida Avenue dam.'

"Following his orders the starboard passengers backpaddled slightly. We were approaching the first of ten check dams constructed to make the river flow more evenly, as well as to back up water so it could be more easily pumped out for various purposes. In due time we will have all these dams 'notched' so boat chutes can be installed allowing vessels such as ours to ride down over the obstructions. But the dam at Florida Avenue had no chute, and with the high water we dared not go over it.

"As we maneuvered the raft slowly toward the shore, we passed another of our parks, Overland Pond. It was once a fenced off quarry barred to the public except where used as a golf driving range. We reshaped the quarry into two ponds and opened up most of the area. However, a part of the six acres was left for a native wildlife habitat. Also, we planted the area with indigenous vegetation which requires no irrigation, in contrast to expensive bluegrass landscaping.

"Going down the Platte, Overland Pond offers the first of several examples of an unusual approach our Committee took to finding park sites. Instead of always turning to pretty places, we looked to some of the most unsightly areas along the river. Halfway through our trip we would pass Frog Hollow, a small green park, popular for picnics, and resting place for bikers and joggers, and a launching point for small boats. Not long ago Frog Hollow was a typical highway maintenance yard piled with salt and sand, encumbered with metal buildings and filled with trucks and road equipment. Working with our State Highway Department, we had the maintenance yard moved to a more practical site, and Frog Hollow replaced the mess.

"Just after our portage the raft took us under the first of six wooden bridges that we built across the Platte, leading the Greenway trail from one bank to the other. These structures, with walkways eight feet wide, were designed literally to ride out floods instead of standing and fighting until battered to pieces. The bridges, which were prefabricated in Oregon, were set in sections on concrete piers so they could actually float off in a flood. If this happens, however, the wayward sections are tethered by cables to the riverbank piers, and they simply float on the floodwaters a few yards downstream. When the flood recedes, the sections can be towed back to the piers and re-set. These innovative bridges, which now cost $90,000 apiece, were perfect for our continuing effort to make flood resistant our projects in reply to an obvious question from our potential donors: With the Platte's history of flooding, aren't your projects just going to wash away? The answer: No!

"When we stepped ashore during the portage, wet bottoms and backs attested to the white water we had already encountered. Now after passing under the wooden bridge, we were soon in more rough water, and then we came to the best white water experience so far. We purposely rode down over a selected spot on the second check dam. It was a low structure, but at the bottom, the hydraulic backwash turned the raft into a rambunctious sea serpent.

"With the roiling water astern, the sailing smoothed out as we passed another of our parks, Habitat. This park is another example of a bane turned to a boon. Once a city dump, the six-acre park is now one of the longest sections of green on the Denver stretch of river. In time Habitat Park will contribute to our schoolchildren's knowledge of the natural world, for it is slated to become an outdoor classroom amidst a number of restored natural environments.

School children at Habitat Park view a pair of Canada geese.

"As we sailed by Habitat Park, all on board were distracted by a great flurry in the trees on the opposite bank. Our presence had agitated a large nest of blue herons, and the great, beautiful birds were taking to the air. None among us was more excited than Pat McClearn or Joan Mason. Both nature lovers are thrilled that our efforts have made the South Platte amenable to wildlife, as well as people. Downstream we would see more signs of improved fauna—which, in one case, is a mixed blessing. We planted hundreds of trees to dress up the Platte, and the increasing numbers of beaver have been most appreciative. We know this from all the trees—our trees—they have gnawed down.

"Late in the morning, Bill Taggart ordered a turn to port into Weir Gulch Marina where we were greeted by an excited, curious group of Chicano and Vietnamese children racing around the grassy banks. Weir Gulch is one of three small streams entering the Platte in Denver, flowing down from the front range of mountains to the west of the city. When the Committee first came along, Weir, like the other gulches, was an odoriferous disaster—old auto tires, garbage, dead Christmas trees, decrepit refrigerators, on and on. The little mountain stream was destined to flow through a concrete canyon, planned for flood control. We got rid of that plan and instead made a small green park, equally capable of sustaining a flood. The neighborhood citizens, many of whom helped us build the park, now enjoy a grassy pocket around the creek, instead of an ugly, cement closure.

"On one side of the pretty little park a marvelous mural was painted on the wall of an otherwise drab industrial building. The colorful painting—125 feet long, 20 feet high—became one of six on the sides of buildings overlooking our waterways.

Local artists did the pictures using paint, an average of $3,000 worth per mural, donated by the Colorado Paint Company. The Weir Gulch mural was by artists Manuel Martinez and Carlos Sandoval and nearly 100 neighborhood children, each assigned to paint a square in colors designated by the muralists. Their picture represents the emergence of the modern Mexican as he still clings to his native culture.

"Ken Wright suggested we give the bright-eyed youngsters a raft ride, so while we watched from the shore, Captain Taggart piloted the kids around the marina pool. Afterwards we paddled back out to the river, while the tickled children ran out to our Greenway trail and waved goodbye. In this area the trail is on a wooden deck, cheek by jowl to a railroad track (we had passed under both entering and leaving Weir Gulch). The cantilevered deck, a half mile long, was built to keep the trail hugging the river.

"My enthusiasm for the greenery we've added to the South Platte may inadvertently convey the image of a river engulfed in parklands. Actually, rafting through Denver is also a marine tour of city industries. For example, that morning we had already passed the large Gates rubber factory, as well as numerous smaller industries located right on the waterway. Some of these businesses became our most enthusiastic, early supporters. Indeed, our first big donation, a $780,000 gift, came from the Gates Foundation, a tax-exempt organization using Gates funds for public purposes.

"Downstream from Weir Gulch we approached one of the Public Service Company's large, in-city generating plants, and there between the shores is an inflatable dam, a 'fabri-dam' made of tough rubberized fabric inflated with water. The dam backs up a large pool used for industrial cooling. Of course, our Committee originally saw the structure as a barrier for boaters. But then the Public Service Company obligingly helped us deal with the problem, and the result was a special boat chute designed by Bill Taggart. The chute, weighing thirty-five tons or so, rests on the inflated dam and provides an exciting six foot drop—a great experience for kayakers and others, with white water at the bottom.

"In a few minutes, with Bill issuing more paddling commands than I could follow, we were shooting the chute down over the fabri-dam, and then hanging onto the bucking, tossing raft as we ran the white water below. Our backs and bottoms got wetter than ever—but who cared with all the excitement!

