MARYLAND'S FUTURE

...THE NEXT FIFTY YEARS

Proceedings of the Futures Conference
Held in Baltimore on October 27, 1983
Commemorating the 50th Anniversary of the
Maryland State Planning Commission

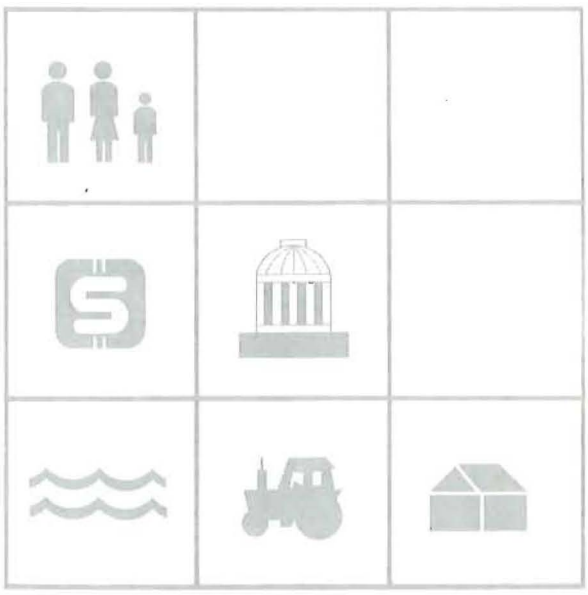
Sponsored by the
Maryland State Planning Commission
and the
Department of State Planning

MARYLAND'S FUTURE

...THE NEXT FIFTY YEARS

Proceedings of the Futures Conference
Held in Baltimore on October 27, 1983
Commemorating the 50th Anniversary of the
Maryland State Planning Commission

Sponsored by the
Maryland State Planning Commission
and the
Department of State Planning



STATE OF MARYLAND

Harry Hughes, Governor

DEPARTMENT OF STATE PLANNING

Constance Lieder, Secretary

Edwin L. Thomas, Deputy Secretary

Capital Improvements Programs
Emory Harrison, Assistant Secretary

Comprehensive Policy Planning
Scribner Sheafor, Acting Assistant Secretary

Office of Planning Data
Michel Lettre, Director

State Clearinghouse for
Intergovernmnental Assistance
Guy W. Hager, Director

301 West Preston Street
Baltimore, Maryland 21201

MARYLAND STATE PLANNING COMMISSION

Arnold M. Kronstadt, Chairman
*Harry Ballew
Thomas B. Beyard
George M. Brady, Jr.
*A. Freeborn Brown
Delegate Martha S. Klima
Margaret M. Kline
Senator Julian L. Lapides
Patricia Carr Layton
Julia A. Metcalf
George B. Reeves
*William M. Smith, Jr.

FUTURES COMMITTEE

Margaret M. Kline, Chairwoman
Thomas B. Beyard
William Boucher
Joseph Coates
Frank Francois
Arnold M. Kronstadt
Daniel H. Lufkin
Julia A. Metcalf
Charles Steiner
Delegate Larry Young

This page shows positions held through October 27, 1983 when the 50th Anniversary of the Maryland State Planning Commission was commemorated. Since that time, Michael Kushner has been appointed to the Commission, and asterisks (*) indicate resignations. Mr. William M. Smith, Jr., has been appointed Assistant Secretary, Comprehensive Policy Planning.

CONTENTS

Preface

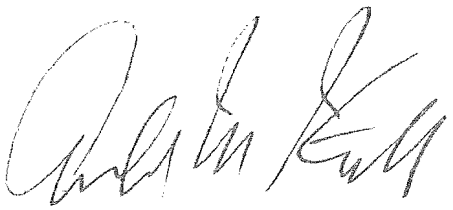
Arnold M. Kronstadt
Chairman
Maryland State Planning Commission

The Maryland State Planning Commission takes great pride in celebrating fifty years of service to the State of Maryland. While its role and responsibilities have changed along with the evolution of State government, the Commission continues to offer a broad citizen perspective to the State's planning problems and how to solve them.

For its fiftieth anniversary celebration, the Commission wanted to stimulate creative thinking and dialogue about Maryland's future. The Commission and its Futures Committee, chaired by Margaret Kline, worked with the Department of State Planning and hosted the Futures Conference held on October 27, 1983 at the Baltimore Convention Center.

To encourage people to think about Maryland's future, we invited anyone to submit proposals for writing essays on topics of interest to Maryland's future. Six thought-provoking proposals were selected from the many submitted. We took a straw poll to find out how Marylanders viewed the future. The Department's staff prepared a profile showing past and possible future changes in Maryland's population and economy. With Neal Peirce's look at Maryland, reflections on the history of planning by Maryland planners, and the special tribute to Dr. Wolman, our first Chairman in 1933, we discovered new perspectives on our past and a future filled with challenge.

Let us shape the future through analysis, decision, and action—and remember that the quality of our future will be influenced by our values, our collective ability and determination to work in a sense of good, and our awareness of the whole environment.



Preface

Constance Lieder
Secretary
State Planning

Only once does a person have a fiftieth birthday. The year 1983 marked fifty years since the State of Maryland created the State Planning Commission, now the oldest such commission in the nation.

It was fitting to look back, celebrate accomplishments, and pay tribute to the many citizens and planners who could visualize how to make life better and would work to make that better life happen in Maryland. We wanted to remember our past while keeping our eyes toward the future by holding a Futures Conference where creative thinking and discussion about Maryland's future would be encouraged.

We paid a special tribute at the Conference to an early pioneer in planning who would become a giant in many fields of human endeavor—Dr. Abel Wolman. Named in 1933 as the first Chairman of the State Planning Commission, Dr. Wolman's still-active career has spanned over seventy years. His presence and words of reflection were among the highlights of the Conference.

It is hoped that these Proceedings will serve as a resource and stimulus for thoughtful discussion and action toward a bright future for Maryland.

Constance Lieder

Acknowledgments

The State Planning Commission and the Department of State Planning gratefully acknowledge the interest and work of all those who helped make the Futures Conference a success. Over 200 persons who attended and participated in the Conference or helped in its planning are listed in the Appendix.

Special recognition is given to the members of the Commission's Futures Committee, chaired by Margaret Kline, for their work in planning the Conference, and to the American Planning Association's Maryland Chapter, under the leadership of Robert Marriott, for arranging the morning session on the evolution of local planning in Maryland.

Members of the Department of State Planning's staff who assisted throughout in planning and supporting the Conference and preparing these Proceedings are listed in the Appendix. Special mention is given to Nancy Ancel, conference coordinator, Kay Bienen and Richard Gucker; to Michel Lettre and his staff for the Maryland Chartbook and staff support; to Al Feldstein for the audio-visual presentation, "Change, Challenge, and Choice . . ."; and to Jack Anderson who served as resource person for the Futures Committee, author of the report on MSPC's Straw Poll, and general editor of these Proceedings.

The Conference encouraged thoughtful and creative expression of ideas on the issues Maryland will face in the future and how to solve them. Those ideas, which are expressed in these Proceedings, are appreciated; however, they are the views of their authors and presenters and do not represent the policies of the State of Maryland, State Planning Commission, or Department of State Planning.

PROCEEDINGS

1
Conference Highlights

WHY A FUTURES CONFERENCE?

The year 1983 marked the Maryland State Planning Commission's fiftieth year of service to the State of Maryland. In 1933, amidst the Great Depression, the new Commission under the chairmanship of **Abel Wolman** began to look at Maryland's problems and opportunities and to work for a better future for its citizens. The Commission and the planning function played important roles in helping Maryland respond to the challenge of the times. It was appropriate that the Commission celebrated its fiftieth birthday not only by recalling its past but by looking forward to "The Next Fifty Years."

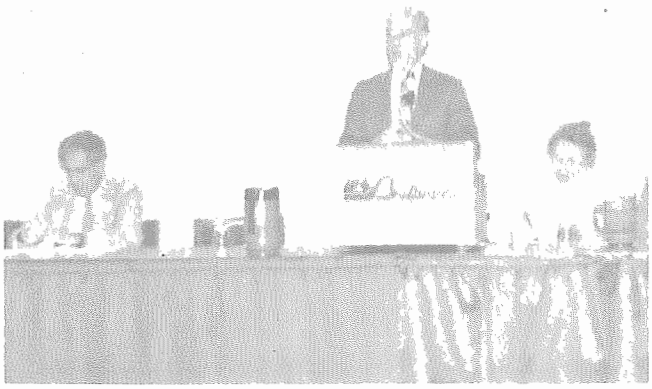
To plan this celebration the Commission formed a Futures Committee chaired by **Margaret Kline**. The Committee decided to mark the occasion by holding a Futures Conference where creative thinking about Maryland's future would be encouraged, and where trends and issues likely to affect Marylanders and what should be done about them would be discussed.

A "Call for Papers" invited anyone to submit proposals for preparing essays on topics they believed important to Maryland's future—such as population and economy, governance and planning, cities and housing, agriculture, environment and resources. Winning proposals on a variety of topics were selected by the Futures Committee from among dozens submitted based on content, comprehensiveness, creativity, and the author's qualifications. Each essay was prepared and presented at the Conference, commented upon by a panel of respondents and discussed by the audience. The essays are included in these proceedings along with their respondents' commentaries.

The Futures Committee also sought the opinions of a broader range of Maryland citizens. Marylanders were asked in a straw poll to identify the most important issues facing Maryland and to indicate priorities for the future. Some 457 adults active in their organizations and students participated in the poll which was taken during the weeks preceding the Conference in various meetings, high school and college classes, and in other places around the State. Results of the poll were distributed at the Conference and are presented in the Appendix.

A Change Profile was prepared to put Maryland's past, present, and future in perspective. Using statistical and graphical presentations, it shows dramatic changes during the last fifty years in population, employment, economic conditions, transportation, and other features of Maryland life; and includes projections to the Year 2000. It was distributed at the Conference and is included in the Appendix.

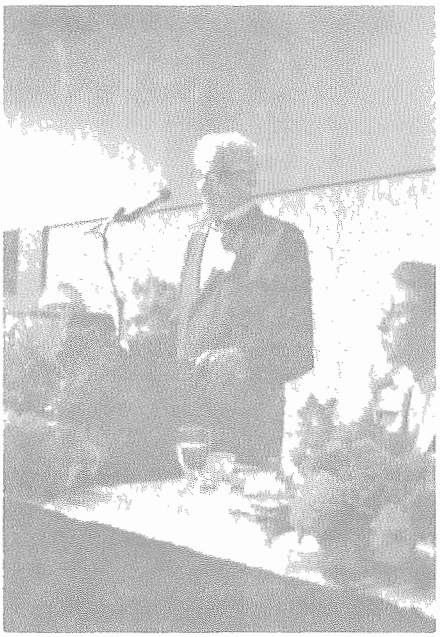
Neal Peirce, Arnold Kronstadt, Dr. Abel Wolman, Margaret Kline, and Secretary Lieder



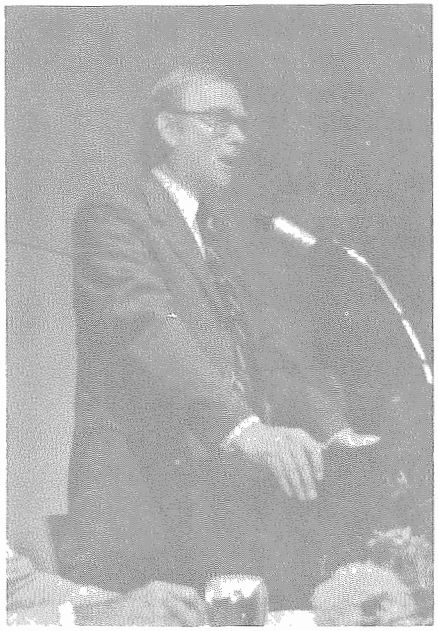
Mayor William Donald Schaefer welcomes the Futures Conference

Comptroller Louis Goldstein addresses the Futures Conference

At the Futures Conference Evening Program



Dr. Abel Wolman



Neil Peirce

In opening the Conference Secretary Lieder emphasized our obligation to prepare for the future: "The future may not be predictable," she said, "but it does depend on what we do individually, collectively--and inadvertently. We have an obligation . . . to prepare for it and do what we can to direct it in ways we think are important."

Mayor William Donald Schaefer was introduced by Secretary Lieder as a man who has "devoted his life to the future of Baltimore." Mayor Schaefer welcomed the Futures Conference to Baltimore which he said has had planning over a long period of time. He talked about the importance of having a "good basic plan," but he emphasized decisiveness and action. From his perspective "we do not have the luxury of time" and as a result he is sometimes "impatient." He wants to see direct action flowing from planning.

Comptroller Louis Goldstein extended best wishes to the Futures Conference from Governor Hughes and the State of Maryland. The Comptroller agreed with an inventor who once said "We should be concerned about the future because we have to spend the rest of our lives there." Like Mayor Schaefer, he emphasized the importance of action: "We have so many things that ought to be done now so people can enjoy life." He summarized this idea with six words: "Stop and think--do it now."

Dr. Abel Wolman, the first Chairman of the State Planning Commission, was named "Admiral of the Chesapeake Bay" by Governor Hughes and was awarded his commission at the Future's Conference. Dr. Wolman's presence and observations based on his distinguished career of over seventy years were memorable experiences as he recalled how in many ways "the present mirrors the past."

A LOOK AT MARYLAND BY NEAL PEIRCE

The Futures Committee invited Neal Peirce to be keynote speaker at the Conference. Mr. Peirce is a noted columnist and an astute observer of life in America. He and Jerry Hagstrom travelled across the country probing one community after another, and wrote about their observations in THE BOOK OF AMERICA: Inside Fifty States Today. Mr. Peirce took the Conference audience on a whirlwind tour of the fifty states and gave his impressions of life in Maryland and its opportunities for the future.

Contrary to the popular viewpoint that America is a single mass homogenized culture, they found each state a unique blend of history, people, and economic and natural environments. Mr. Peirce emphasized the importance of local leadership in adapting to change when he observed "This country is being remade from the grass roots up." Using Baltimore as an example, he said "I take a rather perverse pleasure in describing this blue-collar, lunch-pail, white-marble-steps locality as the epitome of urban revival."

He had some advice for Maryland and for planners. For Maryland he said "A really hard challenge is the need to build a common public consciousness that sticks together and ties with the joint efforts of people from different regions and classes to tackle its problems."

Mr. Peirce urged planners to "use the skills of their profession so that the fruits of society can be enjoyed by more people and so that there can be more equalization, not necessarily of wealth, but of opportunity."

LOOKING BACK ON PLANNING IN MARYLAND

The American Planning Association's Maryland Chapter, under the leadership of President Robert Marriott, assembled a panel of experienced planners to reflect on the evolution of planning in Maryland. In his opening remarks Mr. Marriott traced the development of planning from a few practicing planners several decades ago to today where the "wide distribution of planning capacity within State and local government constitutes an achievement of great significance."

George Grier, who recently retired from his position as Administrative Assistant to the Carroll County Board of Commissioners, recalled how planning was first introduced in several Maryland counties. He told how the typical rural citizen wanted protection from nuisances like junkyards, but cringed at the thought of land use control. Mr. Grier emphasized the importance of education and step-by-step evolution of an understanding for the need for planning and zoning. He cited an example: "Enthusiastic citizen volunteers would drive around the county and identify the existing land uses by color codes. When we mixed in the population trends and saw how people were using the land, a natural understanding of planning came about for our rural people."

Tom Harris, Howard County's Director of Planning since 1961 and a staff member of the Howard County Planning Commission before that, traced the evolution of planning in Howard County. He told how the County had just completed its first General Plan when Jim Rouse dramatically announced plans for the new town of Columbia. He told how the Columbia Plan was approved and built into the planning and development process for Howard County and how later two new General Plans were prepared to respond to current issues. While Columbia was an opportunity which Howard County realized, other opportunities were missed along the way such as an independent source of water for Howard County which was once suggested by Dr. Abel Wolman. "It is interesting," noted Mr. Harris, "to reflect on missed opportunities or how things might be if different choices were made at an appropriate time." The lesson for Maryland is to learn how to recognize opportunity and seize it before it is lost.

Franz Vidor, Planning Director for Baltimore City's Department of Housing and Community Development, told about the evolution of planning in and around Baltimore. He noted the demographic changes of the last fifty years and pointed out that while the counties were planning for growth, the City, at least for the last thirty years, planned for redevelopment. He described a 1956 Planning Commission brochure, outlining "Prospects for Downtown Baltimore," which included a concept for the inner harbor as the third stage of redevelopment. Paying tribute to the important contributions of planners he said, "The high calibre of planning commission members and professional staff has been a critical ingredient in the success of planning."

Franz Vidor, Robert Marriott, Tom Harris, and George Grier

ESSAYS AND COMMENTARIES ON MARYLAND'S FUTURE

Population

Dr. Charles D. Laidlaw, a planning consultant and University of Maryland professor, told how major population shifts might play out over the next fifty years.

For example there will be a lot more elderly people. Dr. Laidlaw said "improved lifelong medical care will result in a three-fold increase of persons eighty-five and older (in which) women will outnumber men by a three-to-one ratio." Maryland's rate of population growth will decline and stabilize, yet a million more people will probably live in Maryland and a half million more jobs will be needed. While major metropolitan growth will continue, he expects to see a significant shift in growth toward smaller urban areas and mid-sized towns. Dr. Laidlaw said the impact of these and other changes will be felt in all aspects of life in Maryland.

Kalman Hettleman of the University of Maryland's School of Social Work and Community Planning said he was more concerned with what life will be like in fifty years than the exact number of those who will be around. He also expected and hoped that in fifty years "there will be a significantly greater equality . . . of income and wealth and a greater sense of social community than exists today."

Dorothy J. Lehrman, student representative to the University of Maryland's Board of Regents, felt that "The future should deal not only with survival but with the quality of life."

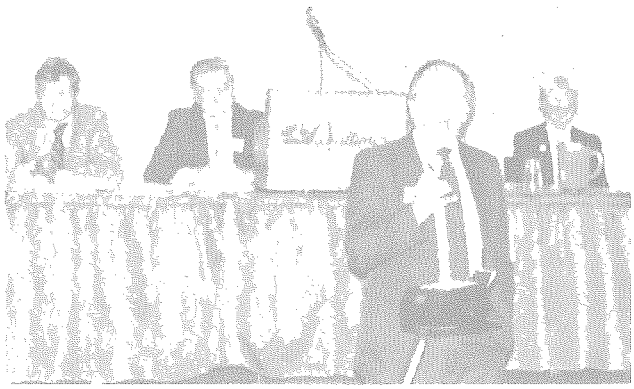
Economy

Maryland along with the nation and world is moving from a "farm-and-factory" to an "information-and-services" economy, according to Dr. Paul Larkin, Director of an Institutional Research Center in Prince George's County. Dr. Larkin outlined the major trends affecting the Maryland workforce and told where Maryland's major job-producing opportunities may be found. In preparing for the future he emphasized the importance of "quality education with academic challenge on the one hand, and well-mannered teamwork on the other." Teamwork-building skills were further underscored when he said "we must renew our emphasis on courtesy, conflict resolution, and dispute negotiations."

Dr. Brent Johnson, Maryland's Secretary of Employment and Training, agreed that Maryland is moving toward a services economy but was concerned that "the loss of manufacturing as a major segment of the economy could well result in a poorer standard of living in this country." Dr. Johnson also agreed that education and training should be important priorities in preparing for the future.

Sister Kathleen Feely, SSND, President of the College of Notre Dame of Maryland, said that "producing this workforce will require a much more individualized, tailored approach to teaching, particularly at the elementary level."