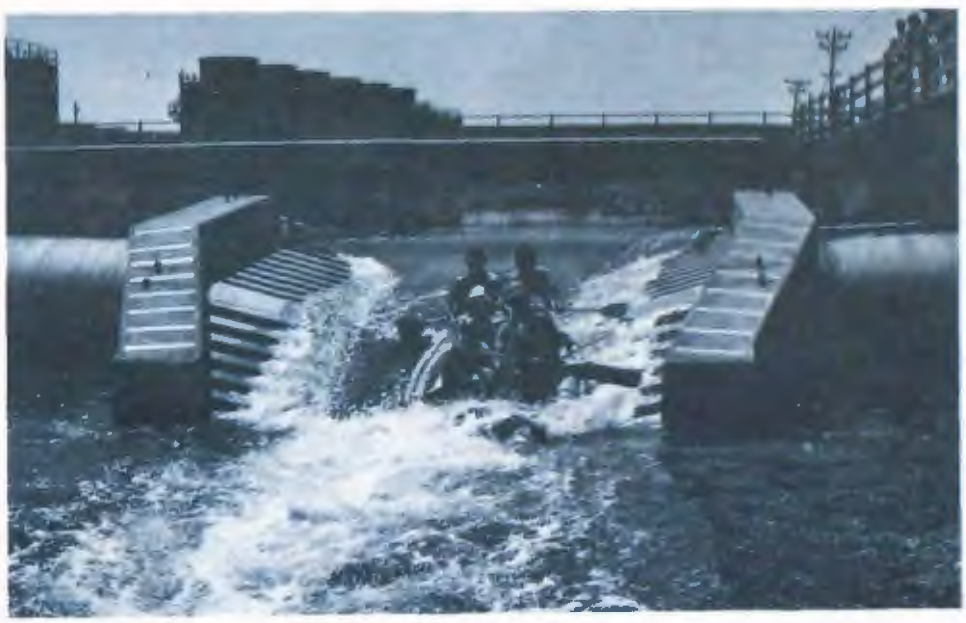
"Drifting on down the Platte we moved closer to the heart of Denver, as well as into some of the most difficult territory to convert from blight to amenity. For example, the transformation of Lakewood Gulch, entering the river at Colfax Avenue, took us three years to complete. Now it connects with Rude Park and the hike-bike trail built by the Denver Parks Department to the west city limits. Here also, the problems, like the city's vast, unattractive railroad yards, are bigger, more deeply entrenched, more costly to solve. But then in this area an improved river holds the greatest potential for influencing other city improvements, making our efforts doubly worthwhile.

"Close to noon we drifted past a 13-acre strip of riverfront that we had already named Gates-Crescent Park—yet it was anything but a park and turning it into one was becoming a difficult political effort. Currently the site was an elliptical eyesore, a storage area for Denver Public Works sandwiched between the river and heavily traveled I-25. It contained all that such yards usually display, from salted-sand mountains to grubby asphalt paving machines. At the moment we were urging the city to earmark $825,000 in Federal funds to relocate the facility back away from the people's river. We already had a quarter million dollars from the Gates Foundation (and soon to receive another quarter million from the Piton Foundation) as a starter for building the park. Mayor McNichols was with us, but serious resistance was surfacing from City Council members eyeballing the Federal money for their own districts. So we had a battle coming up, and that afternoon as I finished paddling we had to go politicking. We intended to see that Denver's own degradation of the Platte would soon be moved in favor of a new, green piece of the city with many advantages for nearby neighborhoods, as well as for the hundreds of thousands attending Mile High Stadium next door.

"At noon we pulled into Fishback Landing, a two-acre park that literally came out of the blue one day when we were approached by the trustee of the late Hermes Fishback whose business had been located in this area by the river. The trustee wanted something done in Fishback's name, and the result was a $53,000 gift to construct improvements on land we had already acquired for a delightful vestpocket park that we named Fishback Landing. As we docked there, the park was populated with people who worked in the neighborhood, and had come to the park to relax and have lunch. We joined them with our lunch delivered to the park by Mary Lou Wesemann, the staff secretary. Later we visited our Greenway headquarters located in an old paint warehouse a few yards behind the park.

"When it was time to go, Bill Taggart announced that the river being so high, his vessel had to proceed by truck for a short distance to avoid one of the most precarious stretches of the Platte, practically in downtown Denver. We were to take the Greenway trail on foot to a designated rendezvous.

"The brief walk, shared with noontime joggers, bikers, skaters and perambulators, took us over and around our most intensively developed section of the river, near the city's business center. From one of our bridges, we looked down on the short but precipitous piece of river too rough for rafting. Actually, we were looking at the largest of our boat chutes—or better put, the nation's first, permanent



Zuni boat chute on Public Service Co. fabri-dam at 13th Avenue.

Bikers at Frog Hollow Park, once blighted by piles of salt and sand for State highway maintenance

man-made urban white-water run. Here a kayaker can zoom down across an old dam, trying to follow a tortuous course marked with slalom poles, as on a ski slope (except our poles dangle from cables stretched above and across the watery run).

"Nearby on the river we could see our impressive brick plaza with broad, gracious steps leading down to the water. Behind it are two old brick buildings, beautiful structures, survivors from Denver's past (the Forney Museum and the H. H. Post Building). The plaza was our Committee's first big project, built with seed money from the city. This great beginning set us in motion and provided momentum for the continuing improvement of the South Platte. The area was named Confluence Park, it being at the point where Cherry Creek (Denver's second largest stream) joins the Platte.

"From the trail we could also see the amphitheater across the Platte from the plaza. When our Committee was formed by Mayor McNichols, this spot was a disaster—just like the entire area. It was marred by broken concrete dumped haphazardly with twisted old iron and timbers from the Lord knows where. Now we looked at a grass-covered amphitheater constructed from the rubble, piled up and packed in earth. On summer evenings people, who were once repulsed by the terrible mess, now sit on the grassy promontory built on the rubble and listen to musicians perform on the stage below.

"At one point I noticed Rick Lamoreaux contemplating this scene of our most concentrated accomplishments. A lot of this young man's exceptional creativity had gone into the doing of what was before us. As the Greenway's Executive Director he had found a surprising challenge in the river. Rick once said:

"'When I came to this job, I had a hard time reconciling the South Platte in Denver with my feelings of what a river was all about. But then I recognized what a real challenge it was to do something for the river, despite all the constraints imposed by the past neglect and abuse.'

"As we resumed our walk, we looked back along the river to a site that will soon become another piece of our downtown complex—and again will consign to bad memories one of the valley's worst assaults on the senses, an automobile wrecking yard that spewed auditory, visual, olfactory, pulmonary—you name it—pollution. We now saw a vacant 6.3 acres to be called Centennial Park minus this environmental blitzkreig, our Greenway organization having purchased the land. Soon it will have four tennis courts and the first velodrome (bicycle racing arena) between Illinois and the west coast.

"Remaining in the confluence area, we took a brief sojourn up a side trail along Cherry Creek for a look at that stream. Had we walked its length, the trail would have led us to downtown Denver and the Auraria Higher Education Center. With financial help from the Center, we built the walkway to make the South Platte accessible by foot to some 25,000 Auraria students. Without it a direct stroll to the river could have been a flirt with suicide, for it would have required crossing sixteen busy railroad tracks. The trail was to be extended by the City inside the walls of Cherry Creek to the country club in the center of Denver. The Parks Department had previously constructed a trail inside the Cherry Creek channel from the country club to Cherry Creek Lake.