Dorothy Lehrman, Julia Metcalf (panel moderator), Dr. Charles Laidlaw, and Kalman Hettleman



Dr. Brent Johnson, George Reeves (panel moderator), Dr. Paul Larkin, and Sister Kathleen Feeley

Government

Dr. John Foerster of the U.S. Naval Academy offered a thought-provoking and controversial appraisal of the ability of State and local governments to function efficiently in a future of scarce resources. According to Dr. Foerster, "There must develop a new, perhaps radically new, government which trims the bureaucracy to a minimum." He then outlined why and how he thought State and local government should be restructured. To eliminate duplicate programs, improve services, distribute taxes equitably, bring education onto par in all areas and protect the environment, Dr. Foerster said State government should be streamlined, and counties should be dissolved and replaced with a system of regional governments.

Our panel of elected officials disagreed with Dr. Foerster's appraisal. House Speaker Benjamin Cardin said the regional system would not work, and that "the proposed five regions covered too large an area, resulting in too few governmental units to assure representation of all segments of the population, proper governmental control and accountability for governmental actions."

C. Vernon Gray, a member of the Howard County Council, said "the proposed regional system obscures government's access to the citizenry thus hampering their attempts to manage conflicts and meet needs." Councilman Gray thought a more appropriate solution to more cost-effective government was home rule for all counties.

Howard County Councilman C. Vernon Gray, Julia Metcalf (panel moderator), and House Speaker Benjamin Cardin

Chesapeake Bay

Dr. Ian Morris, Director of the University of Maryland's Center for Environmental and Estuarine Studies, presented his outlook for the future of Chesapeake Bay. He told how the Bay is affected by naturally-occurring conditions and how much man has dramatically changed these conditions. Dr. Morris identified four main problem areas—sedimentation, nutrients, toxic substances and living resources—and offered his outlook for their future improvement. He urged action when he said "The future of a system as complex as the Bay will . . . depend on controlled actions by man modifying the deleterious effects of increasing pressures from man." According to Dr. Morris: "If management actions are put into place and enforced it seems possible that fifty years from now the water quality in the Bay will be comparable to the present condition and in some upper parts of some of the rivers, local improvements might be expected."

Dr. L. Eugene Cronin, Director of the Chespeake Research Consortium, agreed with Dr. Morris and suggested some specific management approaches. He emphasized that the Bay involved other states by saying "The Bay is a regional resource stretching far beyond Maryland and must be addressed as an entity."

Dr. L. Eugene Cronin, Julia Metcalf (panel moderator), and Dr. Ian Morris

ESSAYS AND COMMENTARIES ON MARYLAND'S FUTURE

Agriculture

Agriculture in Maryland and the nation is in transition, according to Alan Kempske: "The farming community and those who plan for it have a choice. They may select policies and priorities that reflect an orientation to farming as a 'culture' or way of life worth preserving, or as a 'business.'" Mr. Kempske outlined a strategy for the survival of agriculture in Maryland. He said agriculture should become more business-oriented and build upon Maryland's fundamental agricultural strengths: excellent agricultural land and diversity of production, public commitment to preserve good agricultural land, proximity to large agricultural markets, strong shares of growing agricultural market segments, innovativeness and an ability to build a community of interests among rural and urban residents.

Robert Gray of the American Farmland Trust agreed with Mr. Kempske's ideas, but was pessimistic about the future of agriculture in the Piedmont unless there is an all-out effort to save it. He said "The battle to retain agriculture in the Piedmont will be won or lost in the next twenty years."

F. Grove Miller, Chairman of the Maryland Agricultural Land Preservation Foundation, added his view that "technological improvements in agriculture have not even begun to scratch the surface." He also underscored the importance of local control in the State's Agricultural Land Preservation Program if it is to be successful.

Housing

"Economic and social factors suggest the re-use and redevelopment of centrally located urban land," according to Dr. Allen C. Goodman of the Johns Hopkins University. Spiraling petroleum prices, smaller households with different needs, low prices for central city houses and land have made central city land desirable for reinvestment. Dr. Goodman used housing indicators and recent census data to predict the likely location and pattern for future redevelopment activity in the Baltimore and Washington areas. He urged special attention for those who live in these areas when he said "policies must minimize the pain of dislocation, and must also strive to avoid . . . individual and neighborhood disruptions."

Leon N. Weiner, nationally known housing expert and builder, agreed with Dr. Goodman about the prospects for continued redevelopment in Baltimore's center city, but dismissed as unreliable any specific long-range projections. Mr. Weiner also pointed out that "Economic imperatives favor high density residential development in urban areas," and listed the reasons why.

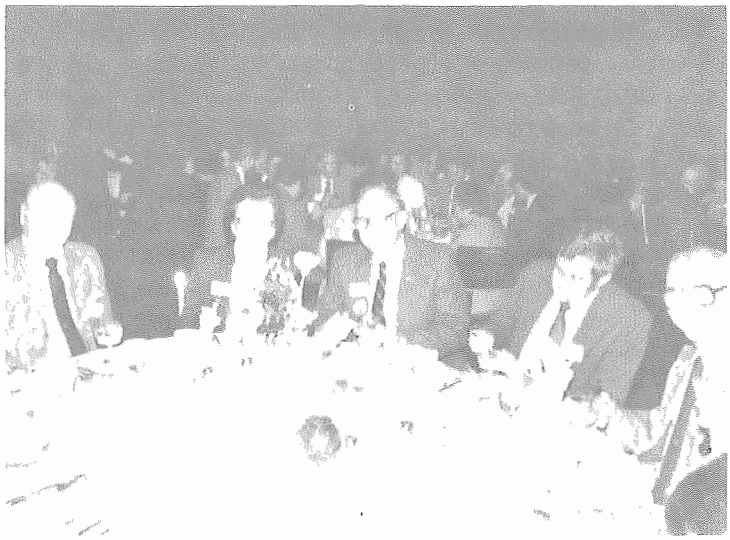
Lola Smith, of the Housing Assistance Corporation, offered a somber note in the proceedings when she said "The next fifty years will be unequaled in the unsatisfied need for housing for many Maryland citizens who have low or moderate incomes."

F. Grove Miller, George Reeves (panel moderator), Alan Kempske, and Robert Gray

Leon Weiner, George Reeves (panel moderator), Dr. Allen C. Goodman, and Lola Smith

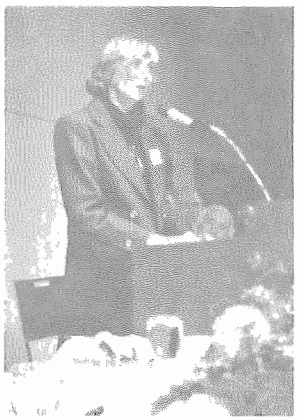
Arnold Kronstadt, Chairman of the Maryland State Planning Commission

George Reeves, Margaret Kline, William Smith, Dr. Abel Wolman, and Secretary Lieder



At the Futures Conference evening program

George Brady, Martha Klima, Julian Lapides, Julia Metcalf, Saul Stern (former Chairman of the State Planning Commission), and Vladimir Wahbe (former Secretary of State Planning)



Margaret Kline, Chairperson of the Futures Committee

2
A Tribute To Dr. Abel Wolman

Dr. Abel Wolman, American emeritus professor and public health engineering consultant, received at the Futures Conference the highest award that a Maryland Governor may bestow upon a citizen. Governor Hughes has named Dr. Wolman "Admiral of the Chesapeake Bay" in recognition of his contributions and loyal interest in the Maritime State and its beautiful Bay. Secretary Lieder, in presenting the award on behalf of Governor Hughes, said "Tonight we recognize Dr. Abel Wolman for his many contributions to the State, the national and the world communities."

It is particularly fitting that Dr. Wolman received his award at the Futures Conference celebrating the fiftieth anniversary of the Maryland State Planning Commission, for Dr. Wolman was appointed its first Chairman, a position he held through its formative years. These were the turbulent years of the Depression, followed by World War II and planning for the post-war era. Dr. Wolman established a high standard which serves as a beacon for planning in Maryland.

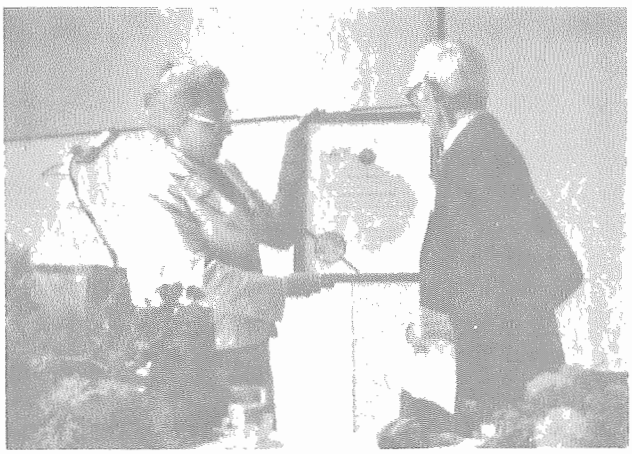
Dr. Wolman's still-active career of over 70 years has brought him international recognition as a leading authority in all forms of water use and development, public health and sanitation. He has been an educator, regulatory official, consultant, and advisor. His work has covered a wide spectrum of water resources development, wastewater disposal, pollution control, management and finance with particular emphasis on public health and socio-economic-political relevance. He has authored four books and over 300 articles published in scientific journals, has received four honorary doctorate degrees and numerous awards for his achievements, and has been made an honorary member of many professional and scientific organizations.

Dr. Wolman's award presentation at the Futures Conference was appropriate in light of his remarkable and well-known ability to perceive future needs and how to meet them. According to the Baltimore Public Works Museum, "Dr. Wolman has turned the task of supplying water for the present and sometimes unpredictable future into a science and artform."

As he accepted Governor Hughes' award, he offered some interesting observations based on his long years of experience with planning at all levels of government.

Dr. Wolman said "The definition of planning has all the elements of logic and wisdom" but so often falls by the wayside because of "a minimum of realism."

He emphasized for the historically-minded how planning goes through "the peaks and troughs of public acceptance."



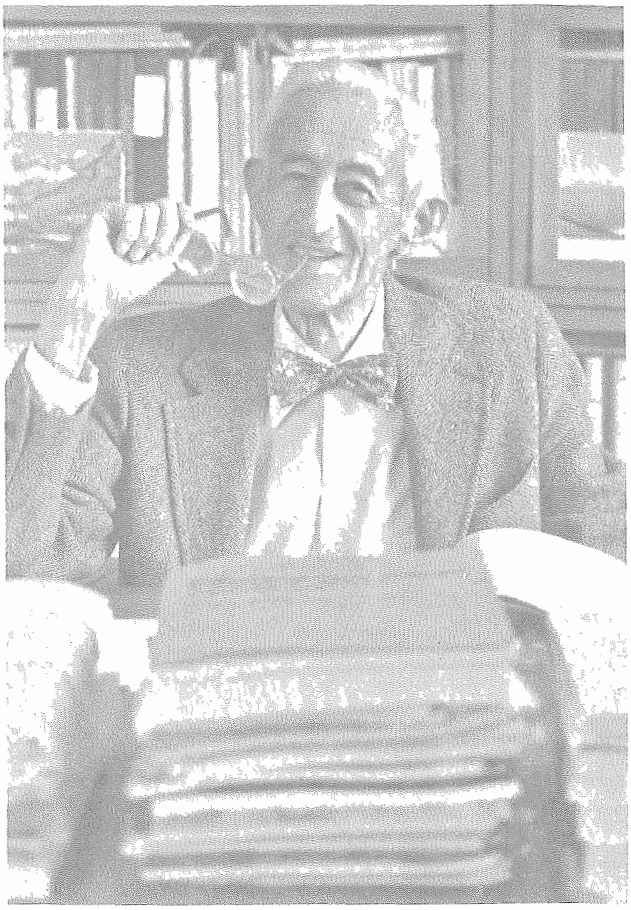
Dr. Abel Wolman receiving Admiral of the Chesapeake Bay Award from Secretary Lieder on behalf of Governer Hughes

The present mirrors the past, observed Dr. Wolman. He described some personal experiences to illustrate his point. In 1914 as a resident engineer in construction he lived for six months at Springfield State Hospital—which was then called Springfield State Hospital for the Insane. The next year in the same capacity he lived for six months at the House of Correction in Jessup. There he saw the issues of mental health and corrections first-hand. Today, nearly seventy years later, both problems remain.

Dr. Wolman then turned to the shellfish industry of the Chesapeake Bay. He said that in his extensive travels around the world the Bay was considered "the finest underwater farm in the world with the least production." Having reviewed sixteen decades of historical information about the problems of the Bay's shellfish, he came to an interesting conclusion about Bay politics. Legislative assemblies, past and present, have avoided the issue of the development and recovery of Chesapeake Bay and its shellfish industry.

Dr. Wolman's final observation concerned a "new and important parameter" where "perception is much more important . . . than reality." Manipulated by political and environmental activists, perception is influencing policies and decisions to an increasing extent.

In concluding his remarks at the Futures Conference, Dr. Wolman said "Thanks for the joyous welcome which I've had today and, incidentally, for all my years as a faithful devotee of the State of Maryland."



Dr. Abel Wolman (Photo by William Denison)

3
A Look At Maryland's Future

Neal Peirce

Contrary to the popular viewpoint tht America is a single, mass, homogenized culture, each state is a unique blend of history, people, and economic and natural environments. Local leadership is a crucial ingredient in adapting to change. America is being remade from the grass roots up, and Baltimore is a prime example. These and other observations about life in America were presented along with some advice for Maryland and for planners.

I have found Maryland to be one of our most intriguing states, and Baltimore one of our most intriguing cities. I have written of Maryland as the place of the "superimposed civilization." What I call Old Maryland consists of the somnolent Eastern Shore; Western Maryland, a microcosm of Appalachia; Southern Maryland, whose character defies summarization; and Baltimore City, which H. L. Mencken likened to "the ruins of a once great medieval city." Old Maryland coexists with New Maryland — the shiny new post-World War II suburbs of Montgomery and Prince George's Counties, to which generous federal salaries brought growth and new wealth probably exceeding the wildest dreams of the developers and planners.

In 1980, as Harborplace was about to open, James Rouse told me that in two years Baltimore would be recognized as the most dazzling center city in America. Jim likes to make rather extreme statements, and I scoffed at that one; — but it wasn't so preposterous after all. Today, in speeches across the United States, I take a rather perverse pleasure in describing this blue-collar, lunch-pail, white-marble-steps locality as the epitome of urban revival — of what a city can do to pull itself up by its own bootstraps.

After Spiro Agnew resigned as Vice President in 1980, a famous native son, Russell Baker of the New York Times, was moved to write that "Baltimore is permissiveness. The pleasures of the flesh,

Neil Peirce (Photo by Peabody Communications)

Mr. Peirce is an author and syndicated columnist on state and local government themes and federal relations. His weekly column, the first and only one of its kind in the nation, has appeared in over 150 newspapers since 1975. THE BOOK OF AMERICA: Inside Fifty States Today (May 1983), which he co-authored with Jerry Hagstrom, was the culmination of a multi-year survey of life throughout America. According to Publisher's Weekly (May 6, 1983), the 910-page book offers "At last, a state-by-state guidebook to America that is intelligent, candid, lively, literate and wholly readable." Mr. Peirce has appeared on television and lectured extensively. A graduate of Princeton University, Mr. Peirce was a Fellow of the Woodrow Wilson International Center for Scholars at the Smithsonian Institution, political editor of the Congressional Quarterly, a founder and now contributing editor of the National Journal, and is a member of the Advisory Committee on State and Local Government Affairs at Harvard University's John F. Kennedy School of Government.

the table, the bottle, and the purse are tolerated with a civilized understanding of the subtleties of moral questions that would have been perfectly comprehensible to Edwardian Londoners. Gross and overt indulgence, however, is frowned upon. The gunned corpses that litter New Jersey are not part of Maryland life. That sort of thing is vice. Vice leads to cruelty and suffering, and what's more, is in bad taste. Sin is something else. Baltimore tolerates sin." You should have had Russell here tonight.

Let me take some time to tell you of my odyssey of the last fifteen years, as I traveled throughout the country, trying to understand the unique character of each of the fifty states and their large cities, trying to understand what sets each one of them apart from the others in our time.

The project began in the late 1960s, when I realized that since John Gunther wrote his classic "Inside USA" at the end of World War II, no one had tried to take a look at what makes all of our states tick--the constellation of people, power and politics that gives each one its individuality. I tried one book and ended up writing nine, which indicates that some journalist lacked control. A few years ago, a young fellow named Jerry Hagstrom started working with me. One day at lunch, he suggested that we co-author the one book, and we struck a deal. He comes from North Dakota, I'm from Philadelphia, so we had a diversity of perspectives.

In the past three-and-a-half years, we have traveled to each of the fifty states, conducting hundreds of interviews and asking in each case what has been the major factor for change in the state in the last decade or so. As we worked along, we found ourselves diverging from the viewpoint that the United States is a single mass homogenized culture, created by television and mass marketing. Each of the fifty states remains a unique blend of history, people, and economic and natural environments. To live in Massachusetts as compared to Texas, Arizona as opposed to Vermont, or Maryland as contrasted with Idaho is to live and move in strikingly different places. Can you imagine an actor named Ronald Reagan moving from a Midwestern town to Charleston, Philadelphia, or Baltimore, making his way through the political system of that area to become the state's Governor, and then using that state as a launching pad for the Presidency? Our suggestion is that only in California, the state of strangers, would that have been possible. Can you imagine the revered old Senator George Aiken of Vermont, the Robert Frost of American politics, making it through the cauldron of Texas politics with the likes of Lyndon Johnson, John Connally and Billie Sol Estes or Tom McCall, the great environmental governor of Oregon, ever being accepted in Louisiana, where governors are commonly enthralled with big oil and other forms of big money, savory or not? Can you imagine the super soap promoter and ex-Kentucky Fried Chicken king, John Y. Brown, becoming governor in Maine instead of his home state of Kentucky? A total change in character would be necessary.

*How does Maryland fit into the pattern of development across the fifty states? I would like to make two points. First, I think that since World War II, Maryland has enjoyed a Golden Age. The amount of population growth and economic growth in this state has been stupendous. Much of that comes courtesy of the federal government and the federal taxpayer; some has come through the smart business savvy of people in cities like Baltimore. Second, Maryland has a problem common to all states — split constituencies and their influences. You find in the split between the suburbs and Old Maryland a question of where the public consciousness will be coming from to guide the state's future growth. Can you even have a single public consciousness? It is very difficult when you have some people focusing on the D.C. suburbs, others on Baltimore, and still others on the disparate outlying regions of

---

*(Editor's Note: At this point, the speaker conducted a whirlwind tour of the unique characteristics of the 50 states and the largest cities, based on the findings reported in his and Hagstrom's book, THE BOOK OF AMERICA: Inside Fifty States Today, published by W.W. Norton & Company. He concluded by examining Maryland in the context of those findings.)

the State. A really hard challenge for Maryland is the need to build a common public consciousness that sticks together and tries with the joint efforts of people from different regions and classes to tackle its problems.

Another great Maryland challenge is how to harness the talents of its new residents, those that have come into the state in the last two decades, and their children, so that they do not become too preoccupied with Washington, for example, but become a part of the culture of the state in a very real way. New Jersey suffers because the skills of many of its citizens are being applied in Philadelphia or New York instead of in their own state. Maryland has some of that same problem with respect to Washington, D.C.

Maryland needs to think about its industrial policy—whatever that means; it's a great debate these days. There seems to be a "high tech" transformation traveling down the Eastern seaboard and ready to go West. How to get high technology into the State, how to use it, and how to tie it to the older manufacturing segment so that all prosper, rather than substituting one for the other, seems to me a key issue. The environment was mentioned earlier tonight; I was delighted to hear Abel Wolman's sharp comments about the shellfish industry. Each state needs to look at what are its greatest treasures and what it owns that the rest of the world should be able to enjoy. And land use remains a very important issue, particularly in terms of properly guiding suburban growth.

Finally, Maryland seems to be a state of very many fortunate people. The state's prosperity has made life a lot better for hundreds of thousands of Marylanders. The challenge for the planners is to be politically savvy and to consider the full range of their own skills, to look at what some of the best planners in America have done, such as Frank Keith of Massachusetts and Bill Press of California in developing urban policies for their respective states. Planners should use the skills of their profession so that the fruits of society can be enjoyed by more people and so that there can be more equilization, not necessarily of wealth, but of opportunity.

You might ask us, with all of our research about the 50 states completed, where we think the country now stands. Our answer would be that since state cultures still tolerate the exploitation of people and of the land, and that since states still commonly practice narrow beggar-thy-neighbor economic policies, there is much in American that bodes ill for the future. Yet in the promising renewal of Baltimore and so many other cities, in the neighborhood self-help movements cropping up from sea to sea, in the new wave of public-private partnerships, in more careful and resource-conscious public leadership, in competent and even imaginative city and state governments, we find the potential ingredients of an American Society that is both mature and adaptive to its new circumstances.

The objective journalist within us would say that no one can yet know which of the two futures, the positive or the negative, shall triumph. But the American and traveler and adventurer in us affirms that this is not a nation of tired blood, but a land of intense vitality and originality. It is a country not being well-directed from the top down now. We would doubt whether any President, Republican or Democrat, would be able to change the current condition of paralyzed central government very significantly. However slowly, painfully and experimentally, we are using our natural talents as a people to improvise for ourselves and for our communities in these laboratories we call our states. This country is being remade from the grass roots up. This we found in the 50 states and in thousands of communities on our odyssey, and this we believe is the American future.

4

Planning in Maryland: Accomplishments, Problems, and Issues

Robert Marriott, George Grier, Thomas G. Harris, Jr., and Franz Vidor

The evolution of planning in Maryland was recalled by a panel of experienced Maryland planners. George Grier described why education and step-by-step evolution of an understanding for the need for planning and zoning were so important in Maryland's rural counties. Tom Harris discussed the evolution of planning and the impact of the new town of Columbia on Howard County. Franz Vidor traced the history of planning and redevelopment in Baltimore City.

Robert Marriott

The planning movement has made notable progress in Maryland since 1933. Citizen planning boards have been established at the State level, in counties, Baltimore City, and 92 municipalities. Professional planners are employed at the State and regional levels, in counties, Baltimore City, and 15 municipalities. About a thousand public planners are employed in Maryland with public budget expenditures of approximately $30 million.

The wide distribution of this planning capacity within State and local governments constitutes an achievement of great significance. This is particularly true given the earlier resistance to the concept of planning. The process of planning has been integrated into most public decisionmaking activities in the executive and legislative branches. However, our particular branch of planning—multidisciplinary and comprehensive—is still not widely or successfully practiced.

The administration of planning programs and development activities by different agencies at various levels of government affecting the same people in a particular area creates a serious need for collaboration. Planners have led the way for improvement of intergovernmental coordination. The Maryland State Planning Commission has played a valuable role over the years in promoting planning cooperation. It is essential that local, State, and federal plans be harmonized with consistent policies and clear goals.

It is my pleasure at the fiftieth anniversary of the Maryland State Planning Commission to introduce three persons with long experience in planning in Maryland: George Grier, Tom Harris, and Franz Vidor. They will highlight the issues and problems tackled by Maryland's local planners.

George Grier

My task today is to tell you about the evolution of planning in the rural portions of the State. The rural counties consider themselves to be rather sophisticated when it comes to planning. Although some planning organizations were initially established in the twenties and thirties by the Maryland General Assembly and metropolitan subdivisions, rural counties, with the exception of those in Southern Maryland, did not initiate planning activities until after World War II. This was the

Mr. Robert Marriott, Deputy Director of Planning for Baltimore County, is President of the American Planning Association's Maryland Chapter. George Grier, who recently retired from his position as Administrative Assistant to the Carroll County Commissioners, has served in a variety of local planning and administrative directorships in Maryland. Tom Harris is Howard County's Director of Planning, a position he has held since 1961. Franz Vidor, Director of Planning for Baltimore City's Department of Housing and Community Development, has held a variety of posts in local and regional planning in Maryland.

beginning of a period of rapid change for our rural areas. It was believed by some agricultural leaders in these counties that planning could help cope with the changes on the horizon after the war years. We were hard pressed, however, to find citizens who were acquainted at all with planning or zoning concepts at that time.

Often the way rural counties were introduced to the planning process was through a consultant. In the fifties, there were very few rural planners around. Most planners were experienced in urban development and came from a few metropolitan centers around the country. These planners confronted rural communities who had a limited and preconceived understanding of planning. It is interesting to note how rural leaders educated themselves about planning and adopted unique ways of coping with the "moveable society" of the sixties and seventies.

The average rural citizen usually cringed when he found out that zoning meant control of the use of his land. However, this same citizen would petition the county for help to protect him from a junkyard in his community.

The introduction of planning to rural counties followed a definite pattern. We would first become familiar with Article 66B which was the legal basis for adopting local planning and zoning laws. We established a Planning Commission and then scouted around for a planning consultant, or adapted zoning ordinances from an adjoining jurisdiction. Upon hiring a consultant, a county employee, usually from public works, would be tagged to run the show.

We were able to visually grasp the complexity of our county when we purchased a set of photographic maps. Enthusiastic citizen volunteers would drive around the county and identify the existing land uses by color codes. When we mixed in the population trends and saw how people were using the land, a natural understanding of planning came about for our rural people. We could see the logic of separating industrial, business, and residential uses in various sections of the county. Of course, the more sophisticated elements of planning were not recognized or used in these early efforts.

Looking back on the scene, the pioneers in planning were called upon to travel to other rural counties. We were asked by these citizens to help them establish planning and zoning programs in their jurisdictions. It was usually our job to acquaint the politicians, the farmers, and citizens from all walks of life with the concepts of planning. We would explain that planning was something about how you wanted your county to grow. It was akin to a housewife arranging furniture in a new home. Planning was something that really didn't hurt.

Zoning was a rather different animal. We advised caution until enough people were supportive of the concept. A successful approach in those early days was to use interim zoning so people could become familiar with its advantages. An interim zoning ordinance which was not lengthy and dealt with limited uses such as junkyards, trailers, airports, and other conditional uses requiring public hearing was an ideal way to proceed. Then a more comprehensive zoning code could be developed over several years.

Another successful approach was to directly involve the farmer in studies of existing land use. The farmer was a potential opponent of zoning, so winning him over was an important first step. An early issue, which is with us today, was whether we should have a true agricultural zone.

It is important to be aware that planning and zoning are relatively new concepts having only been in operation for some twenty or thirty years. The jurisdictions in central Maryland got started in the fifties. Southern and most of western Maryland got involved in the sixties. Our Eastern Shore neighbors started planning programs in the late sixties and seventies, although some Eastern Shore communities had started earlier.

As planning programs began we needed information and assistance. The State Planning Commission responded by sponsoring a regional planning program in the Baltimore Region. This effort was the forerunner of the present Regional Planning Council established by State legislation. These early meetings provided an opportunity for people such as Abel Wolman,

Malcolm Dill, James Rouse, Richard Steiner, Philip Darling, and others to talk to county commissioners about planning issues.

We have learned by struggling with the issues of the day. We have weathered the storm over issues such as water and sewer, solid waste, areas of critical State concern, regional planning responsibilities, coastal zone management, agricultural preservation, urban redevelopment, and transportation.

May the next fifty years be as challenging as the last fifty years.

Thomas G. Harris, Jr.

It is interesting to reflect on missed opportunities or how things might be if different choices were made at an appropriate time. In reviewing some old records dating back to the early fifties, a letter was discovered that was written in 1929 by Dr. Wolman recommending the creation of a water reservoir on the Patuxent River at Savage in Howard County. If the County decisionmakers had acted on that recommendation, Howard County would now have an independent source of water. Instead, we depend on WSSC and Baltimore City to provide our water.

While missing that opportunity, Howard County did establish zoning early. The first zoning ordinance was drafted by James Macgill, first Zoning Commissioner in the County, and was adopted in 1948 by the County Commissioners. A very simple sentence in the initial code that prohibited billboard signs, except in the business district, has worked to spare the county from unsightly signs. These early planning decisions set patterns which continue. Fortunately for Howard County, the early decisionmakers did a good job.

In 1951 the County adopted its first subdivision regulations as a result of concern being expressed about the way the land was being developed. In 1954 the County revised the first zoning code from three basic districts to an entire array of districts and adopted a new zoning map. In 1956, subdivision regulations were approved.

All this land use control activity was initiated prior to the County's employing professional planners. The Planning Commission did its own planning. In 1958 the County adopted a sewer plan. This plan was developed based on the idea that the County was obligated to provide sewer service throughout the County. This was the first acknowledgment of the pressures for growth from Baltimore and Washington which could consume most of the land in the County for residential use at relatively low densities. The sewer plan envisioned the entire County being developed; it seemed inevitable.

Later in 1958 the County hired its first professional planner, Eugene Wheeler, from Baltimore. He convinced the Planning Commission, which had been in existence for seven years, that they should have a plan. State enabling legislation provided for planning. He told the Commission they should be doing some planning, not just zoning. I was hired in 1959.

We worked for two years to develop a general plan that could be used as a guide for growth. This plan was adopted in 1960 and was the plan which Jim Rouse faced in 1963 when he first approached the County about developing a whole new community. Jim Rouse announced to the County Commissioners that he had purchased 15,000 acres, or ten percent of the County's land area.

Twenty years ago Jim Rouse disclosed his plans to the County Commissioners. He described his desire to develop a "planned city" to avoid sprawl. The County plan was often described as "controlled sprawl." Jim Rouse said he could do a better job. He thought his plan would eliminate waste, promote the environment, and provide jobs, recreation, shopping and health care, and commercial and industrial growth. In an area where our plan called for only about 400 acres of nonresidential uses, he felt 2,800 acres of commercial and industrial use could be developed and would result in a better tax base and more jobs. He sold the County Commissioners on the concept, but they wanted to see a plan.

Rouse indicated he was going to develop a plan over the next year with the involvement of the County's leaders and citizens. He convened a multi-disciplinary work group to help form the plan. The plan was structured by villages focussing on a town center. The villages were composed of neighborhoods. The plan was to build a complete city.

We coordinated the planning process to ensure the new town would be functionally integrated with the County, particularly the open space system and transportation network. After 300 meetings by the Rouse Company with citizens, community groups and public officials, the concept plan achieved a consensus in 1964.

New town zoning district regulations were added to the zoning code in May 1965 which gave the developer the flexibility he needed but included a way to hold him to his promises.

After adoption of the zoning provisions, Rouse asked for approval of a preliminary development plan, in accordance with the zoning requirements, which is a conceptual plan showing the distribution and acreages of land use types as the zoning district does not. This plan was then adopted by the Zoning Board in August 1965. Final development approval became the responsibility of the Planning Board. This Board reviews and approves the final development plan which details the land use activities by parcel. It is similar to a subdivision plat. Performance criteria are also adopted to regulate future uses in a manner similar to zoning requirements. The final controls are very precise.

Currently Columbia has 14,000 acres in the preliminary development plan, but only 6,800 acres have been recorded for development. The residential population is 54,000 people in 18,000 units, which ultimately will be built out to 32,000 units and slightly less than 100,000 people, if the household size remains the same. Columbia is about 60 percent complete today.

The first residents of Columbia moved into Bryant Gardens Apartments in 1967. Single-family home construction soon followed. The success of Columbia can be measured in the following ways: substantial amounts of open space have been recorded at no cost to the County; housing choices in the County have been greatly expanded; Columbia is an "open community," integrated by race, income, education, age, etc.; underground utilities were used before the State required this standard in new construction; a sediment control plan was developed, also before State law required this practice; stormwater management was introduced early in the process; jobs were created (now 34,000 permanent jobs among 1,100 businesses); and the tax base was enhanced (Columbia has always been a positive revenue generator producing 20 percent more revenue than expenditures); builders were required to provide all necessary infrastructure and the developer pre-serviced the area with nonpublic facilities.

Since 1966 the County's tax rate has gone down from $2.76 to $2.59 per 100 dollars of value. The experience with Columbia has helped the County do a better job of planning.

In 1971 a new general plan was adopted which anticipated that most of the County's development would occur in and around Columbia. This provided a basis for protecting rural/conservation areas in the western section of the County. A new zoning map reinforced this trend by reducing density through large lot zoning (3 acres) in the rural residential areas. This plan provides for a greater concentration of development in Columbia and eastern Howard County.

In 1982 a revised general plan was adopted which emphasizes agricultural preservation and rural/conservation areas in the western portion of the County. Development is concentrated to the east in and around Columbia. Columbia has provided an excellent model of how we can develop other portions of the County intended for growth. We are currently engaged in a comprehensive revision of the zoning code and map.

Franz Vidor

It can be said that the high calibre of planning commission members and professional staff has been a critical ingredient in the success of planning for the past fifty years and will help move us forward for the next hundred years.

In order to provide a context for a discussion of planning accomplishments, it is useful to understand the demographic changes that have occurred in the Baltimore Region over the last fifty years. Between 1930 and 1980 the regional population doubled; however, the distribution of this growth was not equal among the Region's jurisdictions. The fastest growing jurisdiction was Howard County (633%), the slowest was Carroll County (168%).

Baltimore City grew for the first twenty years, but declined over the last thirty years, resulting in an overall reduction in population of two percent. In 1930 two-thirds of the State's population lived within the Baltimore Region; by 1980 this had declined to one-half. Similarly in 1930 one-half of the Region's population was concentrated within the City, and by 1980 its share had declined to 36 percent.

The implication of these changes is that the counties planned for growth, while the City, at least for the last thirty years, planned for redevelopment. The City received a reduced share of funds allocated on a population basis, and the political power of the City within the Region declined.

The first real physical planning for Baltimore City was done in 1904 after the Great Fire, when the State legislature authorized the establishment of the Burnt District Commission. The first planning commission for Baltimore City was created in 1910 by an act of the State legislature. It was called the Commission on City Plan.

In 1932 the Planning Commission was reconstituted. Mayor Howard Jackson noted that the main purpose of the Commission was to coordinate the planning activities with the financial problems of the City--this being the beginning of the Capital Improvement Program process.

In 1947 the Planning Commission was reorganized again. Next month this Commission will hold its 1243rd meeting. In 1948 Malcolm Dill, who was Director of Planning for Baltimore County, made a presentation before the City Planning Commission. He described the proposal for a circumferential road around the City which he called the Beltway and which would be constructed to connect with main arterials coming from the City core. That same year, Arthur McVoy was appointed as the first professional Planning Director of Baltimore City. He came from MIT and received the "fabulous" salary of $9,000. In 1956 the Planning Commission published a brochure called "Prospects for Downtown Baltimore." It outlined a program for the survival of the city in three stages. The third stage included a sketch of a "possible plan for the inner harbor."

Regional Planning started in 1937 when a study of the Annapolis-Baltimore-Washington Regional Area was undertaken under the sponsorship of the State Planning Commission with staff from the National Resources Committee. In 1948 a short-lived Baltimore Metropolitan District Planning and Coordination Committee was organized by the State. In 1954 the Federal Housing Act authorized funding for areawide studies under Section 701, which in 1956 resulted in the establishment of the first Baltimore Regional Planning Council under the sponsorship of the State Planning Commission. In 1962 the Metropolitan Area Study Commission submitted a regional planning bill to the General Assembly which enacted legislation the following year creating the current Regional Planning Council.

Urban renewal is an extremely important element in the history of planning in Baltimore. The Housing Authority of Baltimore City was established in 1937 based on federal legislation. Its purpose was to eliminate slums and provide housing for low income families. The first public housing project was started in the City in 1938. In 1939 the Commissioner of Health condemned St. John's Court as "unfit for human habitation" and authorized its demolition by the City Building Department. The first housing code was established--based on health concerns--in 1941 and the City Health Department was responsible for its enforcement.

In 1945 a Redevelopment Commission was established, again based on federal legislation. Richard Steiner was its first director. In 1947 the Housing Court was established as the first such institution in the country. In 1950 the first federal urban renewal project was undertaken. In 1951 the Housing Bureau was established within the Health Department and charged with enforcing the housing code on an areawide basis and in cooperation with the City's Planning Department, Redevelopment Commission, and Housing Authority. In the same year, a "Fight Blight" fund was organized as a private non-profit group to assist low income owner-occupants who had to fix up their homes in response to the housing code. In 1954 the Commissioner of Health adopted additional housing code regulations which required, by 1956, a bath tub or shower, hot and cold running water, and an inside toilet for each dwelling unit.

In 1956 the Mayor appointed an Urban Renewal Study Board which consisted of nationally known experts. They proposed, and the City Council established, the Baltimore Urban Renewal and Housing Agency which consolidated the Housing Bureau from the Health Department. The Redevelopment Commission, some functions of the Planning and Public Welfare Departments and the Housing Authority were combined into a single agency, although the latter continues to this day to remain a separate legal entity. In their wisdom the framers of that legislation tied planning into the redevelopment process by requiring Planning Commission certification of renewal plans as being consistent with the City's Master Plan. Finally, in 1966 the current agency, the Department of Housing and Community Development, was created as a separate City agency by adding the building inspection functions from the Department of Public Works.

We should recognize some of the many quasi-public planning and development corporations which the City has fostered. These include Charles Center - Inner-Harbor Management Inc., a similar organization for the retail sector called the Market Center Development Corporation; the Housing Assistance Corporation, the Towson Development Corporation; and the Baltimore Economic Development Corporation. Private planning groups have also made important contributions to planning. The oldest is the Municipal Arts Society that commissioned a study by Olmstead which resulted in a plan for parks in the Baltimore area. More recently, in the 1960s, it co-sponsored a study of the Jones Falls Valley.

In 1941 the Citizens Planning and Housing Association was established and is still active. The Planning Council of the Greater Baltimore Committee was established in 1956. Later a Green Spring Valley Planning Council was established.

When we talk about planning in the Baltimore area we need to look at highway planning. Between 1942 and 1957 there were eight major proposals for an east-west expressway connection through Baltimore City. Most of the alignments were north of the CBD. In 1945 Nathan Smith proposed an inner-city ring with extending radials. In 1956 the Interstate Highway Act was passed which resulted in plans for the Beltway and for the Jones Falls, East-West, and Southwest Expressways. Although inside the City these proposals had very little public support, they were adopted into the City Master Plan in 1957.

In 1960 the City Planning Commission reviewed all previous highway plans and recommended an inner harbor crossing for the first time in preference to previous alignments north of the CBD. In 1961 consultants were hired to examine 20 different routes. They recommended the "10D" alignment which is essentially the I-170 and I-95 corridor. Public hearings were held from 1965 to 1967. In 1967 the City Council adopted the final condemnation ordinance for the interstate system. As public resistance continued, a multi-disciplinary "design concept" team of physical, economic, and social experts was constituted to study the system. This was a national first. It recommended to the Mayor another alternative in 1968. This "3A" system deleted the Inner Harbor segment, and reduced the scale of other inner-city roads.

Shortly thereafter, "joint development" was instituted under the auspices of a new Interstate Division for Baltimore City. As of this time, the 3A system has been further modified by deletion of a section of I-170 through Leakin Park and the downgrading of the southeastern leg of the Jones Falls Expressway to boulevard status.