"'Hey! There's one of our rangers,' announced Bob Searns, as we returned from Cherry Creek Trail. We looked ahead to see a young man on a bicycle towing a small, two-wheeled trailer with a wire basket containing various tools. 'They're at work again this season and doing a good job,' Bob added.

"Our Greenway Rangers, a group of five young people, ride our ten-mile trail system, late spring, summer and early fall, keeping our projects clean, doing routine maintenance, reporting on the trail's condition, answering people's questions, whatever comes along. They were around for the second year, and I was glad of their success.

"Bob Searns, who helped develop and is in charge of the Ranger program, also came to our river project in its earliest days. The young man with the black, bushy hair is from Buffalo, New York. 'That's where I was exposed to many of man's abuses of the environment,' he says, 'and it helped me decide to commit myself to outdoor water recreation, especially in cities. I believe in people living in cities, but then I mean cities that are clean and beautiful. For that purpose clean, natural water becomes important.'

"Bob is a jack-of-all-trades, which he needs to be as our Project Director: planning, administration, public relations, celebrations, maintenance, safety, anything required. Above all Bob has won my gratitude for bringing all of our projects in at budgeted costs—except for one, Weir Gulch, where he did not have budgetary authority.

"When we arrived at the plaza, Bill Taggart was there ready to launch the raft from the lowest step and we were soon aboard drifting downstream again.

"Passing under the 15th Street Bridge just off the plaza I was reminded of how many little things added up to make our Greenway work rewarding. One of them was visible to our left, where the Greenway trail runs along a shelf of the viaduct abutment. There one sees a long, colorful panel of more than 400 hand-painted tiles mounted on a wall. Each tile, six inches square, was decorated by a Denver citizen and set in place by artist Barry Rose, who was compensated by the First National Bank of Denver.

"As our raft drifted lazily along the river beyond the 16th Street Viaduct stretch of white water, we saw a patch of the riverbank that had sustained serious damage in the past few months, and not by nature's hand. Again our own city

employees were responsible. Truck drivers from Public Works had selected an accessible stretch of riverbank as a dump site for snow plowed up with salt, antifreeze, oil and all else one finds in a modern street. That was bad enough for the water, but then their choice of dump site coincided with where we had planted trees to beautify the Platte. The trees were now dead, and the scene of their demise raised my temperature enough to boil blood.

"'I brought it to their attention,' said Rick Lamoreaux, 'and they promised no more dumping.'

"'But a little late for those trees,' added Ken Wright as he snapped pictures of the blighted bank.

"Helmsman Taggart grew uneasy as we approached the 19th Street Bridge, and then announced, 'I think we ought to pull ashore. We really should look at the white water beyond the bridge before going ahead. It's pretty rough.'

"Taggart, Searns, and Mason left the raft and walked down the trail to take a look at the river. The stretch of water ahead, even though well within city limits, is said to be one of the finest pieces of white water for kayaks in the nation. It might be too much for a big, lumbering raft like ours, especially with the high water, but I trusted our inspectors' judgments. Joan is a lover of water recreation who has seen rough water all over the country. Bob is also an expert, having had his baptism in boating in the Canadian wilderness.

"Returning, they recommended that we proceed—unless someone preferred to walk the trail past the white water. Like the others, I rejected the invitation to walk, but swallowed hard in doing so. Off we went and the pudgy raft was soon twisting, bucking and tossing its passengers all around the craft. At one point I saw Bob Searns astraddle the forward gunwale on my side—but against the sky—and Ken Wright was between us. When the raft flattened out from that powerful flap, Bob was in Ken's lap and I had hold of the latter's belt to keep both men aboard. Pat McClearn (another experienced river hand), Joan Mason and Rick Lamoreaux were firmly in place on the port gunwales, as if nothing had happened. When finally we were free of that cauldron of foam, the remainder of the trip seemed like sailing on a glass sea, and we got back to inspecting our river.

"'I can never pass here,' said Joan Mason, 'and really believe a sidewheeler plied the same stretch.'

"'Whatever became of it?' asked Ken Wright.

"No one knew, but I wished it were still around. She would make a great antique reminder of how people once used their river. In 1887, before the Platte had become too foul to visit, all Denver enjoyed River Front Park (which we had passed soon after negotiating the last stretch of white water). There, for a short time, a person could buy a 50-cent excursion ticket on the steamer to Brighton, about 20 miles north, until some tricky sand bars spoiled the idea. The entrepreneurs then dammed the Platte at 19th Street, making a lake back to 15th Street, and there on summer evenings the steamer, with the oompah of its brass band echoing across the city, took passengers on abbreviated excursions in and out of John Brisben Walker's amusement center in River Front Park.

Brick plaza at Confluence Park, with bridges and viaducts in background.

"In mid-afternoon Bill Taggart directed us ashore just short of the Franklin Street Bridge and the city line. By now we had rafted nearly ten miles through the center of Denver and had taken a look at the last of our parks, Globeville Landing, and were ready to go home and dry out.

"'Joe! Look, there's your friend!' shouted Ken Wright as he and Taggart were deflating the raft. He pointed to a big, white tank truck coming toward us across the bridge. I hurried to the street for a closer look at the stenciled identification.

"'He's followed us all day, poor man,' said Joan Mason, jesting. 'Still trying to dump in the river.'

"'Don't kid yourself!' I said. 'You could be right! But you have to admit, we're making progress.'" □

Anyone interested in buying a copy of "Returning the Platte to the People" can mail a check for ten dollars (of which five dollars is a tax deductible donation) to The Greenway Foundation, 1421 Court Place, Denver, Colo., 80202, and enclose a return address.

FBI to Aid in Hazardous Waste Investigation

The Environmental Protection Agency has begun a joint program with the Federal Bureau of Investigation to uncover criminal violations that may occur in the transportation, discharge and disposal of hazardous waste.

EPA is focusing especially on "midnight dumping" and other practices such as the discharge of toxic wastes into the Nation's waterways to circumvent the Agency's hazardous waste regulations.

"The FBI's willingness to assist EPA in these investigations will give us exceptional investigatory resources to crack down on willful violators," explained Administrator Anne M. Gorsuch. "The hazardous waste regulations are designed to protect the public from those few criminal offenders whose actions can threaten the health and well being of large numbers of our citizens."

Under the program, the investigative resources of the FBI will be used to pursue up to 30 cases during the coming year. EPA will provide the technical support required for these investigations, including site inspections and chemical waste sampling and analysis.

Published reports in recent months have indicated that organized crime has been moving into the toxic waste disposal business in several northeastern States. A subcommittee of the House Interstate and Foreign Commerce Committee (now the Energy and Commerce Committee) last December heard testimony that mobsters were infiltrating this business in New York, New Jersey and Pennsylvania. One witness, an FBI informant, told legislators that new State and Federal laws on disposal of hazardous chemicals had increased costs of legal chemical treatment for many industries to the point where organized crime could make huge profits by taking it off their hands and dumping it illegally. "You can get $20 or $30 a (cubic) yard for it and dump it for a dollar," he said.