Overall, there have been many planning and development accomplishments during the past 50 years. The following can be attributed to public policies: better private-public partnership, more active citizen participation, relatively long tenure of local planning directors, emphasis on better design, greater interjurisdictional cooperation, a recognition of the need for historic preservation, a shift from wholesale demolition to rehabilitation, the use of innovative approaches — such as the creation of the Trustees or the leveraging of public funds — and particularly in the City of Baltimore, a change in attitude from apathy to enthusiasm.

Specific achievements in Baltimore, with emphasis on the Charles Center and Inner Harbor areas, are shown in the following slides. In addition, it should be noted that insofar as public housing is concerned, all new high-rises have been built for the

exclusive use of the elderly, and low income families have been placed in some 2000 rehabilitated, but formerly vacant, houses scattered throughout the City.

The employment base of the Region was greatly increased by the move of the Social Security Headquarters to Woodlawn, and its subsequent expansion to downtown Baltimore. The tapping of the Susquehanna River as an additional source of water supply enhanced the Region's growth potential. The adoption of growth management plans in the counties helped protect agricultural land from development.

Finally, mention must be made of planning education in the Baltimore Region, which was nonexistent during the first three decades of the past 50 years. In 1964, what are now known as the Essex Community College and the Community College of Baltimore cooperated in establishing an Urban Development Assistant Program to train students as support personnel for professionals in the fields of planning and development. This was a national "first." At the graduate level, a planning program was established in 1971 within the School of Social Work and Community Planning at the University of Maryland at Baltimore, and in 1974 at Morgan State University. The creation of the Center for Metropolitan Planning and Research at the Johns Hopkins University in 1972 provided another important academic resource in Maryland.

5

Maryland 2033: Our Population In Fifty Years

Charles D. Laidlaw

Maryland will face a continuing challenge during the next fifty years in meeting the needs of a dynamically changing population. While the exact dimensions of these changes are not clear, a broadbrush picture of major shifts can be drawn. Maryland's rate of population growth will decline and stabilize, yet a million more people will probably live in Maryland and a half million more jobs will be needed. While major metropolitan growth will continue, a significant shift in growth toward smaller urban areas and mid-sized towns may be seen. The number of elderly citizens will double while the youth-aged population will stabilize. The impact of these and other changes will be felt in education, employment, corrections and criminal justice, housing, health, politics — indeed, in all aspects of life in Maryland.

No one really knows exactly what Maryland's population will be like in fifty years. Still, it's important to explore that fifty-year population picture in some fashion. Creating a broadbrush fifty-year population scenario is an orderly—but flexible—way to approach that task.

One could, of course, produce highly detailed population projections for the decade containing the year 2033. But such projections tend to generate an impression of precision that's hard to justify for fifty clearly uncertain years in the future. So it seems more useful to pursue a less tightly structured scenario approach to peering fifty years into Maryland's future.

This exploratory essay is based on a composite scenario about the roughly five-million people who might reasonably make up Maryland's population fifty years from now. That population will probably be:

- About a million persons larger, at about 5.25-million persons than the 4.217-million counted in the 1980 Census;

- Living in households averaging 2.5 persons, down from 2.8 in 1980 and implying continuing need for more housing units;

- Less dominated by youth groups under twenty as their share of the population drops to 24% from the 32% share of 1980;

- More balanced in the work force years from twenty through sixty-four as migration into Maryland levels off at near-zero levels and baby boom ups-and-downs virtually disappear;

- A few years older, on average, with life expectancy close to eighty years, median age pushing forty, and fifteen percent of the population sixty-five or older — that substantially up from the nine percent elderly share of 1980;

- Somewhat more nonwhite in character with a 70%-to-30% white-nonwhite mix rather than the 75%-to-25% mix of 1980 due to nonwhite birth rates remaining somewhat higher than those for whites; and

- More compactly distributed within today's major urban and metropolitan areas but also more dispersed around the State in growing mini-metropolises and urban towns.

Dr. Laidlaw is a private planning consultant and a Visiting Associate Professor at the Institute for Urban Studies of the University of Maryland at College Park. He received a Ph.D. in Planning from the University of Pennsylvania, and has served in a variety of teaching, consulting, and public and private planning organizations. He is the author of publications and reports on planning and analysis.

Knowing—or, more accurately, anticipating—those overall fifty-year population characteristics provides some useful benchmark indications of future private market potentials and public service needs.

Table 1 presents key elements of that composite fifty-year Maryland population scenario—and some of its pre-1980 antecedents—in a somewhat more detailed and time-phased fashion.

The table is based on an overview of recent trends and likely population dynamics. Specific population levels, characteristics, percentages, and growth rates are based on:

- Analysis of actual 1970 and 1980 census data;
- Review of trends from as far back as the thirties and forties;
- Interpretation of Maryland Department of State Planning projections to the year 2000;
- Examination of similar projections for the Baltimore and Washington metropolitan areas; and
- Extension of likely population dynamics and urban settlement patterns to roughly 2035 or so.

The composite scenario that emerges is one of both continuity and change. Maryland will still be Maryland fifty years from now. But there will be substantially more people. And they will be facing both new—and old—Statewide planning problems.

This deceptively simple composite scenario presentation provides a basic backdrop for virtually all of the people-oriented fifty-year population scenario commentary that follows.

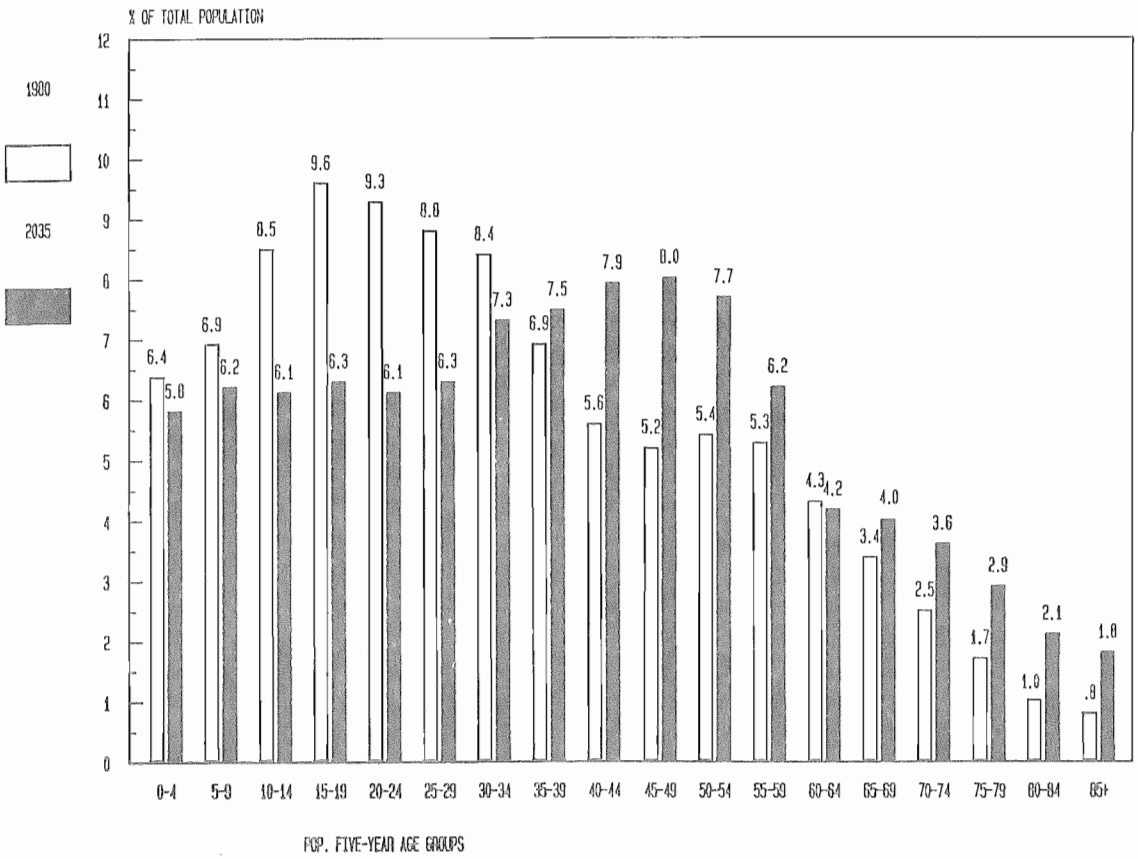
Another graphic fifty-year view of Maryland population prospects is also in order here. Chart 1 presents unisex population age-group percentage distributions—in bar-chart form—for 1980 and roughly 2035.

The chart shows the 1980 census-reported percentage distribution of five-year age groups along with a "best guess" distribution for fifty years from now. It reveals a dramatic shift toward a more stabilized and better balanced population one-third of the way into the next century. In many respects, this percentage distribution is more significant than are actual population projections, though actual numbers of people are also of obvious importance for long-range planning. Even though age-group percentages will shift, dramatically in several cases, all population groups except the four groups from ages ten through twenty-nine will show increases

TABLE 1: MARYLAND COMPOSITE POPULATION SCENARIO HIGHLIGHTS

ELEMENT OF INTEREST	1970	1980	2000	2035
Total Population	3,924,000	4,217,000	4,860,000	5,250,000
Yearly Growth Rate	2.4%	0.7%	0.7%	0.2%
Percent Nonwhite	19%	25%	28%	30%
Housing Units (est'd)	1,200,000	1,400,000	1,900,000	2,100,000
Household Size	3.3	2.8	2.6	2.5
Percent 0-19 Years	38%	32%	26%	24%
Percent 20-64 Years	53%	59%	62%	61%
Percent 65-Up Years	8%	9%	12%	15%

CHART 1: Percentage Population Age-Group Distributions, Maryland — 1980 and 2035



in numbers of people representing markets and requiring public services. Little doubt, then, that Maryland's long-range planning stance must continue to include major attention to growing and shifting public facility and services requirements. Changes in numerical, percentage, and geographic distributions will make that essential.

Now that the general outline of a reasonably likely Maryland fifty-year population scenario is in view, the rest of this essay will examine:

- Where we've come from since the depression years of the thirties;
- Where Maryland's population is headed over the next fifty years; and
- What that means in terms of changing demographics, shifting economic forces and altered urban settlement patterns.

A society which looks largely at past trends becomes very adept at predicting what has already happened while missing major changes coming in the future. But a society which eagerly looks only to the future manages to miss the fact that history—particularly the history of demographic trends—does have a curious way of repeating itself from time to time. That's why an examination of past trends, evident future patterns, and overall implications is in order.

WHERE ARE WE COMING FROM? MARYLAND POPULATION TRENDS

The demographic trends which swept Maryland from a 1930 population of 1.63-million to today's roughly 4.3-million level don't seem very dramatic from the perspective of 1983. After all, today's world is looking toward a high-technology era featuring a computer in every home. And data on past population trends and shifts deals with seemingly lifeless numbers spread over half a century or so. But let's consider the vast span of Maryland change and emergence those figures reflect when looked at with some care. Among other things, they include some effects still being played out from the thirties and forties.

The basic dynamics of population change are very simple. Population at, say, the end of a year equals the population at the beginning of the year, plus births during the year, minus deaths during the year, and adjusted for net migration into or out of the area of concern. But that's where the simplicity ends and the complex uncertainty begins. Consider the following confounding factors relative to birth rates, death rates, and migration flows in terms of Maryland trends over recent decades.

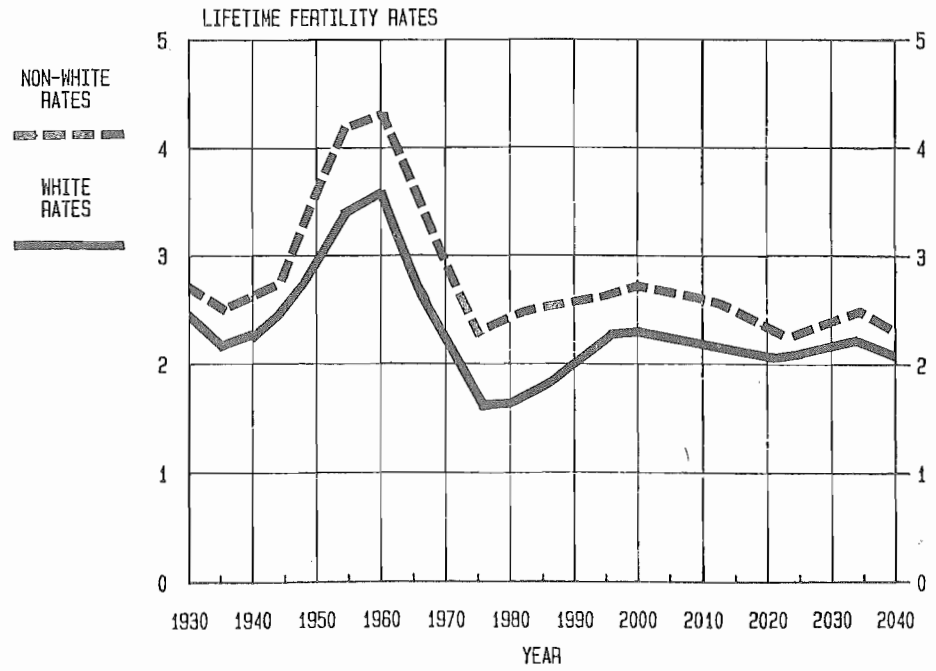
Birth Rates are obviously a major population change factor in terms of both numbers and percentages. They vary substantially with age, race, income, and educational level and continually defy accurate anticipation (Taeuber, 1978, pp. 15-41). There are, indeed, birth and fertility rate change patterns over time. Maryland—and national—birth-based fertility rates fell off during the depression years of the 1930s, stabilized briefly at moderate growth-producing levels during the early 1940s, and then soared to record highs during the late 1940s and on into the 1950s. More recently, those rates dropped drastically from the early 1960s to the mid-1970s, then rose somewhat in the late 1970s and early 1980s. Throughout that fluctuating history, Maryland nonwhite fertility rates were consistently twenty to twenty-five percent higher than white rates.

Those trends can, of course, be converted into wave-like cyclical patterns. Yet one would be hard-pressed to determine the actual causes at work since birth rate changes can be attributed to such differing factors as postwar family formation surges, anticipation of continued prosperity, expectation of economic decline, birth control improvements, changed attitudes about marriage and having children, and child-bearing delays associated with career plans. Little wonder, then, that anticipating the timing and magnitude of birth rate upswings and downturns is such a tricky business (Grier, 1971).

The basic point to be drawn from the chart of past—and prospective—fertility rates is that they do vary, and often in unexpected ways. Conventional demographic wisdom in the seventies was that fertility rates would continue to decline on into the eighties. But, in reality, they went up as couples decided to have career-delayed children and economic anticipation improved in some segments of the economy. Yet it also seems evident that the very high levels of the 1960s and 1970s are probably behind us with future levels likely to hover at very nearly zero-population-growth replacement rates or just a bit higher.

Death Rates can be converted into more comfortable survival rates for analysis purposes and have shown continual long-term decline in virtually all age-specific population groups. That composite trend has resulted in longer life expectancy and a higher median age for Maryland's population, a pattern likely to continue with only minor distortions well into the next century. Death rates are usually fairly stable over periods of a decade or so, but they do show an overall pattern of decline as medical advances and economic improvements contribute to longer life expectancy and reduced risk of succumbing to disease. In reality death rates differ among the age-sex-race groups making up a given population. And they vary from state-to-state, even within a state or city. Some of the reasons for such variation are easy to state, while others are unfathomable. For example, increasing female employment levels have been accompanied by rises in stress-related deaths. The most common causes of death among young adults are murder, accidents, and suicide. On the other hand, continued long-run improvement in medical care and its availability will undoubtedly extend longevity for most of the population.

CHART 2: Fertility Rate Waves



Migration Flows and volumes to, from, and within Maryland have decreased in size and volatility since the great rural-urban and city-suburban surges of the forties, fifties, and sixties. Migration patterns are more erratic and unpredictable, by far, than are trends in survival rates or shifts in birth rates. Migration is sometimes pushed by economic distress or social upheaval, frequently pulled by economic opportunity or desire for more pleasant settings, often forced involuntarily by military or corporate organizations, and more than infrequently seemingly irrational. Maryland has experienced varied migration flows since 1960. They have included flows of rural Blacks moving from the deep South to economic opportunities in the Washington and Baltimore metropolitan areas, higher income households moving toward federal government growth in Washington and Baltimore, retirees moving to a more accessible Eastern Shore, widely varied households moving to suburbs and new communities like Columbia in Howard County and St. Charles City in upper Southern Maryland, and a backflow of both Blacks and Whites to enhanced economic opportunities in the South and Southwest.

Unfortunately, migration flows like those reported for Maryland show no obviously repeatable pattern. And, in fact, once a migration flow has been identified and then ended, it is unlikely to repeat itself. As a result, migration is, by far, the most difficult aspect of population dynamics to cope with in anticipating the future size and composition of Maryland's population. Currently it appears that Maryland's migration picture is not very turbulent. One can guess that selective in-migration and out-migration just about offset each other, that there is some net out-migration by older groups seeking retirement in the sun, and some shifting of population to non-metropolitan urban areas around the State.

The combined overall effect of demographic changes over Maryland's past fifty years or so is a population that is:

- Growing much more slowly than in the past, but still expanding significantly;
- Becoming relatively older as fertility patterns and birth rates stabilize very close to replacement levels;

- Taking on more balanced form in terms of proportional age group distributions; and

- Tending to live in smaller households, those households frequently located in newly urbanizing places.

The net result is that altered private markets and changing public needs are continually emerging in new forms across Maryland's statewide countryside.

Demographers can easily convert birth-death-migration factors into hundreds of pages of theory, discussion, and mathematics. And that is quite proper, but not for this essay. Here, we are more interested in some broadbrush scenarios about Maryland's likely population futures.

To be sure, today's computerized methods of projecting age-sex-race specific population size and structure alternatives on the basis of anticipated patterns of births, deaths, and migration are essential to anticipating likely population futures. Making such projections for five to twenty years can be very helpful in anticipating private market potentials, public service requirements, and public revenue prospects. Beyond that mid-range horizon, however, such tightly structured projection methods become less directly useful (Linstone, 1977, p. 10ff) largely because they tend to look precise when they probably aren't. In addition, discussion of structurally projected alternatives tends to focus on projection methods rather than on substantive issues of population change and emerging planning problems.

WHERE ARE WE GOING FROM HERE? A FIFTY-YEAR MARYLAND POPULATION SCENARIO

Structured population projections with detailed age-sex-race group breakouts are essential for mid-range planning with a time horizon of, say, twenty years or so. But structured projections aren't suitable, certainly not by themselves, for anticipating longer range population size and composition changes over the fifty year time-span being looked at here. The free-play imagining of distant future events and patterns of change simply doesn't fare well in structured projection approaches. By their very nature, they tend to overlook sudden shifts like drastic birth rate changes, major medical breakthroughs, or newly emerging migration flows. Likewise, such methods usually ignore "impossible" events which everyone knows can't happen. The sinking of the Titanic was "impossible." So, for Maryland, might be the notions of massive outmigration or a sudden surge in birth rates after the year 2000. Yet either, or both, could happen and have substantial impact on Maryland's long-run population future.

So—for the long run—anticipation of population futures often draws on scenarios. Scenarios are stories about varied, and yet likely, future situations. Individual scenarios usually have a specific subject, an overall setting or context, and assumptions about future events or conditions of major concern. In order to be useful, a scenario must be focused, make reasonable—though possibly surprising—sense, and contain a manageable series of assumptions. One frequently encounters massively complex scenarios presenting fanciful views of the future and cluttered with dozens of assumptions. They are loosely defined on the basis of some combination of trend analysis, consensus among experts, simulation modelling, and even creative fiction. Such bold, free-wheeling scenarios often make good reading and sometimes appear as novels or science fiction stories. But they often confuse issues and divert analysis into unrewarding areas of speculation.

Looking at Maryland's fifty-year population prospects calls for a less flamboyant and more orderly sort of scenario likely to stay within manageable bounds when it comes to interpretation. Key scenario manageability guidelines include using only a reasonable number of important assumptions, relying on a composite scenario illustrating a "family" of widely differing alternatives, and generating only as much background information as necessary. In general, few people can cope with more than, say, three major scenario themes and six or so major assumptions (Becker, 1983). Beyond that level of alternative futures thinking lie confusion and chaos.

Useful scenarios focus on clear synthesis of generally believable overall patterns of future change and adjustment. (Harris, 1960 and Toffler, 1970) Creating useful—but also interesting—scenarios about Maryland's fifty-year population prospects requires attention to some key issues and forces. They include such basic population forces as birth rates, death-related survival rates, migration flows, and net annual growth rates. They also include more general factors like national and worldwide economic conditons, family formation and planning prospects, and the all-pervasive issue of technology. For each, a few comments:

- Birth rates are generally anticipated to exhibit moderate near-term increases slightly above levels attained in the late seventies. For the remainder of this century, one can reasonably expect composite Maryland birth rates to exhibit minor ups and downs prior to stabilizing at levels just above the zero-population-growth replacement level. For the early decades of the next century, the most common assumption one can glean from available studies is an approximate stabilization of overall birth rates just slightly above the zero-population growth replacement level. Throughout the fifty-year scenario period, nonwhite birth rates will continue at levels somewhat higher than white rates, as has consistently been the case throughout the past fifty years. But nonwhite rates will also come closer and closer to white rates throughout the scenario period. The net long-term result of these birth rate assumptions will be slowed population growth, reduced percentages of children among the total population, and some slight increase in the proportion of nonwhite population.

- Death rates are generally anticipated, particularly in the working years from twenty to sixty-four, to continue exhibiting moderate declines. That will have the effect of extending life expectancy, increasing the population's median age, and raising the proportion of the population sixty-five and older to nearly fifteen percent of total State population, up from the six percent reported for 1980. Even more striking—and significant—is the likely fact that improved lifelong medical care will result in three-fold increase of persons eighty-five and older.

- Migration is, at best, hard to call. Migration flows are, in several respects, likely to be a somewhat open question since they respond to so many widely variable forces. There is general agreement about migration flows that have taken place and then stopped. But migration flows for the future are much more difficult to anticipate. Still, one can find subjective evidence suggesting somewhat accelerated outmigration for economic opportunity in faster growing areas or more pleasurable "Sun-Belt" locales, minor and highly selective in-migration for high-economic-advantage activities likely to expand with the aid of State-promoted enhancements, continuing out-migration for retirement, minimal in-flow of immigrants from other nations, stabilized suburbanization around improved economic core areas in the Baltimore and Washington major metropolitan areas, somewhat accelerated shifting of selective urbanization in mid-sized metropolitan areas and urbanizing towns throughout the state, and lessened development pressure on rural areas. To assign specific numbers or years to such subjective anticipations would border on analytical lunacy. Yet one can anticipate a net effect in which both the working years and elderly populations are damped down a bit. All told, migration into and out of Maryland can be imagined as being nearly a "stand-off" situation, perhaps with slightly more prospect of being somewhat negative than of being slightly positive.

- Net annual growth rates, which have fallen sharply since the fifties and sixties, will level off at somewhat less than one percent yearly until roughly the year 2000, then drop to as little as 0.2% yearly after that. Taken as a whole, that "consensus" pattern of growth rate prospects implies a population of about 5.25-million people in fifty years.

That's the core of a fifty-year Maryland population change scenario. Framed in terms of general comments about birth rates, survival rates, migration possibilities,

and annual growth rates, it seems quite simple. Yet it includes the effects of many swirling and countervailing forces which "surround" the basic process of demographic change.

Some of those forces can have significant impact on basic population dynamics. Three, in particular are worth some comment: economic conditions, family formation and planning prospects, and technology.

- Economic conditions, both worldwide and national, will surely play a strong role in tempering birth rates and in directing migration flows. Positive economic expectations and, better yet, results may well raise birth rates to some extent and enhance Maryland's ability to retain its working years population. Increased productivity levels, improvement over today's inflation-depressed living standards, positive national economic restructuring, and public infrastructure investment management improvements can all serve as forces stimulating population growth. Downside patterns in any, or all, will tend to reduce population in terms of lowered birth rates and increases in net out-migration.

- Family formation and planning prospects will also be significant, though somewhat uncertain, population future factors. We do know that marriages are occuring later in life, divorces are still on the increase, childbearing attitudes are changing, and birth control methods are becoming increasingly reliable. Net result: a general context favoring downside estimates of future birth rates. But all that can, indeed, change suddenly should social perceptions or economic expectations provide the "right" signals. In another direction, the combination of later family formation, smaller families, continued prevalence of divorce, and increased life expectancy promises to result in a substantial increase in the number of smaller households--both young and old--with obvious housing need and public service planning implications (Schussheim, 1983).

- Technology will undoubtedly have a major impact on both the economy and society in general. The transition to a service-oriented "post-industrial" or "information" society in which computers and electronics will allow people to work in dispersed locations, or even at home, seems to be well under way. Trends toward "reindustrialization" with robots and increased international trade are widely commented upon. And there are already evident technology-related issues involving energy sources, mineral resources, agricultural prospects, ocean degradation, world atmospheric changes, even weaponry and war which are much discussed and little agreed upon. If nothing else, technology changes with increasing rapidity, enough so that many Marylanders can anticipate two or three careers in one lifetime, a far cry from the stability of lifetime patterns considered "normal" less than ten years ago (Dizard, 1982, p. 17 and Cornish, 1977, p. 11). The end result may well be to increase uncertainty about both what to do and where to do it, thus leading to altered family patterns and more turbulent migration flows.

Just those three sets of future conditions "surrounding" Maryland's fifty-year population future suggest a wide variety of forces which make selecting a single, "best-guess" population scenario difficult. Yet the context created by those factors—as well as basic birth, death, and migration patterns—is where Maryland's fifty-year population future probably lies.

WHAT DOES THE FUTURE MEAN? SOME FIFTY-YEAR POPULATION SCENARIO IMPLICATIONS

Preceding pages have traced a demographic path leading to a fifty-year Maryland population somewhat larger and more structurally stable than the one which has taken shape over the past fifty years. The most notable shifts in population structure are likely to be:

- A reduction in those under age twenty to 24% of the total population, down from 32% in 1980.

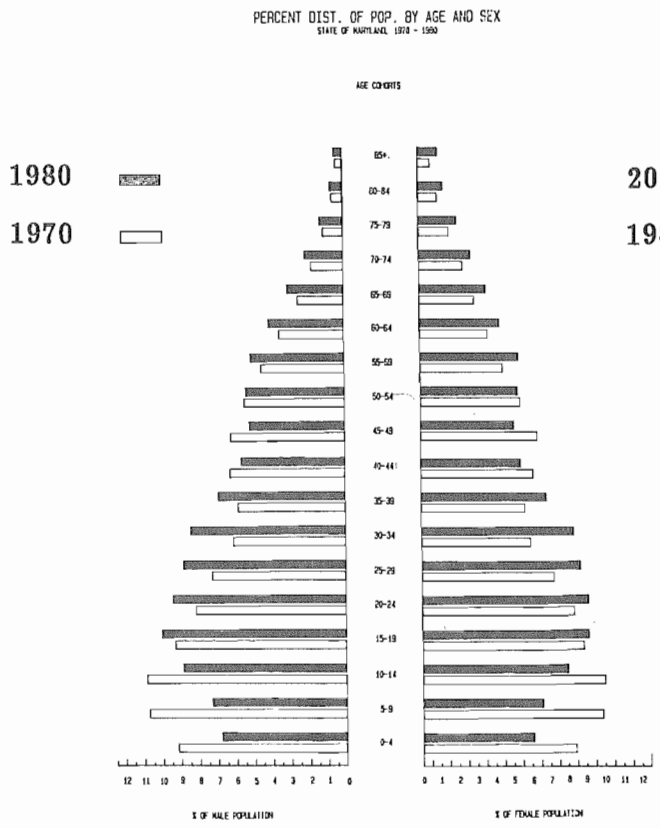
- Little change in the working years population from twenty through sixty-four at 61% of the total population, changed from 59% in 1980.

- Substantial increase in the population over sixty-five to 15% of the total population, up from 9% in 1980.

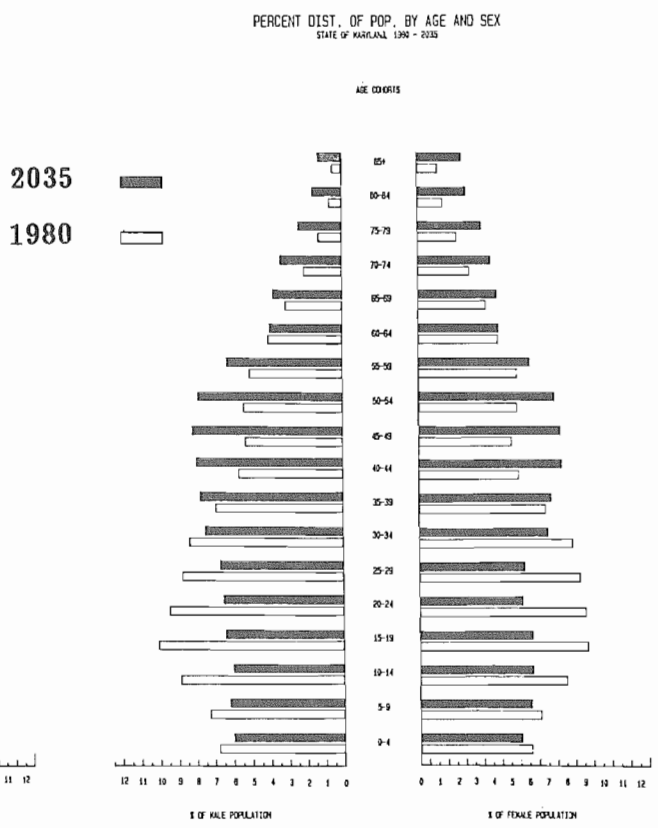
Of course, these percentages all apply to a population nearly 25% larger than that reported for 1980. That means that virtually every specific age-sex-race group in Maryland's fifty-year population of 5.25-million people will be larger than that same group for 1980. As a result, overall public service requirements will generally increase. But the structure of those requirements will shift, for example, toward enhanced services for the elderly, somewhat smaller housing units suited to new lifestyles and longer lives, continued consolidation of development in already urbanized areas, and new growth management planning for urbanized areas still to emerge.

A more graphic portrayal of Maryland's fifty-year population future can be gleaned from age-sex group population pyramids for 1970, 1980, and roughly 2035. Each pyramid shows the percentage distribution of male and female five-year age groups in Maryland's population for any given year. Combining those pyramids into pairs shows past—and prospective—shifts in Maryland's population structure.

CHART 3: Percent Distribution of Maryland Population by Age and Sex



1970 and 1980



1980 and 2035

The two population pyramid pairs provide a vivid glimpse of recent shifts and likely long-term outcomes. In simplest terms, the 1970s saw a narrowing of the pyramid for the younger age groups as birth rates continued to fall. At the same time, there was some broadening in the work force age groups, probably because of net in-migration for economic opportunity. And there was a modest expansion in the older age groups as life expectancy increased. Comparing a likely fifty-year future pyramid for roughly the year 2035 with the 1980 pyramid suggests further "squeezing" of the population structure reflecting continuation of relatively low birth rates barely above replacement levels, cessation of all but the most minor and selective net in-migration for economic opportunity, and sustained emergence of increasing numbers of people sixty-five and older.

Bearing those two pyramid pairs in mind, one can imagine a wide variety of likely fifty-year population scenario implications. Consider some of the more--and less--obvious possibilities inherent in the population pyramids and the demographic factors generating them:

- Total State population will, of course, be larger at roughly 5.25-million people for an increase of about twenty-two percent over the coming fifty years. That simply reminds us that even low annual growth rates—tapering off to as little as 0.2%—do, eventually, generate sizable population increases. That, in turn, serves as a reminder that reduced growth rates will still generate new market opportunities and substantial public facility and service requirements in both old and new locales. To be sure, Maryland's fifty-year population might be as low as 5.0-million or somewhat above 5.25-million. But, whatever the specific population that emerges, there will be substantial population growth to be accommodated in Maryland over the next fifty years.

- The youth population under age twenty will total about 1.28-million, down about 50,000 from a 1980 level of 1.33-million. That slight decline translates into very nearly the same requirement for education and youth services as at present, but frequently in new places where altered patterns of urban development will emerge. One can suggest that there will still, even fifty years from now, be surpluses of education facilities in older urban areas at the same time that new construction is called for in Maryland's next-century urban growth areas. Curiously enough, some of today's urban growth areas will become tomorrow's school facility surplus areas. And that suggests continued need for long-range education and youth services planning. At the same time, it also suggests adaptive reuse of youth-oriented facilities in order to meet the differing needs of an elderly population which will expand dramatically over the coming years.

- The teenage population segment which buys most of the rock music popular today will decline in both absolute size and percentage share of the population. The teenage market drawn to such music will actually decline by about 100,000 in total size. As a result, the market for ear-shattering rock concerts and records may also decline and offer some respite to the rest of the populace. On the other hand, maybe rock music will spread through other segments of the population, or even disappear. But the point here is that only a few of the youth-age population groups are likely to decline in size during the next fifty years. All but two or three five-year age groups will increase in actual size, even though their percentage share of total population may decline. And that means continued need for a wide variety of public facilities and services.

- In similar fashion, it is very likely that the number of parents in Maryland will exceed the number of offspring. That suggests that there may be somewhat less youth-adult conflict than in the sixties and early seventies when, some analysts have suggested, the number of adamant offspring literally exceeded the number of beleaguered parents. In fact, the combined Maryland fifty-year population trends that now seem most evident are likely to result in a society much more dominated by the needs of the elderly than in the past.

- The unique population which provides most of Maryland's prison inmates--males aged fifteen to thirty—will be

smaller in fifty years. That group will be down to about 500,000 from a 1980 level of about 550,000. That suggests that Maryland's seemingly endless treadmill of expanded prison construction and operation may slow down, or even reverse itself, sometime in the foreseeable future.

- The broad working years population from twenty to sixty-four will, essentially, hold its own proportionately at about sixty-one percent of the total population. But it will, in all likelihood, increase about one-quarter from its level of 2.5-million to about 3.2-million. Despite reductions in birth rates and decreases in net in-migration prospects, increased life expectancy and slow growth will generate need for as many as 500,000 new jobs over the next fifty years to maintain economic buoyancy and accommodate what promises to be a still-higher level of work force participation. In all likelihood, few of those jobs will be in manufacturing as we know it today. Most will be in services, information processing, and high-technology activities one can only guess at today. The point here is simply that Maryland's fifty-year workforce will, indeed, be larger than it is today. And that suggests that continued attention to economic development planning and promotion is both warranted and essential.

- Females will be about fifty-two percent of Maryland's population fifty years from now. That is largely because female life expectancy will continue to exceed that of males by several years. The number of women sixty-five and over will, in fact, exceed the number of men by fifty percent. And, for the over eighty-five population, women will outnumber men by a three-to-one ratio.

- The number of elderly people sixty-five and older will double from 1980s level of 380,000 to about 770,000 in fifty years. The elderly will be about fifteen percent of Maryland's population then, slightly less than the share anticipated nationally because Maryland's retirement-oriented migration will continue to be outward on a net flow basis. Still, adding nearly 400,000 senior citizens—many concentrated in the inner portions of urbanized areas, as is common today—will mean continued pressures on facilities and services for the elderly. Likewise, the emergence of a larger number—and proportion—of elderly persons will increase the Statewide need for smaller and safer housing units, many of them occupied by single individuals.

- The population eighty-five and older will triple over the next fifty years, rising from 32,000 to about 98,000. That sharp increase suggests changes in both the character and volume of services for the elderly. Such notions as advanced geriatric health care centers, even specialized day-care services for the elderly, can be raised as distinct possibilities for the not too distant future.

- The politics of public service provision and funding may well be very different fifty years from now. Need for services for the elderly will increase as that population grows in size. Yet this is the population which has frequently been least willing to vote in favor of public service programs. Whether that pattern will be maintained, reversed, or otherwise modified is impossible to pinpoint in detail. But the eventual outcome may have major impact on the identification and provision of public services.

- Maryland's dependency ratio situation will undoubtedly be different in fifty years. The dependency ratio is usually defined as the percent of total population under twenty or over sixty-four. In crude terms that accounts for pre-schoolers, school children, and the retired population. Of course, the populace doesn't really sort itself out that neatly. But the dependency ratio notion does have some conceptual convenience. Noting a 1980 dependency ratio of forty-one percent and a ratio fifty-years from now of thirty-nine percent suggests little change. But the elderly proportion will be up substantially. In addition, one must at least contemplate the likelihood that education will, for many, continue into the late twenties and early thirties. And there is the distinct possibility that an increasing share of the workforce populace will not be working at any particular time. One can imagine a distinctly possible, and surely disturbing, overall dependency ratio pushing fifty

percent one-third of the way into the next century. That could, indeed, have major implications for Maryland's future.

- Geographic population distribution will, still, be largely metropolitan. Maryland portions of the Washington Metropolitan Area, plus the Baltimore Metropolitan Area, will contain nearly four million of the State's 5.25-million people fifty years from now. That moderate growth in the State's two major metropolitan areas will reflect a leveling off of their overall population and, maybe, the emergence of more compact patterns of urban development. More importantly, perhaps, there will probably be significant shifts of future population gains into smaller metropolitan areas of roughly 100,000 each. Such mini-metropolises are most likely to emerge as extensions of such already urbanized areas as Cambridge, Cumberland, Easton, Frederick, Hagerstown, Ocean City, or Salisbury. But no one can be precisely sure what that pattern might turn out to be. In addition, one can readily imagine the growth of a dozen or so mid-size urban towns averaging 25,000 population and providing relatively calm places to live amidst substantially rural settings. Modest growth of such diverse places as Chestertown, Elkton, Frostburg, and Oakland comes to mind in connection with such spot-urbanization. The central notion underlying the concept of some dispersed--but controlled—urbanization away from the densely developed Baltimore-Washington corridor is that such emerging communities can serve as home base for a wide variety of metropolis-serving activities located in a more pleasant-living sort of development pattern.

- Rural population pressure will, hopefully, be held in check by means of workable development policies carried out in the face of less intense population growth over the next fifty years or so. An agriculturally-based rationale for rural population growth isn't likely to emerge. And, in fact, farm working population may well continue to decline. Thus it may well be possible to channel all Maryland population growth into existing metropolitan centers, emerging mini-metropolises, or small urban centers over the next half century.

There you have it, one of the many composite scenarios one might contemplate about Maryland's people fifty years from now. Other scenarios—some of them much more extreme on the upside or downside--could be created. But the scenario here suggests a complicated, yet manageable, population and planning future for Maryland.

In a turbulent world expected to level off at about six-billion people around the turn of the century, Maryland has the option to plan for the emergence of an expanded--but differing—population over the coming decades. There will, indeed, be plenty for Marylanders to think about and plan for.

BIBLIOGRAPHY

William Ascher, Forecasting: An Appraisal for Policy Makers and Planners (Johns Hopkins, 1978).

Harold S. Becker, "Scenarios" in Technological Forecasting and Social Change (1983) pp. 95-120.

Daniel Bell, The Coming of Post-Industrial Society (Basic Books, 1976).

Edward Cornish and others, The Study of the Future (World Future Society, 1977).