EPA anticipates that the cases encompassed by its joint program with the FBI will be those involving substantial environmental contamination that could pose hazards to human health. In many cases, it is expected that the felony provisions of the Resource Conservation and Recovery Act, as well as other criminal and environmental statutes, will be applied.

Within the FBI, the new program will be supervised by the White Collar Crime Section. At EPA, the program will be coordinated within the Office of the Associate Administrator for Legal Counsel and Enforcement. Representatives from both offices have been meeting to establish procedures and guidelines for the program in a Memorandum of Understanding between the two agencies.

Waste Dump Cleanup

Meanwhile Michael B. Cook, Director of EPA's Office of Emergency and Remedial Response, has described to a Senate panel how the Agency is pursuing a vigorous enforcement program against parties who have left hazardous waste dumps strewn across the country.

This cleanup effort is the "highest priority of the Environmental Protection Agency," said Cook, "We have a commitment to the Congress and the American citizen to vigorously pursue the cleanup of inadequately disposed hazardous wastes."

In testimony before the Senate Subcommittee on Environmental Pollution, Cook said the Agency had a "head start" on the cleanup of hazardous sites when Congress passed the Superfund law last

Midnight dumping

December to make it possible. By that time, he said, EPA and the Coast Guard had emergency response operations underway at a number of waste sites and enforcement actions to require cleanup of others.

Cook cited the following EPA waste dump cleanup efforts:

• Sufficient funding is now available for future emergencies and to continue emergency cleanup actions at 18 of 24 sites where work has been in progress. (Emergency actions have been completed on the remaining six sites).

• Almost $4 million has already been allocated to plan cleanups at 20 high priority sites and funds are available to initiate planning at still another dozen sites this year.

• Considerable work has already been completed at hundreds of other sites by EPA, the Coast Guard, State Agencies and responsible private parties.

• Currently over 9500 sites have been identified, 5900 preliminary assessments have been undertaken, and about 2,700 investigations have been completed.

• Together with the Department of Justice, EPA has filed 60 Federal judicial actions to require responsible parties to clean up sites which represent imminent and substantial danger to the public health or the environment. To date, this effort has produced 11 negotiated consent decrees and preliminary judicial relief for an additional 10 cases.

• There have been 57 enforcement actions undertaken by the States; 55 administrative orders issued by EPA; 69 issued by the States; and two demand letters requiring action by responsible parties.

Funds for the new abandoned site cleanup program for 1981 are coming out of a $68 million appropriation signed by President Reagan earlier this year.

Of this money, Cook said, between $45 and $50 million will go to the direct response effort to clean up sites. The remainder, he said, will help pay for enforcement, research and development, and administrative support.

100 Sites Listed

EPA is compiling an interim priority list of the top 100 hazardous waste sites nationwide—many of which will be targeted for remedial cleanup during 1981 under the first phase of the Superfund program.

The Administrator said this "first priority list" was being developed with the help of State and local governments, many of which have extensive experience in this area.

"EPA is anxious to use limited Superfund dollars wisely on the sites that pose the greatest threat to the environment," Mrs. Gorsuch said.

The Administrator said that the interim list should be completed by the end of the summer, and early indications are that at least one site from almost every State will be listed. EPA will conduct extensive tests at each site to determine the hazard level.

Compilation of the top 100 list is an interim step to a more comprehensive inventory of sites which will lead to a required listing of 400 problem sites. All parties who stored, treated or disposed of hazardous wastes were required to report the location and disposition of such sites by June 9, 1981. EPA is currently tallying the results.

"We cannot put off the initial clean-up process while waiting for a complete inventory," Mrs. Gorsuch said. "We want to get Superfund dollars into the ground —to get actual cleanup underway—and that's why we are creating the interim top 100 list."

"The cleanup of these waste sites ranks among President Reagan's highest environmental priorities," Mrs. Gorsuch said.

The Superfund law established a $1.6 billion fund, primarily levied from a tax on the chemical industry, to be used to clean-up or contain hazardous waste problems. Superfund budget for FY 1982 is $200 million.

EPA, however, is already engaged in cleaning up hazardous sites under legislation enacted in previous years by Congress. "We are working closely with the Department of Justice to require responsible individuals and companies to clean up sites," Mrs. Gorsuch said.

The Administrator indicated that one-third of the sites studied in the past several years were found to pose no danger to public health or the environment. □

Update

A review of recent major EPA activities and developments in the pollution control program areas.

HAZARDOUS WASTE

Site Cleaners
EPA recently held symposiums in Atlanta and Denver on contracting under the Superfund program to clean up hazardous waste sites. The symposiums were sponsored by the American Institute of Chemical Engineers, and provided EPA with the opportunity to communicate the scope and nature of the Superfund program to potential contractors and to receive suggestions from industry on EPA's approach. Congress has authorized over $1.6 billion in funding for Superfund over a five-year period, with 87.5 percent of this amount coming from a tax on those industries which operate the chemical feed-stocks of hazardous waste. The Agency will take clean-up action only in cases where a responsible party cannot be identified, where a responsible party refuses or cannot afford to adequately respond, and if the State is unwilling to take corrective steps.

Groundwater Studies
EPA has awarded "pre-Superfund" contracts for preliminary engineering work at the PAS hazardous waste site in Oswego, N.Y., and the Kin-Buc site in Edison, N.J. for $100,000 each. The funds will be used to gather information to develop groundwater studies at both sites. "The cleanup of hazardous waste sites under Superfund remains one of the Reagan Administration's highest environmental priorities," said EPA Administrator Anne M. Gorsuch. The "pre-Superfund" contracts were authorized by Congress last year for preliminary investigations and engineering work at selected sites under a separate Resource Conservation and Recovery Act appropriation. In February 1981 EPA announced the selection of sites for these funds. The start of actual Superfund clean-up activities at a limited number of high priority abandoned waste sites around the Nation is expected to begin this summer following President Reagan's signing of a $68 million supplemental appropriation for fiscal year 1981.

TOXICS

PCB Information
EPA has asked major industries and small commercial firms to make available all information on production, distribution, and use of low concentrations of polychlorinated biphenyls (PCB's) in products or waste. EPA needs the information to determine what types of controls are needed on PCB's in concentrations below 50 parts per million. Under a court order, EPA has 18 months to devise a plan to control low concentration PCB's. Concentrations above 50 parts per million are already regulated by EPA under the Toxic Substances Control Act. The Chemical Manufacturers Association and the Dry Color Manufacturers' Association will supplement EPA's study with their own surveys. The Advance Notice of Proposed Rulemaking on this action appeared in the May 20, 1981 Federal Register.

Tests Proposed
EPA recently proposed that three common industrial chemicals be tested to determine whether they pose a health risk to workers and consumers or cause other environmental problems. The chemicals, covered in EPA's "test rule", are dichloromethane, nitrobenzene, and 1,1,1-trichloroethane, used as metal cleaners, solvents, paint strippers, and intermediates in the production of other chemical products. EPA proposed testing on the recommendation of the Interagency Testing Committee, a body of scientists established by Congress to make priority testing recommendations to EPA. The Agency will require firms making or processing these chemicals to be responsible for conducting the proposed tests. Affected firms do not all have to test; they can cooperate on a single test program for each chemical, thereby allowing them to divide the costs. A public meeting on the proposal will be held in Washington, D.C. September 17, 1981.

WATER

Dredging Seminar
The Maryland Chapter of the National Association of Environmental Professionals will hold a seminar on dredging and other related problems in the Mid-Atlantic region October 5-7, 1981, in Baltimore, Md. The purpose of the seminar is to provide a forum for multi-disciplinary discussion of dredging and related issues, with representatives from industry, government, academia, and public interest groups making presentations. The sponsoring group is soliciting presentation of papers and posters on the subject; space for exhibits will be available. For more information contact Maryland Chapter, National Association of Environmental Professionals, Dredging Conference, P.O. Box 1643, Annapolis, Md., 21401.

RESEARCH AND DEVELOPMENT

EPA and the Department of the Army recently announced plans to coordinate research activities to control pollution. EPA Administrator Anne M. Gorsuch said the Army has agreed to let EPA use land on Army installations for research and demonstrations of technologies for use in the management and disposal of hazardous waste.

The Army will participate in selecting and coordinating the projects, will provide support, and will share the information developed from these projects. "Combining Federal resources and sharing information on pollution control should help in developing more effective and less costly options for the treatment of pollution problems," said Mrs. Gorsuch.

Under the agreement, the two agencies expect to work together on the following environmental issues: hazardous waste management, response actions at hazardous waste sites, leachate control, and environmental monitoring and assessment. In addition, a joint EPA-Army Technical Coordinating Committee will promote and monitor cooperative activities, and will be alternately chaired for one-year terms by officials of both agencies under a Memorandum of Understanding.

Interior of Sunohio's mobile unit designed to remove PCB's from transformer oils.

Controlling PCB's — A New Approach

By Charlotte Garvey

The EPA has approved the use of a new chemical process that can destroy toxic polychlorinated biphenyls (PCB's) safely.

The mobile chemical treatment system, called PCBX, is mounted on a vehicle trailer and removes the toxic PCB's from oil used in electrical transformers. The process was developed by Sunohio, of Canton, Ohio, a partnership owned by subsidiaries of Sun Company and Ohio Transformer Corporation.

"The presence of PCB's in the environment is potentially one of the most serious public health issues we face," said Edwin H. Clark, EPA's former Acting Assistant Administrator for Pesticides and Toxic Substances.

"The new PCBX process exemplifies an approach to public health protection that holds the real key to our effectiveness in the future," he said. "I am referring to the absolute necessity that new technology be developed by the private sector that will give us the tools we need to deal with the increasingly complex environmental problems we confront."

Well-documented tests on laboratory animals have shown that PCB's can cause reproductive failures, birth defects, skin lesions, tumors and other health problems. PCB's decompose slowly and may be stored in fatty tissues in humans and other living creatures. EPA estimates that 91 percent of all U.S. residents have detectable levels of PCB's in their fatty tissues.

PCB's were produced in the United States from 1929 until 1977, the year production was banned because serious questions had been raised over their effects on health and the environment.

Most of the approximately 745 million pounds of PCB's now in use are in cooling and nonconducting fluids in electrical equipment such as transformers and capacitors. An estimated 20 million pounds of PCB's are now being stored awaiting proper disposal; about 10 million pounds continue to leak, spill and evaporate into the environment yearly.

According to Sunohio, because PCB's are man-made, the PCBX system can basically reverse the manufacturing process by stripping chlorine atoms from the PCB nucleus, leaving only environmentally safe compounds and residues.

The PCBX unit is self-contained and can be operated from an external power source or can generate its own power.

Clark said, "The PCBX disposal system has a number of unique and interesting features. For example, it does not produce any PCB emissions to air or discharges to water. It is also portable, being mounted in a vehicle trailer.

"This means that PCB's can be treated where they are found, thereby avoiding the potential risks associated with extra handling or transportation of the contaminated oils," he said. Also, because the process removes the chemicals from these oils, the cleaned oil also can be recycled for continued use, according to Clark.

Previously transformer oils having PCB's in concentration under 500 parts per million could be disposed of only by using thermal methods such as high-temperature incinerators and industrial boilers, or in landfills that have been specifically approved for that purpose. Because of fairly rigorous criteria, only two incinerators have been approved for commercial use and with a limited capacity, and only eight landfills nationwide have been approved for PCB disposal.

Clark said a wide range of new techniques for disposal are now in various stages of development including new thermal methods, catalytic decomposition, and chemical destruction such as the method used in the PCBX system.

EPA's ten Regional Administrators have the authority to approve PCB disposal facilities and processes for use within their regions.

Region 7, based in Kansas City, Mo., has granted full approval for use of the system within the Midwestern States it encompasses. Region 4, based in Atlanta, has given approval for four companies to use the system in the Region: Tennessee Valley Authority, Department of Energy's Oak Ridge Atomic Energy Facility in Tennessee, the U.S. Army's Redstone Arsenal in Huntsville, Ala., and the Southern Company, a private firm and parent company of a number of electric utilities in Alabama, Georgia and Mississippi.

EPA's other Regional offices are now evaluating the PCBX process following a demonstration of the system and testing by EPA; the Regions are expected to approve use of the system in the near future.

Sunohio has completed construction of one trailer equipped with the PCBX system and has two more under construction, according to Norman E. Jackson, chairman of the board for both Sunohio and the Ohio Transformer Corporation.

The initial mobile processing unit is designed to decontaminate about 500 gallons per hour of transformer oils containing up to 1,000 parts per million (ppm) of PCBs.

Jackson estimated the cost of a single trailer equipped with PCB-destroying equipment at $500,000, and said that Sunohio plans to construct a total of five such trailers. Each would be equipped to handle about two million gallons of contaminated oil yearly at an average cost of $3 per gallon.

"The Sunohio PCB process was researched and developed to solve the electrical industry's immediate problem with PCB's," said Jackson. "The process also has probable application in other areas of environmental concern. Preliminary laboratory work leads us to feel confident that the PCBX process will also be effective against other halogenated hydrocarbons, which include a great many of the pesticides and other dangerous chemicals which are causing so much concern today."

Jackson estimated that the PCB problem could be controlled over the next five to ten years if the PCBX system proves a success. □

(Charlotte Garvey is an assistant editor of EPA Journal.)

U. N. Finds Pollution Control Cost Less in Third World

Ground water, such as this supply collected in an underground cavern, is a valuable resource in countries around the world.

The economic cost of pollution control in developed countries is estimated to be far less than the cost of pollution damage, and would be an even smaller percentage of gross national production in Third World Countries, according to Dr. Mostafa Tolba, United Nations Environment Program Director.