Wilson P. Dizard, The Coming Information Age (Longman, 1982).

George Grier, The Baby Bust (Washington Center For Metropolitan Studies, 1971).

Britton Harris, "Plan or Projection," Journal of the American Institute of Planners (11/60, pp. 265-272).

Harold A. Linstone and W.H.C. Simmonds, Futures Research: New Directions (Addison-Wesley, 1977).

Maryland Department of State Planning, Causes of Farmland and Forestland Conversion (1983) Internal Study Document.

Maryland Department of State Planning, Maryland Population Data (1981).

Maryland Department of State Planning, Final Interim Population Projections (1983).

Population Reference Bureau, Population Handbook (Washington, 1982).

Regional Planning Council, Population Projections Through Year 2000: RPC Scenarios III, IV, and V (1981).

T. Paul Schultz, Economics of Population (Addison-Wesley, 1981).

Morton J. Schussheim "The Impact of Demographic Change on Housing and Community Development" in Housing — A Reader (Congressional Research Service, 1983).

Karl E. Taeuber, Larry L. Bumpass, and James A. Sweet, Social Demography (Academic Press, 1978).

Alvin Toffler, Future Shock (Random House, 1970).

Robert Weller and Leon Bouvier, Population: Demography and Policy (St. Martin's Press, 1981).

COMMENTARY

Kalman Hettleman
School of Social Work
and Community Planning
University of Maryland

We need to be more concerned about what life will be like in fifty years than with the exact number of those who will be around. We should be more concerned with distribution equity or distributive justice—or how income and social opportunity will be distributed and shared in 2033. There will be a significantly greater equality in the distribution of income and wealth and a greater sense of social community than exists today. There will be a quantum jump in social welfare although we have a way to go to catch up with most Western industrial democracies in the world who continue to be far ahead of us in the scope and coverage of their social welfare programs.

To get where we want to be by 2033, we need to face up to new distributional issues. There will be losers as well as winners. Without distribution, we will have an alienated underclass marked by an intergenerational dependency. We will have a disaffected working class whose aspirations for upward mobility will be stifled. One example of a distributional issue is health care. Another is social security. How much are we going to provide for the future and how are these costs going to be borne?

We need not just redistributional concepts, but new tools such as national planning. Albert Einstein said that the unleased power of the atom has changed everything save our modes of thinking. National and social planning are needed in this country. The role of the states is obsolete in economic and social welfare issues. We also need a coherent set of values as a nation. It is not that we have bad values, but that we have not had any coherent, compelling, uplifting, and unifying values as a nation. We should be optimistic about the future. Will Rogers said things will get better despite our efforts to improve them. We should keep trying to improve them anyway.

COMMENTARY

Dorothy J. Lehrman

Student Representative to the Board of Regents
University of Maryland

George Orwell's 1984 typifies the parodoxical forces endemic in our society. As we approach the year 1984, we are filled simultaneously with a curious mix of optimism and fear. Dr. Laidlaw's statistics project how many and what type of people will be around fifty years from now. But we must progress one step further to examine the human implications behind his numbers.

The outlook of the future must focus on quality of life. We must examine what it will mean to have a larger population of blacks and elderly and a smaller population of adolescents and young adults. What implications will these projections have on housing markets, health care, and the penal system? And how will the population projections of minorities and women affect the equal rights movements?

How will the population of Maryland be employed in fifty years? Since Maryland borders on our nation's capital, the State provides homes to highly-skilled and highly-educated individuals who work for the federal government or related organizations. In other parts of the State, there exist dairy, tobacco, and seafood industries. Employment trends will vitally affect the quality of our future life.

The ushering in of the information age will have profound effects on our society. Will Maryland's manpower be replaced by machines and computers, or will this new age help to escalate our economy and manpower? Within this potential paradox, advanced technology will enable us to live longer and better. We, as concerned Marylanders, must plan now to secure this opportunity for the population of Maryland, as a whole, not just for particular segments. This thinking must spread to other factors that affect quality of life.

Dr. Laidlaw aptly sets forth projections for Maryland's future. We must capitalize on this knowledge now in order to make our and the coming generation's future a fruitful one. Governor Hughes' effort to clean up the Chesapeake Bay is an example of such an initiative. Yet, we must not be so myopic that we are not aware of the needs of our nation and our world.

Marylanders should not look forward without heeding our rich history. We must use Dr. Laidlaw's statistics as a foundation to plan for the prosperity and success of our State.

6

Employment Megatrends: 21st Century Implications of a Shift Toward an Information and Services-Producing Workforce

Paul G. Larkin

Maryland is experiencing the global movement from a farm-and-factory to an information-and-serices economy. The maturing of Maryland depends on how it manages changing values and expectations. These underlying forces combine with unique economic problems facing Maryland. Future job development in Maryland will hinge upon new and small businesses, international trade in "intangibles," and information and service activities. Mutuality of interest is the key process. In an information and services economy, "people" interactions are what's important. To prepare for this, we need quality education that is academically-challenging. We also need teamwork-skills. This means a need to renew our emphasis on courtesy, conflict-resolution negotiations, and avoidance of confrontation approaches.

A NEW STRATEGY FOR BUSINESS AND INDUSTRY IN MARYLAND

Twentieth Century American folklore has pitted the individual against the big bureaucracy. Witness M*A*S*H. This reflected the frustration of monolithic institutions, gatekeepers authorized to stop creativity, and narrow self-interest expressing itself in mindless litigation.

Let's get rid of that old machinery. "Networking" is a process to deal with gatekeepers. Win them over, or go around them. Let's also say goodbye to the culture of narcissism. The individual doesn't have to be against the group. What we need is an I-win, you-win mentality. Negotiation means finding a basis for agreement. Global forces make this the only way to go.

If we want to do more than survive economically, and improve upon our existing prosperity, we have to think mutual interests. Far Eastern labor forces are showing us the potential of teamwork. They usually avoid confrontation. Teamwork is an American idea whose time has come again. Our athletic teams embody a high standard: individual talent shining through group process. The irony is that our corporate functioning, prizing profitability and fast payoff, has betrayed that American value. However we Marylanders learn it, we need to learn the making of global commitments toward mutual advantage.

How? These considerations influenced me concerning Maryland's opportunities for business and industry in the next fifty years:

1. **Where we are failing.** Maryland has been losing its competitive strength in manufacturing. Electronics, food products and publishing have been exceptions.

2. **Workforce strength.** Maryland's increasing human capital advantage is now in services: business services, health services, and educational services.

3. **The logic of what to do.** Maryland should improve upon those activities at which it is best, and concentrate on exporting business, health, and educational services of high quality.

Dr. Larkin is Director of an Institutional Research Center in Prince George's County at Largo, Maryland. He received his Ph.D. from George Washington University. He has served as a member of the World Future Society's Program Planning Committee, and has chaired its Committee on Video-Communications. He is president-elect of the Manpower Analysis and Planning Society of Washington, D.C. He is also a board member of the Suburban Maryland International Trade Association. He has served in a variety of teaching, research, and consulting positions. He has written a number of published articles on workforce trend analysis.

4. **Potential markets for services.** Third world and recently developed countries are becoming excellent markets due to their evolving needs.

5. **Problems.** Obstacles include funding channels, government gate-keepers, and self limitation ("it's not my role"; "it's not my mission").

6. **Problem-solving idea.** Such obstacles can be circumvented by selective use of institutional channels.

7. **Whose authority?** The mission, goal, and priority need to be established by the legislature working with the executive.

8. **What mechanism?** "Maryland Services" agreements will be made wherever needed, negotiable throughout the globe, to provide business and information services to business people; public health and disease prevention services to communities and localities; and educational services along similar lines. Work with provinces or institutions can be used to bypass obstacles of national government bureaucracies (including our own national government).

9. **Who pays?** Through World Bank and similar financing, the services produced will be adequately paid for.

10. **Good international relations.** A favorable balance of payments for Maryland will be the result. Maryland's image will be enhanced both at home and abroad.

MEGATRENDS AS PATHWAYS TOWARD THE FUTURE

Like the world, Maryland is in transition. We are moving from a farm-and-factory to an information-and-services economy. Sweeping us forward are forces that John Naisbitt called **Megatrends.** His theme: trends are like horses, easier to ride in the direction they are going. According to Webster, trends are directions of things, or a prevailing course of events. We will analyze directions of the larger society, especially employment trends as megatrends. Results of a delphi panel of experts suggest the following megatrends for Maryland:

FROM	TO
Manufacturing and distribution	Information and communication
Mass production	Global production
Concentrated workforce	Dispersed workforce
Male workforce	Male and female workforce
Emphasis on exporting goods	Emphasis on exporting services
Fortune-500 employers	Small business employers
Non-scientific industries	Scientific knowledge businesses
A younger workforce	An older workforce
Stability of skill demand	Continuous retraining needs

These are not future directions. They are happening. Sixty percent of all occupations in the U.S. are now information-related; thirteen percent are manufacturing-related. Only five percent of America's new jobs during the 1970s dealt with manufacturing. In the near future, an estimated 75 percent of all jobs will involve some kind of computer.

Trend information helps toward imaging Maryland's future. By indicating consistent directions of change, trends say how things are likely to keep moving. This helps you to imagine implications, make decisions, or contribute to public policy.

AGE TRENDS IN MARYLAND: WORKFORCE IMPLICATIONS

Maryland's population directions are "megatrends." Department of State Planning information shows the results of our "baby boom" and "baby bust" experiences since World War II. Rounding off age distributions, we can see a changing pattern where 35 percent of the population is to be found like the blip in a radar screen:

Age Groupings	1980	1990	2000
45+	30%	30%	35%
25-44	30%	35%	30%
5-24	35%	30%	30%
0-4	5%	5%	5%

First, young adults, then early middle age, then post middle age. Without pre-school population pressures, adult needs and preferences will dominate spending. Census trends show Maryland's adults as increasingly unmarried, often living in small "non-family" households. More adult women are now working outside the home in private sector services. Their labor force participation is likely to increase and then stabilize at nearly the rate for males, around 78 percent.

The maturing of Maryland (more middle-aged citizens and fewer children) will change our values and expectations. Imagine the interaction effects of costly energy and adults in small households. Changed mobility patterns are a certainty. There will be fewer single-person car trips, more use of public mass transportation. The need for smaller homes, easier and cheaper to maintain, is already evident. Other differences in consumption will mean new markets for producers of services. As costs of private auto transportation go up, for example, costs of telecommunications will go down. This will affect both business practices and leisure time behavior. The outlook is excellent for business services (computer services and software, accounting, financial services, insurance, market research, communication technologies, and building maintenance services). The outlook is also good for individual consumer services: dining and entertainment, home repair and improvement, education, health and a variety of social services.

MARYLAND TRENDS IN INFORMATION AND SERVICES-PRODUCING EMPLOYMENT

Maryland is at a time of change in work functions. Manufacturing has begun to employ proportionately fewer people. In 1970, manufacturing accounted for 23 percent of Maryland's 1.2 million private sector jobs. In 1982, it was 17 percent of 1.5 million jobs. In comparison, the sitcom's Archie Bunker no longer operated a forklift; he started running a tavern. Work in Maryland was becoming "people work." And women were doing more work outside the home. The Maryland labor force base of one million persons in 1970 increased by over 300,000 females by 1980. More than 100,000 of these were black. Women and minorities entering the labor force helped to expand services-producing employment.

Maryland's 1975-1983 experience presages employment trends beyond 1990. Services-producing industries will lead the way. They will provide thousands of new jobs per year in computing, information services, marketing and market research, building maintenance and management, repair services, health care, and membership organizations. Communications as an industry will offer many technical and non-technical jobs. Retail trade employment will also grow, but at a less rapid rate.

Large multinational corporations have been reducing their payrolls, while multiplying white collar workers: lawyers, public relations workers, advertisers, marketers, office support staff, and even social researchers "good for corporate image." Where will tomorrow's jobs be as fewer goods-producing roles become available? Small companies will lead the way. New and small businesses are the best bet for new job opportunity. Public policy will therefore be needed in Maryland to support new and small businesses to generate more jobs in higher knowledge industries as factory jobs are lost.

Forecasts by the Department of State Planning anticipate which services industries are likely sources of future jobs. Business and professional services head the list. These activities will yield thousands of new positions a year in the 1980s and 1990s. Health services will be another strongly growing employer. We can also look to nonprofits, entertainment, and private education services for new Maryland jobs. Auto repair and hospitality activities round out the list.

Beyond 1990, international trade will give Maryland much new business-related employment. Foreign export and import will involve increasing activity. Projects such as the new trade center on Smoot Bay (Bay of the Americas project) will accelerate this trend. In Montgomery and Prince George's County, for example, we now have a forum for business dialogue about international trade: the recently formed Suburban Maryland International Trade Association (SMITA). This catalyst will help local traders take strategic advantage of accessibility to consumer markets and export capability in the Baltimore/Washington region. International import of services will lead the way. But export of services will become important beginning in the later 1980s, once the valuation of the dollar against other currencies has changed.

Office activity will join together with residential consumer spending to support a vigorous economy. Office automation is finding a skilled work force ready. Information and communication now account for one out of ten jobs in the D.C. suburbs. More new jobs will arise as a result of technology advances. Satellite signals and laser optics will multiply. We will see more 100-channel cable systems. Videotapes and micro-computers will make new information available in both home and office. In 1990, members of the baby boom generation will be passing their mid-thirties. They will have high discretionary income. Fewer children implies fewer consumer outlays for goods and more market for consumer services. This will generate many small service activities including new information services.

MARYLAND'S HIGH-TECH WORK FORCE

One issue about work has been "high-tech" versus traditional jobs. Information and communication technologies will dominate most new employment. Even agriculture and manufacturing have become information-based despite human resistance to change. Consumer services will also become more information based. Traditional jobs will become fewer. There will be personalizing reactions to the impersonality of hi-tech, as the shift from farm and factory to "people work" continues:

TYPE OF SOCIETY	CHALLENGE
Agriculture	Struggle with nature
Industry	Transforming nature
Information	People interactions

Where is Maryland strong in high technology? One area is communications equipment, employing several tens of thousands of workers. Three other high technology services together employ even more tens of thousands: computer services, R&D labs, and noncommercial research organizations. High technology services in Maryland employ several times the proportion of the workforce as in the rest of the U.S. This sector is also growing faster in Maryland than in other areas.

To maintain our competitive position, we will have to press forward continuously with technological innovations in goods as well as services production. We will have to replace technologies where we lose our global advantage. Instead of semiconductor applications, life sciences and genetics may be a good focus. Above all else, Maryland needs role clarity. California and Japan have been good at entrepreneurship. Maryland can be good at innovation. The entrepreneur as competitor reads consumer demand, and gets into mass production to earn tons of money. But the wave of the future is in basic science that will become new technology. Optical fiber research, for example, leads to value-added based on innovation. The leaps forward are in light years, not millimeters. This will challenge College Park, Johns Hopkins, our new R&D labs, and our Route 270 corridor researchers.

FORCES OF THE FUTURE: THE GLOBAL PICTURE

International trade in information and services is now Maryland's greatest opportunity. Global forces are changing the balance of goods production and consumption. In 50 years, the United States may not be much better off materially than the average country in the world. The other countries will catch up. But we have a chance to be better off in education, health, communication, and culture. The issue is leadership. Market research is needed to identify international trade priorities. What are Maryland's alternatives? Foreign revenue figures for international services in 1980 shown in the inset below suggest areas of American strength.

How are Maryland's jobs related to international trade? We need information about this. But we don't know how many jobs in accounting, banking, data processing, marketing, business management, hospitality, and tourism exist in support of international exchange. Educating foreign nationals in our colleges and universities, for example, increases our State's balance of payments. Why does this kind of education go almost unnoticed? Public policy could support new dormitories full of additional foreign nationals as enrollments drop at our public four-year colleges.

We do not have priorities for economic development in information and services-producing industries. Considerable research is needed to clarify Maryland's international exchange potential. We know some of the positive forces. Nearby Washington is helpful as a communication center. New trade associations have been formed in Maryland's D.C. suburbs and at the State level. Our Bay of the Americas project,

CATEGORY	REVENUES	OPPORTUNITIES
Business and commercial services	$24 billion	Banking, information, business services
Transportation	$14 billion	B.W.I. Services
Individual services	$11 billion	Tourism, education, health
Construction/engineering	$ 5 billion	Sub-government or institutional contracts

across from Alexandria, Virginia, promises to work well with Baltimore's Inner Harbor as a catalyst for international trade in services. Maryland's economic development effort is beginning to identify mutual business interests that cross national boundaries. The State legislature will need to be informed of options and opportunities for international services exchange in order to make public policy that goes beyond the farm and factory economy. It will be a disaster if we continue to focus economic development efforts on land development and manufacturing activities.

IMPLICATIONS FOR LEADERSHIP IN EDUCATION AND TRAINING

Expanding economic activity will challenge Maryland's skilled workforce. The need will be to "work smarter." The University of Maryland is opening up new pathways to excellence in professional, scientific and information science capability. Our community colleges are a strong resource for adult education and retraining. What are the problems? We dare not continue to limit ourselves to specific training for "lifetime" jobs. Specific knowledge and skill requirements are changing too fast. Along with a few entry-level jobs, we will have to educate for re-entry jobs many times over. We need solid grounding in principles at the K-to-12 level. Not only reading, writing, and arithmetic, but also technology, computer literacy, communication concepts, and interpersonal relations. We must renew our emphasis on courtesy, conflict-resolution, and dispute negotiations. Teamplay may be more important than individual brains and talent. Hence the importance of quality education with academic challenge on the one hand, and well-mannered teamwork on the other. Not driver education or goof-off courses. Sounds like an old fashioned prep school. But if that's what it takes, let's do it.

The conventional wisdom, to develop Maryland's economy with new factories, is nonsense. Human capital is what counts, not new factories. Productivity depends mostly on people. It makes sense to increase the knowledge of our workers while they are employed. Don't wait until their skills are useless. Invest in people to get the most out of technology and hi-tech services. Maryland's economy isn't going to thrive without a major effort to upgrade the workforce, and keep it upscale for decades to come.

Specific ways and means to educate and train a superior Maryland workforce for the 21st Century are listed on the facing page.

PROBLEMS TO SOLVE, AVOID, OR CIRCUMVENT

As Maryland moves from a farm-and-factory economy to an information and services economy, problems likely to hold us back include the following:

1. The drag of materialistic culture, focusing on the quantity of life.
2. An erosion of productivity and the work ethic.
3. Dominance of goods-consumption values left over from the 1950s and 1960s.
4. Resistance to the labor-saving consequences of information technology.

Let's assume that the trends we've been talking about run their course: high technology, local consumer and business services, increased international trade in services. What will the impact be on the Eastern Shore, Baltimore's inner city, and Western Maryland? Can we train "have-not" unemployed people or those who are not in the metropolitan centers to work in information and services? Will they otherwise be left out? Or will they have to relocate? Wise public policy favors a broad base of knowledge for unemployed adults. We need to invest in human resources. If nothing is done, the gap will widen between the information poor and the information rich. New approaches are needed in the face of problems summed up under the following headings:

1. **We have problems of leadership.** Some "world order" theorists talk of the "Limits to Growth." They question the "growth for profit" motif. But leaders making decisions of consequence keep pushing for more! more! more! The vast majority of people seem to be following these leaders.