Dr. Tolba also said in a report issued on World Environment Day June 5 that vital groundwaters are being misused around the globe.

The State of the World Environment message, issued annually, also evaluated the economic advantages of protecting the environment as an investment for the future.

"Most people would accept that there must come a limit of cost, above which further control or clean-up expenditure becomes unreasonable," the report stated. "But not all the damage to the environment can be assessed in money terms; there are many effects on man and his environment that cannot be quantified."

The report named benefits generated by improved environmental quality, including lower death and sickness rates, better productivity, technological innovation spurred by environmental protection policies, and improved amenities. The report also calls for measures to reduce the levels of toxic chemicals in food and for more research into how the contaminants move through the food chain.

"There can be no question that many chemical products have on balance brought benefits to man," states the report, but adds that other chemicals have caused environmental damages, and outbreaks of poisoning make clear the potential threat to human health.

"The general public is understandably concerned by the fact that toxicologists are at present unable to give reliable estimates of the risk," Tolba declared.

Noting that groundwater accounts for most of the fresh water on land (excluding glaciers and ice in polar regions) Tolba calls for stringent scrutiny of waste disposal, new procedures governing use of chemicals on land, and effective controls against pollution and over-use of groundwater supplies. "This is not simply an instance where prevention is better than cure but where prevention is the only available option," he said.

In assessing the economic impact of pollution controls, the report states that the estimated cost of pollution damage in developed countries falls between three and five percent of the countries' gross national product (GNP) while the cost of environmental protection policies is estimated to range between only one and two percent of GNP.

Developing countries, says the report, spend their environmental protection budgets mainly in improving drinking water supplies and sanitation, but to control pollution effectively as well, they would require only one half to one percent of their GNP.

Tolba advises world leaders to base good management of the environment on avoidance of resource waste and pollution, rather than being forced to redress environmental degradation after it occurs.

The World Environment Day panel discussion on toxic substances in New York was led by Dr. Noel J. Brown, director of UNEP's North American office.

Also on the panel were members of U.S. non-governmental groups and the international community, including filmmaker Robert Richter, winner of the Dupont Award for his documentary, "Unsafe Here, Okay Anywhere Else" on the export of pesticides and pharmaceuticals from developed to underdeveloped nations. The film was featured on Public Broadcasting Service's "NOVA" series.

In Washington, D.C., the Canadian Embassy hosted a reception for World Environment Day, where establishment of a UNEP liaison office in Washington was also announced. □

Around the Nation

REGION 1

Discharge Permits
Region 1 recently issued draft wastewater discharge permits to seven oil companies contemplating offshore oil and gas drilling on Georges Bank in the Atlantic Ocean. They are Exxon, Getty, Mobil, Murphy, Shell, Tenneco and Union oil companies.

The permits are considered to be among the most stringent ever issued for offshore oil exploration work. The oil companies are required to use the best available control technology during the exploration process. Georges Bank is a major commercial fishing ground off the coast of Massachusetts.

The draft permits also require a comprehensive monitoring program to be put in place. The study will focus on the impact that drilling muds and other discharges from the rigs are having on the marine environment.

The permits are for exploratory work only. New permits will have to be issued before actual production could begin.

Generic Bubble
Region 1 has conditionally approved the first "generic bubble" regulation, governing all regulated air pollutants, to be adopted at the State level.

In the State of Maine plants already complying with existing air quality emission standards would be allowed to develop bubble programs involving all regulated pollutants. The Maine proposal for bubbles in attainment areas is based on EPA's bubble policy and contains more stringent eligibility criteria.

EPA's national bubble policy is an important regulatory reform initiative which allows pollution sources the flexibility to meet Clean Air Act requirements in a more cost-effective way. The policy visualizes a factory with many smokestakes as being under a large imaginary dome or bubble with only one emission point. It is a voluntary program and permits industry management to calculate the best way to clean up air pollution at individual plants provided overall clean air requirements are met.

Other States have developed generic rules but only for one pollutant.

REGION 2

Violators Cited
Region 2 recently cited seven New York State firms for asbestos control violations under national emission standards for hazardous air pollutants.

Two of the firms, David Fabricators of Brooklyn and J&S Supply Company of Long Island City, manufacture products which contain asbestos. The five other firms were involved in the renovation of buildings which contained significant amounts of asbestos insulation material. Four of the five, Joseph D. Gibson Contracting Corp. of Wantagh, MTF Industries of Queens, Hollywood Commercial Renewals of Hicksville, and Cross-Bay Excavators of Brooklyn, are alleged to have started renovation work without notifying EPA. EPA alleges that the fifth, Compass Metal of Jamaica, N.Y., failed to handle and clean up its work properly.

EPA rules require firms to notify the Agency before starting demolition work. During demolition they must comply with regulations intended to keep carcinogenic asbestos fibers out of the atmosphere.

REGION 3

Request Denied
A Federal judge in Philadelphia recently denied a request by the Commonwealth of Pennsylvania to postpone the start of an auto-emissions inspection and maintenance program until January 1, 1983. U.S. District Judge Louis C. Bechtle said that the program must go into effect by May 1982.

Pennsylvania had agreed to such a program in a 1978 consent decree after suits were brought by local citizen groups and EPA. The decree called for the program to start by May 1, 1981 in 12 counties centered around Philadelphia and Pittsburgh.

The State asked for the additional time so that computerized testing equipment could be used by the privately-owned inspection stations that would run the tests. The equipment was not available for distribution by the original deadline.

National EPA policy allows extensions until January 1, 1983 if States wish to use more sophisticated equipment. The computerized testing equipment is more accurate, easier to calibrate, and less expensive to use and maintain than equipment available now. EPA Region 3 did not oppose the State's request for these reasons, but was concerned about a proposed change in schedule for State inspection of testing stations. The citizen groups that signed the consent decree were generally opposed to any change in the original agreement.

REGION 4

Barrier Islands
The regional office is preparing an environmental impact statement on wastewater management for the North Carolina barrier islands.

The statement will develop and evaluate alternative treatment technologies. The alternatives are being examined for environmental impact, cost effectiveness and possible financial impact on barrier island communities. A major issue involves proposed centralized waste treatment facilities. The concern is that such facilities may promote high density development resulting in adverse impact such as increasing the potential for non-point source pollution of estuarine areas.

Value Engineering
More than $61 million has been saved on 29 wastewater treatment projects that used Value Engineering in Region 4.

Value Engineering helps achieve maximum value for dollars spent by identifying and removing unnecessary project costs. The process, begun in 1975 at the urging of the General Accounting Office, is mandatory on projects costing more than $10 million.

Figures show that Region 4 accounts for one-third of all EPA's saving generated using this process.

REGION 5

Suit Filed
Region 5 recently filed suit against the Inland Steel Co. charging violations of Federal particulate and opacity regulations at the company's East Chicago, Ind., integrated steel mill facility.

The suit seeks civil penalties of $25,000 a day dating back to August 7, 1977, a permanent injunction against further violations of Indiana Air Pollution Control Regulations and the installation of additional controls to achieve compliance with State and Federal air quality standards.

Region 5 alleged the company violated the Federally approved and enforceable Indiana State Implementation Plan. Particulate sources cited included eight blast furnaces, three hot scarfers, two coke batteries, an electric arc shop, a basic oxygen furnace shop and an open hearth shop.

REGION 6

Superfund
The Regional office has accelerated efforts in identifying abandoned hazardous waste sites required by the new Superfund law.

During a six week reporting period, compa-

nies and individuals made 800 telephone calls to the Region 6 Superfund Unit, resulting in the reporting of 350 sites in the five State region.

The Superfund unit, working with the States, is currently ranking the sites which need cleanup or other remedial action. This ranking will result in the selection of 400 priority sites nationwide as top candidates for Superfund action.

Earlier this year, each region selected sites for study that clearly met Superfund criteria. Of the 17 sites chosen nationwide, two are in Region 6. The Motco site in LaMarque, Texas, received $121,000 for a hydrogeologic investigation to determine the extent of groundwater contamination. The BWS Corp. site, in Tate Cove, La., received $10,000 for monitoring wells. The Louisiana Department of Natural Resources contributed $40,000 for the work at the BWS site.

Control Relinquished

Iowa is the first State in the Nation to relinquish primary enforcement responsibility for public water supplies. The State had originally accepted primacy on September 11, 1977.

On April 1, 1981, Region 7 was officially notified by an authorized representative of the Governor that the State would terminate all public water supply activities as of July 1, 1981. This action reportedly took place because of a legislative proposal to cut funds for the State's water testing program. The Iowa State Legislature adjourned on May 22, 1981, without appropriating matching State funds necessary for the Iowa Department of Environmental Quality to continue to carry out a public water supply program.

Under the requirements of the Safe Drinking Water Act, EPA must assume responsibility for carrying out the mandates of the Act when this activity is terminated by a State. Region 7, therefore, will routinely monitor test results of the Iowa public water supplies to determine if they are in compliance with the maximum contaminant levels provided in the Safe Drinking Water Regulations.

Approximately 400 people attended public meetings in Iowa to discuss the transfer of authority from the State to EPA.

PCB Burn Successful

A test burn of one gallon of polychlorinated biphenyls (PCB's) at Colorado's Rocky Flat nuclear weapons plant has successfully destroyed 99.999 percent of the chemical. No detectable amounts of PCB's were released into the air.

EPA, Rockwell International and the Colorado Department of Health monitored the burn. Laboratory tests were independently conducted by both EPA and Rockwell, which operates the plant for the Department of Energy.

The fluidized-bed incinerator is a breakthrough in the destruction of PCB's and can be modified and designed to fit on a railroad car to permit burning away from highly populated areas. The incinerator is normally used to destroy some low-level radioactive waste produced in industrial operations at Rocky Flats.

Predator Control

Reports of high livestock losses have prompted the National Woolgrowers and the National Cattleman's Association to request public hearings on predator control. The stockmen primarily want the return of products containing compound 1080, a poison used against livestock predators such as coyotes.

EPA plans to hold informal hearings in Denver, Colo., and Washington, D.C. to reevaluate the use of certain poisons, including 1080. The original ban was imposed in 1972 to protect people and non-target animals.

EPA Administrator Anne Gorsuch is slated to review all information gathered during the hearings and decide whether or not to hold formal, legal hearings to amend the 1972 ban. Any necessary hearings, however, will be held before the 1982 lambing and calving season.

Water Projects

It is expected that one half of California's State Assistance Program grant dollars will fund projects that were identified in EPA financed plans under Section 208 of the Clean Water Act. Total capital expenditures of over $39 million are slated to be used in implementing programs that have the potential to substantially benefit water quality.

The Clean Water and Water Conservation Bond Law of 1978, known as Proposition 2, contained provisions for the expenditure of $50 million to fund water pollution control, water conservation, and wastewater reclamation needs in California. The State Water Resources Control Board designated this as the State Assistance Program and adopted a Project Priority List containing 29 projects. Eight of the 29 funded projects can be directly traced to specific recommendations made in and as a result of Section 208 planning. This section created EPA's main program to deal with nonpoint source pollution.

Roster Update

Region 10 recently updated its rosters of business firms owned by minorities and women that can help plan, design and build sewage treatment plants and other kinds of pollution control facilities.

To people who think of sewage construction as being exclusively a man's business, the rosters may provide a surprise. In the Pacific Northwest, there are more than two dozen firms owned by women offering services funded by EPA's wastewater treatment construction program. Even more surprising may be the number of minority-owned businesses—contractors, suppliers, architects and engineers—who perform these kinds of services. According to figures available from the Region's Office of Civil Rights, there are no less than 368 such companies located in the Region, including Alaska (64), Idaho (39), Oregon (98), and Washington (167).

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Region 5 (Chicago)
Illinois, Indiana, Ohio, Michigan, Wisconsin, Minnesota
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Arkansas, Louisiana, Oklahoma, Texas, New Mexico
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Colorado, Utah, Wyoming, Montana, North Dakota, South Dakota
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Region 9 (San Francisco)
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415 556 2320

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Alaska, Idaho, Oregon, Washington
206 442 1220

The Baltimore harbor, scene of industrial complex.

A sloop heeling over in stiff breeze on the Cheaspeake.

Summer on the Chesapeake

Commercial oyster dredging under sail in the Chesapeake.

The Environmental Protection Agency is now winding up a five-year in-depth study of the Chesapeake Bay, with findings that may have broad significance to estuaries in many other areas of the United States.