	PROBLEM OR OPPORTUNITY		RECOMMENDATION
1.	High school graduates lack academic skills. No amount of remediation will make up for poor foundations.	1.	Emphasize high standards of academic outcomes in our public school system, K-to-12.
2.	As technology impacts on industry, new kinds of functional skills will be needed especially for producing services.	2.	Use Maryland's excellent system of 17 community colleges for adult continuing education and continous work force retraining.
3.	Educational institutions need new kinds of role clarity to support Maryland's economic development.	3.	Encourage the residential colleges to attract more international students. Use the university system for high calibre graduate education and basic research, emphasizing excellence in a few fields rather than competition with everybody in everything.
4.	A SYSTEM is needed for funding the adult education and retraining that will be increasingly necessary.	4.	Establish an Individual Training Account system (education and retraining vouchers) jointly funded by employer and employee sources, to be used like the GI bill was, at any institution the adult chooses.
5.	Adult Marylanders, as well as younger students, need to know what new skills are in demand and how they can be acquired.	5.	Establish an excellent system of career information for Maryland, a state of the art model, maximizing computer capability in the Employment and Training Department. Use communication technologies to disseminate this information via microcomputer networks and 100-channel cable systems.
6.	Poor teaching contributes to poor education. Teachers who can't spell are common. Education departments at our colleges and universities have low admissions criteria, easy grading standards. Low pay discourages potential teachers.	6.	To reverse declining teacher competence, we need full fellowships for teacher trainees, new systems for recognizing excellence, reasonable incentives for people to work in the field, and cutbacks in frills such as driver education.

2. Optimizing economic development need not mean farm-to-factory. Heavy industry development is not the only route for economic development in rural counties. Small scale agriculture with non-technical, non-gasoline tools could make sense by providing cultural continuity blending in with an information society. Fortunately, many people in rural areas seem to realize that they have an option, even if it keeps them out of the mainstream.

3. Value systems have to be taken into account. A standard of living that implies more and more consumption of goods may not make sense. But 99 percent of the people don't see this yet. Look into their behavior. Cultural lag therefore needs to be taken into account in any form of adult retraining.

4. **Jobs in the services sector will require different kinds of training.** We will have to review our past training strategies. Then decide public policy on where we want to go with training. Then how we want to get from here to there. Elements of training proposals will need to take interpersonal competencies into account, as well as knowledge and skills needed to hold 21st Century jobs.

More comprehensive training may be needed to qualify jobmarket re-entrants. Such packages would include:

a. Consciousness-raising about the big picture.

b. The need to "work smarter rather than harder."

c. The dignity of teamwork and the importance of having a role.

d. The inevitability of "people work" (as opposed to farm work, construction work, or factory work).

e. The importance of making a contribution.

f. The importance of quality and service besides that measured by dollars.

For economic development people, the challenge will be to make productive change happen. For educators and program planners, it will be to adjust to trends. For private sector workers, the need will be to learn, re-learn, and keep on learning. New conditions of our economy will empower most Marylanders to be winners, provided we learn. Provided that we abandon confrontation techniques, pitting the individual against the group, where one person tries to "win" at everybody else's expense, without productivity. We need a "you win-I win" attitude.

COMMENTARY

Sister Kathleen Feeley, SSND
President
College of Notre Dame of Maryland

The present trend toward a high-tech service economy is "demassification." An industrial economy is the creator of mass production, mass communication, mass politics, etc. In the post-industrial economy, it is possible to tailor production and marketing to specific parts of the population. Society then comes to see itself as a collection of interacting groups rather than as a uniform whole.

Education must be a major priority in preparing for the future. Modern methods of segmenting markets call for a more educated and more motivated workforce. Producing this workforce will require a much more individualized, tailored approach to teaching, particularly at the elementary level. Dr. Larkin's suggestion that a basic curriculum should be "unified in content" but "diversified in approach" is well taken. Integrating this educational program into a services-oriented society should build workers' individual skills while developing their ability to combine these skills in teamwork.

COMMENTARY

Brent Johnson
Secretary
Department of Employment and Training

Dr. Larkin's basic premise that the national economy is tending toward providing services rather than manufacturing goods is sound. However, the loss of manufacturing as a major segment of the economy could well result in a poorer standard of living in this country. Part of the reason for the relative decline of manufacturing might be our national policies toward private industry. Economic incentives coupled with accountability by management for important economic decisions could help keep the manufacturing industry a strong part of our national economy.

While it may be difficult to convince an aging population to support a major investment in schools, Dr. Larkin is correct in targeting education and training as a critical priority in preparing for the future.

7

From Here To Where: Future Think, Conceptualizing Regional Survival

John W. Foerster

Federal funds for state and local programs are diminishing. State and local governments are under increasing pressure to use available funds more efficiently. Limited fiscal resources, equity considerations, and problems which cut across traditional county boundaries call for a reorganization of government in Maryland. One way to do this is to streamline State government and replace the 23 counties in Maryland with five new regional subdivisions. This will eliminate duplicative programs and bureaucracies, realize economies of scale, improve services, distribute tax revenues more equitably, help equalize spending for education, and achieve more uniformity in standards and enforcement for environmental programs. An organizational structure for regional government in Maryland was presented along with an analysis of its effects on sediment control and education spending parity.

All areas of Maryland look ahead to survival as Federal tax dollars dwindle, businesses go bankrupt, people move away and the local tax base shrinks. There arises the question: From here to where? What does the future offer?

This is no longer the 18th century. No community within Maryland can survive unequivocally on its own. Communications, transportation, food resources, waste treatment and disposal, and goods and services no longer are contained solely within a single political boundary. No local government is able to function in isolation. The automobile, television, telephone and computer have propelled all areas of Maryland into the age of cooperation. This cooperation must be achieved for survival. The isolation of the small town and rural community has passed into the nostalgia of history. To prosper, the future in Maryland must now be redefined as regional cooperation by the governmental subdivisions. To quote from Robert F. Wagner (1), former Mayor of New York City,

> "Cities and rural areas are running into each other. Housing developments, shopping centers, arterial highway networks, water supply systems, and recreational areas are reaching out farther and with little regard for existing political boundaries. Central cities and outlying regions are becoming more closely intertwined."

What is needed is a system of government that adequately recognizes a sharing of power between a larger government unit and a smaller people-oriented unit. This system would have to "recognize a larger unit to permit economies of scale, areawide planning and equities of finance. It must recognize a smaller unit to permit the exercise of local power over matters which affect the lives of local citizens." (2) Therefore, the following is a proposal to eliminate the middle men of government — the counties — and establish a regional government system.

The State is faced with a changed employment picture (3) and reduced federal funds. A decision must be made. That decision should be to draw inward and rely on strengths within the confines of the

Dr. Foerster is an Associate Professor of Oceanography at the U.S. Naval Academy in Annapolis. His Ph.D. is in Marine Science from the University of Connecticut. He has held several teaching and consulting posts in oceanography, biology and environmental planning, and has authored reports and publications in his field.

FIGURE 1: PROPOSED REGIONAL GOVERNMENT AREAS FOR MARYLAND

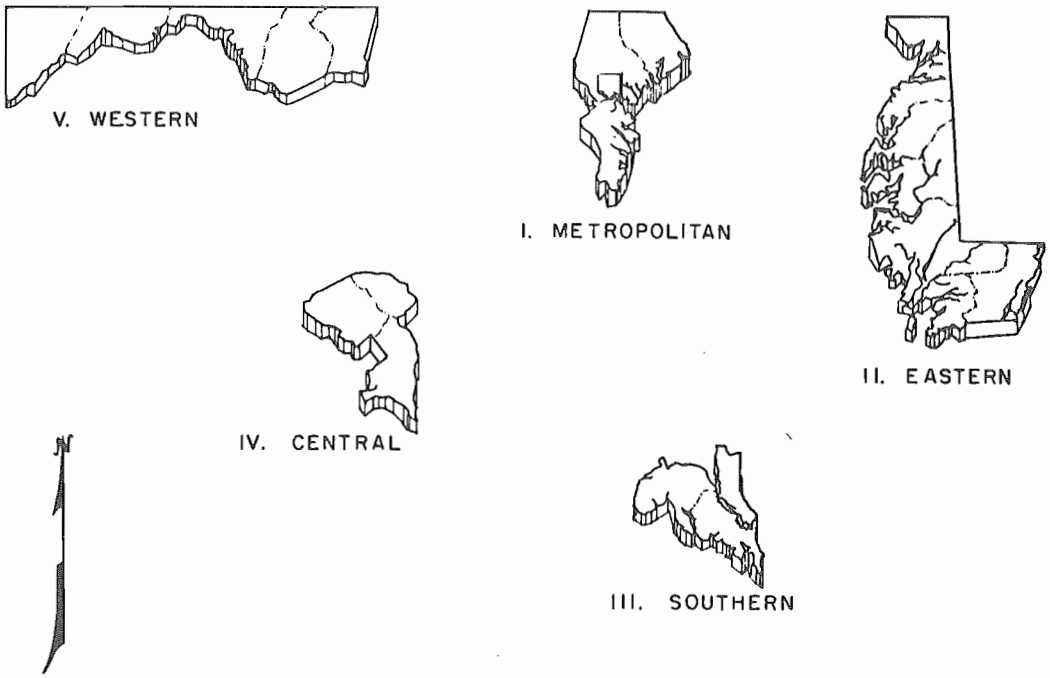
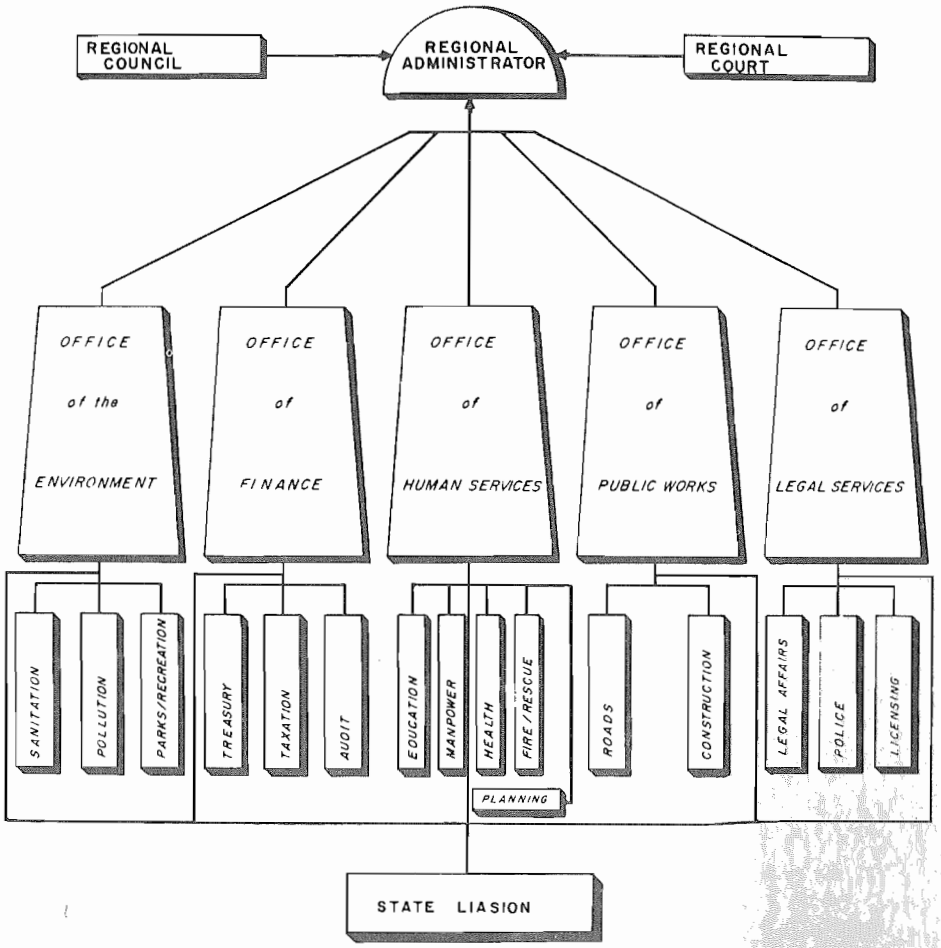


FIGURE 2: PROPOSED REGIONAL GOVERNMENT STRUCTURE
FOR EACH OF THE FIVE REGIONAL AREAS SUGGESTED IN FIGURE 1



State. We should become as autonomously viable and self-supporting as possible.

We must no longer look to the federal government for every subsidy imaginable. For with each subsidy a local bureaucracy is established to administer it. Over the years the bureaucracy becomes entrenched and vital dollars go to supporting a program that started as a piglet and burgeoned into a hog of huge proportions devouring program monies just to survive with little left for program. Economists call it supply and demand. As long as the demand is there, the supply attempts to keep pace. It is easy—far too easy—to go to the local program for funds and not re-think alternatives. The proposed regional government must incorporate a system of constant, planned program evaluations. Only in this way can vital funds be available when they are needed.

The ultimate goal of this supply and demand process is equilibrium. There is a point in the marketplace at which supply of goods and services equals consumption. (4) Disruptive external factors have caused disequilibrium. Inflation and the inability to keep pace with the old needs of the states have seen the federal government cause disequilibrium because of oil prices, military spending, the welfare state, etc. Therefore, the states, including Maryland, will suffer over the next fifty years as the federal government attempts through austerity to regain its economic equilibrium.

Maryland cannot wait for this to happen. As a sovereign state, Maryland must turn inward, review its programs, assess its needs and build on strengths within its borders. There must develop a new, perhaps even radically new, government system which trims the bureaucracy to a minimum. Then Maryland can develop equitable laws and administer them within the new framework. The following government system is based on this idea.

GOVERNMENT RESTRUCTURE

To develop a new approach to working within this era of federal and State funding austerity, a reasonably radical departure from the present government structure is proposed. Five regions would be established (Figure 1). These regions were selected based on their cultural and employment characteristics; and each region has at least one viable, prosperous city.

Region I. Metropolitan. Baltimore City
Region II. Eastern. Salisbury
Region III. Southern. La Plata
Region IV. Central. Rockville
Region V. Western. Frederick

The major premise of this proposal is that to eliminate duplicate programs, improve services, distribute taxes equitably, bring education onto par in all areas and protect the environment justly, the counties must be dissolved. Section 7.03 of the proposed revision of the Maryland Constitution provides for the establishment of regional governments. (5)

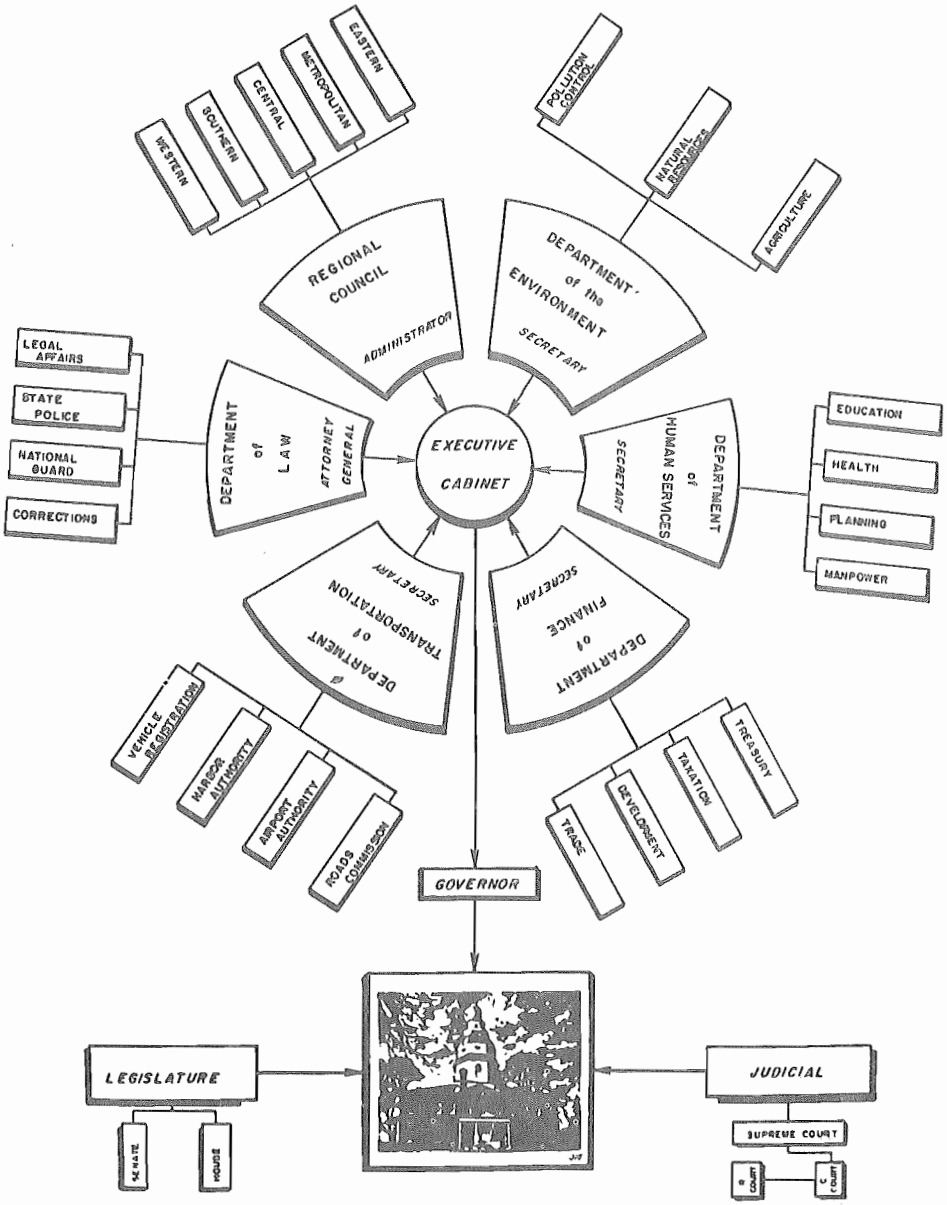
The Constitutional Commission in 1966 wrote "Failure to establish multi-county or regional governments with wide powers may lead to a greater loss of self-determination in local affairs through the continuous transfer of responsibilities to the state and federal governments." (5) In the case study on soil erosion, strong evidence is presented that county systems cannot adopt and enforce meaningful, unified regulations for protecting the soil from disappearing into the Chesapeake Bay.

But it is not just a matter of dissolving county boundaries. It is a matter of developing a working, viable government system — responsive to local needs and integrated into the State structure. To achieve this, the two-hundred-year-old county system must go. Its replacement is to be a regional administration under an administrator and a council. Each of the five regional administrators is to be a public official, popularly elected for a single six-year term.

A maximum of five offices is proposed for each region to administer policy and respond to the citizens' needs. (Figure 2) By reducing the number of agencies and "top" echelon administrators it is hoped that monies would be more available for the people who get the work done.

In addition to being the chief executive of the region, each regional administrator would belong to the Regional Council. The Regional Council, composed of the five administrators, would meet to discuss problems and develop solutions. This State-level council would select one of its

FIGURE 3: PROPOSED RECONSTRUCTION OF THE EXECUTIVE BRANCH OF MARYLAND STATE GOVERNMENT
(It accommodates a Regional Representative at the Cabinet level.)



members each year as the Council Administrator. The purpose of the Council Administrator would be to interface with the Governor at the cabinet level. (Figure 3)

The Council Administrator would change each year so that each regional administrator would serve a term as head. An administrator would not serve consecutive terms. Elections for the regional administrator and members of each region's council should occur in years not affected by gubernatorial elections.

To use the proposed regional government effectively, State government must be restructured. (Figure 3) The large number of agencies and cabinet-level departments would be reduced and the representative from the Regional Council would be added to the Cabinet. The Cabinet would consist of the Departments of Environment, Human Services, Finance, Transportation, and Law; and the Regional Representative. The bicameral legislature would remain and the District Court would become the Regional Court.

FIVE REGIONS

Population and overall employment were investigated in developing the ideas on regionalization. Figure 4 depicts population projections to the year 2030. They are based on expanding the Department of State Planning's year 2000 projection for each county to the year 2030. (6)

Most regions show a modest increase in population, with the Central Region exhibiting the greatest gains. Regions II, III, and V have similar population increases and overall size. The more urban regions (I and IV) have almost five times the population of the other three. Pooling populations and thus governmental resources would have the potential to improve the distribution of tax revenues within each region.