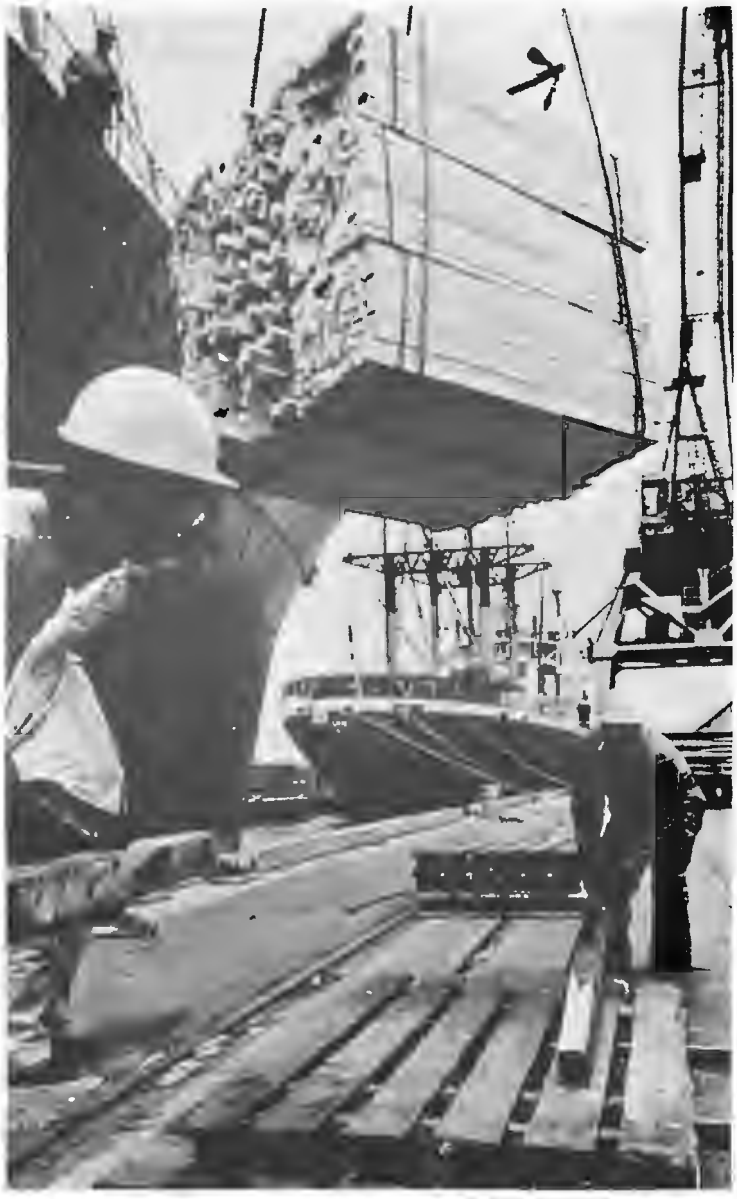
Considered the most productive estuary in North America, the Chesapeake supports a seafood industry grossing $175 million in good years and a recreation industry valued at $200 million a year. It includes a major world port, Baltimore, and serves as a shipping channel for global commerce. The Bay is a haven for migratory birds and waterfowl, along the Atlantic Flyway. More than half a million birds from Canada, including geese and whistling swans, winter in its marshes, coves and fields.

But the Bay has its environmental problems, and faces intensified stresses as commercial shipping, recreation, housing, industry, and other human activities increase in the years ahead. For these reasons, Congress in 1976 directed EPA to inaugurate the Chesapeake Bay Program, a $25 million study of the environmental quality and management of the estuary. Scientists and managers in a joint effort of EPA's Office of Research and Development and Region 3, in close cooperation with States adjacent to the estuary, have been assessing the chief factors that have an adverse impact on the Bay, as well as the many laws, policies, and citizen efforts affecting it, so that Federal, State, and local governments can more efficiently protect the Chesapeake. The findings are expected to be made available in 1982, with special focus on three environmental questions: toxic chemicals, eutrophication (excess nutrient problems),and the decline of submerged grasses.

The photographs on these pages illustrate some of the diversity of the Chesapeake scene today and the ways the Bay serves both people and wildlife as a rich and varied resource.

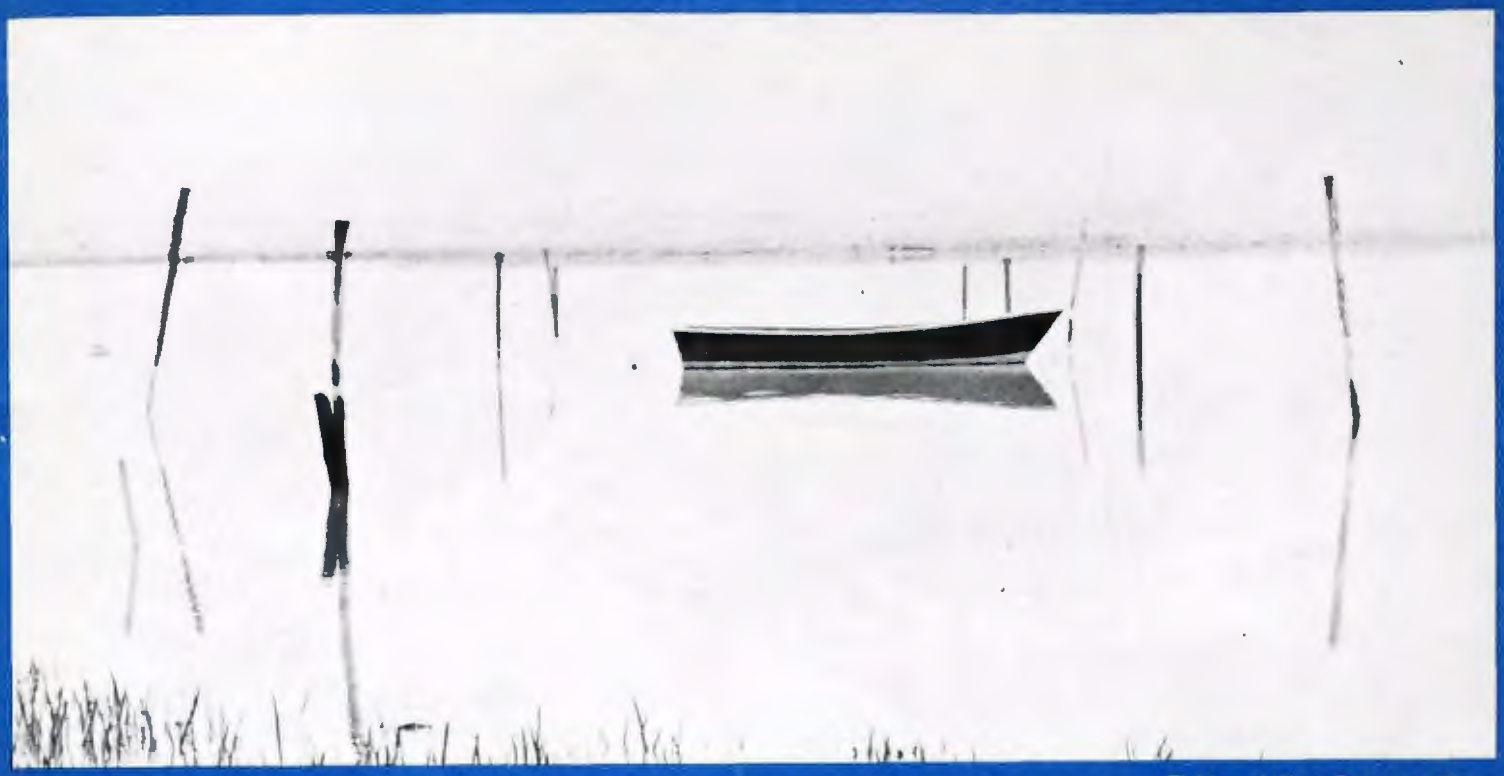
Catching blue crabs with chicken neck bait and nets is favorite Bay pastime.

Loading timbers at dockside in busy Baltimore harbor.



An osprey makes its home atop a channel marker.

The Bay Bridge spans Chesapeake near Annapolis, Md.



Fishing skiff on Patuxent River, a tributary of the Chesapeake, by Steve Delaney.

Back cover: A tranquil cove of the Chesapeake Bay at sunrise, by Steve Delaney.

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