Decreasing employment opportunities have been projected for many counties. (3) By pooling a region's tax structures, grants, business enticements and industrial locations can be offered more fairly. Figure 5 was prepared by expanding the Department of State Planning's employment projections to the year 2030. (3) Slight increases in jobs are projected for each region except for Region IV which will have accelerated growth mainly in the areas of services and government.

Table 1 was prepared to reinforce the idea of pooling county resources into a region. It has listed the major growth areas projected for the next 50 years (3). Government, services, trade, and manufacturing were the only employment sectors that had a consistent potential for long term growth (3). Thus the region would be able to transfer these potential benefits over its entire population.

Lewis Mumford wrote that "Democracy in any active sense, begins and ends in communities small enough for their members to meet face to face." (7) But without the tools of finance and government, this democracy cannot be realized, education can not be pursued effectively, and employment cannot be secured. Unfortunately, neither the single community nor the individual can gain the personal clout necessary to influence State policy without an organized regional approach.

TABLE 1: EMPLOYMENT GROWTH AREAS, 1980-2030, FOR EACH PROPOSED REGION
(Employment categories and data through the year 2000 from the Department of State Planning. (3) Projections beyond 2000 by the author.)

REGION	COUNTY	TRADE	MANUFACTURING	SERVICES	GOVERNMENT
I. METROPOLITAN	ANNE ARUNDEL	+	+	+	+
	BALTIMORE	+	-	+	+
	BALTIMORE CITY	-	-	+	0
	HARFORD	+	-	+	0
TOTAL		+	-	+	+
II. EASTERN	CAROLINE	+	0	0	0
	CECIL	+	0	+	-
	DORCHESTER	+	+	+	0
	KENT	+	-	+	+
	QUEEN ANNE'S	+	+	+	0
	SOMERSET	+	-	0	0
	TALBOT	+	+	+	0
	WICOMICO	+	0	+	+
	WORCESTER	+	0	+	+
TOTAL		+	+-1	+	+-1
III. SOUTHERN	CALVERT	0	0	-	0
	CHARLES	+	+	+	+
	ST. MARY'S	0	0	+	0
TOTAL		+-1	+-1	+	+-1
IV. CENTRAL	HOWARD	+	+	+	+
	MONTGOMERY	+	+	+	+
	PRINCE GEORGE'S	+	+	+	+
		+	+	+	+
V. WESTERN	ALLEGANY	+	-	+	0
	CARROLL	+	+	+	+
	FREDERICK	+	+	+	+
	GARRETT	+	+	+	0
	WASHINGTON	+	-	+	0
		+	+-1	+	+-1

1. Indicates that this area of employment is projected to grow very slightly.

FIGURE 4: POPULATION TRENDS, 1970 TO 2030, FOR EACH PROPOSED REGION
(Projections were derived from census data. (6) Method is discussed in text.)

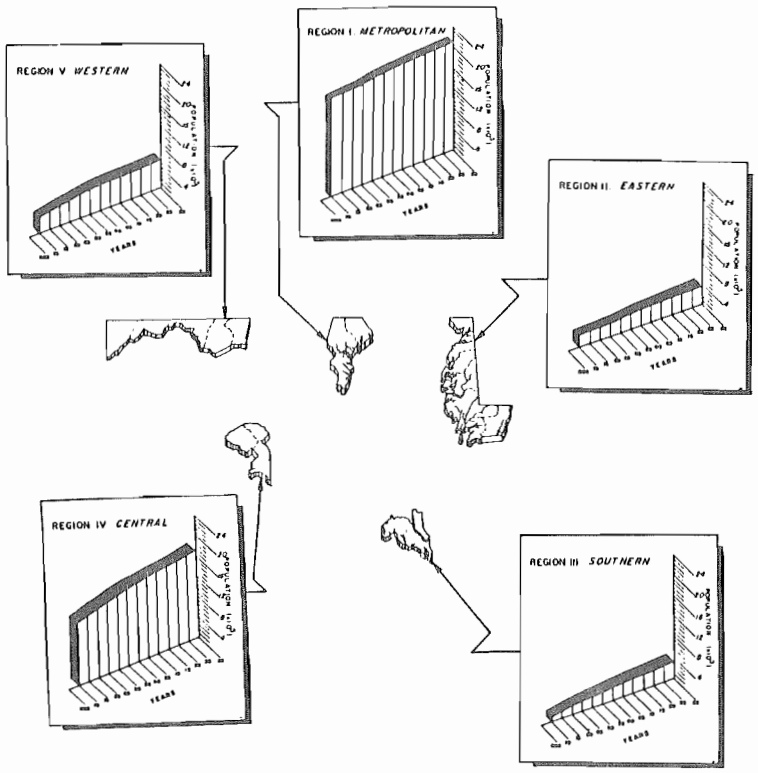
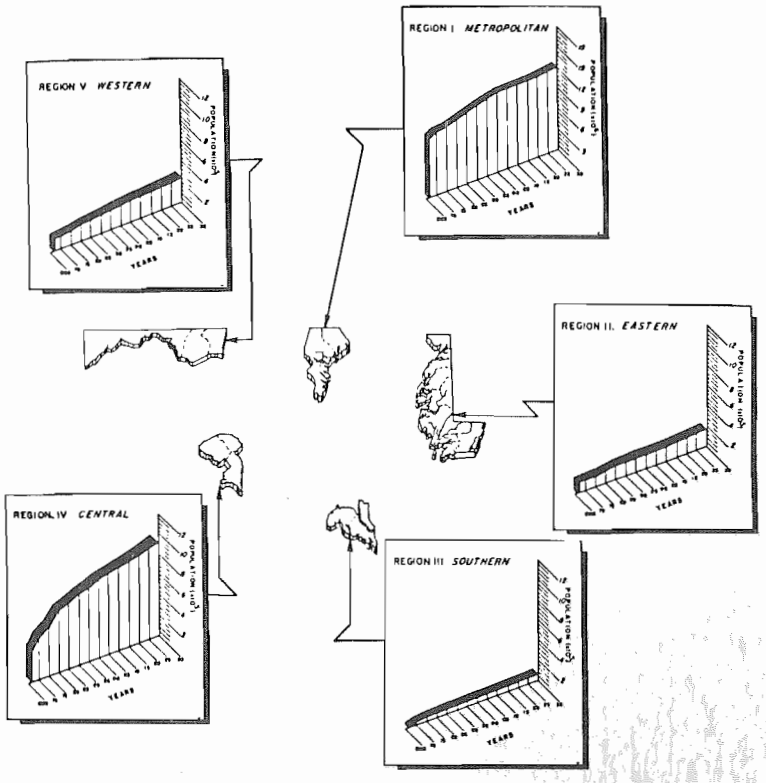


FIGURE 5: EMPLOYMENT TRENDS, 1967 TO 2030, FOR EACH PROPOSED REGION
(Projections were derived from Maryland employment census data. (3) Method is discussed in text.)



CASE STUDY: SEDIMENT CONTROL

Whether it is the lack of a unified educational system with the tools to deliver a proper complete education Statewide or whether it is the lack of funds to repair rotting roads or prosecute pollution violators, there exists in Maryland today a wasteful government system. The system was effective in 1790, 1850, and 1900, but has had trouble responding since the mid 1970s. Industrial plant closings in western Maryland, business migration from Baltimore, and resistance to environmental protection regulations signal problems that local and county governments have been unable to solve. As Maryland emerges into the late twentieth century, current levels of government have served less adequately. In the area of sediment control, for example, the State agencies proposed and adopted regulations that each county was supposed to implement.

Adoption, however, has meant less than adequate local enforcement. The twenty-three counties with their various government structures and local pressures have made strong regulations such as the Maryland Water Resources Administration's sediment control regulation less effective. The major problem has been that the regulations adopted by each county were not as uniform as the State had wished and enforcement has not been strict enough to ensure compliance.

Erosion—the loss of soil by the action of wind and/or water—has been a problem in Maryland since before it became a State. The colonists began this cycle by removing the deciduous forest tree cover. As the State grew in population, more land came under the ax, more forest disappeared, and more soil began its inexorable trip into the Chesapeake Bay.

Scharf (8) wrote in The History of Baltimore City and County that "Hillsides, once covered with trees, shrubs, and herbage, retained the rainwater near the surface or allowed it to flow in a gradual supply to the springs beneath, while a notable portion entered the cracks in the rocks to trickle through and converge in the streams at lower levels. But now the hillsides, baked by the sun, allow the rains to run off by a single impulse, to be lost in swelling floods."

The result for one area of Baltimore County in the Gunpowder River watershed was the loss of the port of Joppa. Joppa was at the mouth of the Gunpowder River on the Chesapeake Bay. It accommodated eight-foot-draft vessels that had been employed to move the timber being stripped from the hillsides in the watershed. Today there is no port and Joppa is a sun-baked suburban Baltimore community near the edge of the Chesapeake Bay. There is now dry land where once ships rode at anchor (9).

Gottschalk (9) computed that in a fifty-one year period between 1846 and 1897, 7.9 million cubic yards of sediment were deposited in the upper Gunpowder estuary. Erosion has continued to cause problems and will continue in the future at rates exceeding natural occurrence, despite the Maryland Water Resources Administration's 1970 Erosion and Sediment Control Law. Regardless of the hard work of the professionals in the agency, the 23 counties and 151 municipalities have continued to enforce their adopted version of the regulation as a matter of convenience, or in some cases the counties have adopted so many exceptions to the regulation that it has no teeth. Roy Benner (10) Chief of the Erosion and Sediment Control Branch of the State Water Resources Administration, reported to the Chesapeake Bay Commission in August of 1983 that ". . . inspection and enforcement on the local level in most cases was poor."

In Table 2 are listed the major components of each of the soil erosion and sedimentation ordinances for each county. The table is also divided into the five proposed regions to reflect the disparity among as well as between these proposed subdivisions. Only seven counties detail a sediment control plan that would make the use of berms, retention ponds, and hay bales mandatory when grading and clearing are undertaken. There was no uniformity among counties as to who must conform or who must post a performance bond. Indeed in the counties where opposition to adopting an erosion/sediment control regulation occurred (Caroline, Somerset, Wicomico, Charles, St. Mary's, Howard, Prince George's, Montgomery, Carroll, and Frederick) a large number of specific types of projects were exempted. This has tended to dilute the program. By going to a

TABLE 2: SEDIMENT CONTROL REGULATIONS SUMMARIZED BY COUNTY FOR EACH PROPOSED REGION
(All ordinances exempt agriculture from county regulation. In theory, agricultural practices are regulated by local Soil Conservation Districts. Data were developed from each county's and Baltimore City's regulation.)

COUNTY	WHO MUST[1] CONFORM	ENFORCEMENT AGENCY	VIOLATION PENALTY	PERFORMANCE BOND	DETAILED PLAN YES	DETAILED PLAN NO	DETAILED EXCEPTION YES	DETAILED EXCEPTION SOME	DETAILED EXCEPTION NONE
REGION I.									
ANNE ARUNDEL	ANYONE STRIPPING 50% OF LOT AREA OR 2500 SQ. FT.	DEPT. OF INSPECTION AND PERMITS	$1000 AND/OR 6MONTHS JAIL/ DAY/OFFENCE	YES IF DISTURBANCE OVER 5000 SQ. FT.	◆			◆	
BALTIMORE	ANYONE MOVING 500 CU. YD OR MORE	DEPT. OF PERMITS	$1000/DAY/OFFENCE	YES	◆			◆	
BALTIMORE CITY	EVERYONE	DEPT. OF PUBLIC WORKS	$1000/DAY/OFFENCE	NO		◆			◆
HARFORD	ANYONE STRIPPING 22000 SQ. FT. OR MOVING 500 CU.YDS.	DEPT. OF PUBLIC WORKS	$1000/DAY/OFFENCE	YES	◆				◆
REGION II.									
CAROLINE	ANYONE MOVING 50 CU. YDS. OR STRIPPING 1800 SQ. FT.	DEPT. OF SEDIMENT AND GRADING CONTROL	$1000 AND/OR 6 MONTHS / DAY/ OFFENCE	YES		◆	◆		
CECIL	ANYONE MOVING 100 CU.YDS. OR MORE	OFFICE OF THE BUILDING INSPECTOR	$5000 AND /OR 6 MONTHS IN JAIL/DAY/OFFENCE	YES		◆			◆
DORCHESTER	ANYONE MOVING 250 CU.YDS.OR A PROJECT COST OF $500 OR MORE	DEPT. OF PLANNING AND ZONING	$5000 AND/OR 1 YEAR IN JAIL /DAY/OFFENCE	YES BUT MAY BE WAIVED		◆			◆
KENT	ANYONE MOVING 250 CU. YDS. OR WITH A PROJECT COSTING $500 OR MORE	PLANNING COMMISSION	$5000 AND/OR 1 YEAR IN JAIL /OFFENCE/DAY	YES BUT MAY BE WAIVED		◆			◆
QUEEN ANNE'S	EVERYONE	SEDIMENT CONTROL ADMINISTRATION	NONE	NO		◆			◆
SOMERSET	EVERYONE	DEPT. OF PLANNING AND ZONING	$1000 AND/OR 6 MONTHS IN JAIL /OFFENCE/ DAY	YES BUT MAY BE WAIVED		◆	◆		
TALBOT	EVERYONE	PLANNING AND ZONING OFFICE	$5000 AND /OR 1 YR. IN JAIL /OFFENCE/DAY	YES BUT MAY BE WAIVED		◆			◆
WICOMICO	EVERYONE	DEPT. OF PUBLIC WORKS	$1000 AND/OR 6 MONTHS IN JAIL /OFFENCE/ DAY	YES BUT MAY BE WAIVED		◆	◆		
WORCESTER	EVERYONE	SEDIMENT CONTROL INSPECTOR	$5000 AND/OR 1 YR. IN JAIL /OFFENCE/DAY	NO		◆			◆
REGION III									
CALVERT	ANYONE MOVING 100 CU. YDS. OR MORE OR A PROJECT COST OF $100 OR MORE	DEPT. OF INSPECTION AND PERMITS	$5000 AND/OR 1 YR. SUSPENSION OF LICENSE	YES BUT MAY BE WAIVED		◆			◆
CHARLES	EVERYONE	DEPT. OF INSPECTION	$1000 AND/OR 6 MONTHS IN JAIL /OFFENCE/ DAY	YES IF 1000 CU. YDS. OR 3000SQ. FT. AFFECTED	◆		◆		
ST. MARY'S	EVERYONE	COUNTY ENGINEER	$1000 AND/OR 6 MONTHS IN JAIL /OFFENCE/ DAY	YES IF 1000 CU YDS. OR MORE MOVED	◆		◆		
REGION IV.									
HOWARD	EVERYONE	DEPT. OF PUBLIC WORKS	$1000 AND/OR 6 MONTHS IN JAIL /OFFENCE/ DAY	YES BUT MAY BE WAIVED		◆	◆		
MONTGOMERY	EVERYONE	DEPT. OF ENVIRONMENTAL PROTECTION	$1000 / OFFENCE /DAY	YES		◆	◆		
PRINCE GEORGE'S	EVERYONE	DEPT. OF LICENSES AND PERMITS	PRESENTLY A STOP WORK ORDER WITH NO PENALTY EITHER CRIMINAL OR CIVIL	YES IF OVER 15000 SQ. FT. AFFECTED	◆		◆		
REGION V.									
ALLEGANY	EVERYONE MOVING 500 CU. YDS. OR MORE	COUNTY SEDIMENT CONTROL INSPECTOR	$25-100/OFFENCE	YES BUT MAY BE WAIVED		◆			◆
CARROLL	EVERYONE	"DESIGNATED"[2] DEPARTMENT	$1000 AND/OR 6 MONTHS IN JAIL /OFFENCE/ DAY	YES BUT MAY BE WAIVED	◆		◆		
FREDERICK	EVERYONE	"DESIGNATED"[2] AGENCY	$5000 AND/OR 1 YR. IN JAIL /OFFENCE/DAY	YES BUT MAY BE WAIVED		◆	◆		
GARRETT	ANYONE MOVING 100 CU. YDS. OR MORE OR STRIPPING 5000 SQ. FT.	"DESIGNATED"[2] DEPARTMENT	$5000 AND/OR 1YR. IN JAIL /OFFENCE/DAY	NO		◆			◆
WASHINGTON	ANYONE MOVING 100 CU. YDS. OR MORE OR STRIPPING 5000 SQ. FT. OR MORE	DEPT. OF BUILDING PERMITS AND INSPECTION	$500/OFFENCE	NO		◆			◆

1. All ordinances recognize permit required if sediment released to local waters.
2. Designate = Department that the type of work comes under, i.e. Roads, Sewer.

regional system, control can be achieved by adopting the State regulation as it exists in the Maryland Code with no exceptions. A more powerful tool would then be available to control erosion and sedimentation.

To put this in perspective, construction activity in a suburban Fairfax County, Virginia development resulted in a loss of 25,000 tons of soil per square mile per year. (11)

Maryland has similar Piedmont type soils as Fairfax County. The results of the movement of such sediments into areas such as the Chesapeake Bay are reduced sunlight and thus reduced plant growth; destruction of fish spawning beds and nursery areas by the covering sediment; smothering of oyster seed beds; abrading of fish gills and crab gills which opens them to infectious disease; and additional subtle influences such as increase of temperature, reduction in oxygen, chelation of vital growth nutrients.

In general, sediment regulations have not been enforced adequately. The waterman has lost part of his harvest; the recreational fisherman has not caught his trophy fish or gathered his bushel of crabs, and the taxpayer whose funds go for dredging harbors and channels has been subsidizing the construction industry in Maryland. Regionalizing this control effort by unifying regulations that appear in Maryland regulations; supplying properly trained enforcement personnel; unifying the penalty for noncompliance; and developing enforcement/inspection to a higher degree would be a great step forward in controlling sediment impacts at the source.

CASE STUDY: EDUCATION

By presenting a comparatively non-controversial case study such as sediment control, a vision of regionalization is available. Now it is important to view a case study where feelings and emotion temper, if not cloud, rational thought. That case is education.

The Report of the National Commission on Excellence in Education (13) reported that, "Our society and its educational institutions seem to have lost sight of the basic purposes of schooling, and of the high expectations and disciplined effort needed to attain them." In Maryland, twenty-three counties are charting and controlling the destiny of almost 700,000 young minds in their jurisdictions. (12) Some are doing it well with the available resources, others not so well.

Table 3 is a summary of the comparative areas in education pertinent to this discussion. It is evident that student/teacher ratios are not highly variable. The Central Region (IV), (except for Montgomery County), has the highest ratio. Referring back to Figure 4, it is noted that this region has the highest growth potential in population for the next fifty years.

Regional variation in cost per pupil is reflected in terms of tax dollars committed to education. Regionalization could bring equity in tax dollars expended per pupil. Wider tax bases and even a revision in taxation could bring this about.

Regionalization could mean a more equitable formula for State aid to education. Baltimore City and Somerset County, in challenging the present formulas for distribution of State aid, have the State Department of Education thinking. But the thinking needs a wider approach. This is where regionalization offers benefit.

Regionalization could bring about a more unified curriculum with goals and expectations more in line with a ". . . world of ever-accelerating competition and change in the conditions of the workplace, of ever-greater danger, and of ever-larger opportunities for those prepared to meet them . . .". (13) County parochialism could give way to the primary goal of education, the training of an active mind.

Finally, regionalization could help to quiet the "hype" of education so discouragingly evident on the local level. Political use, union demands, and special interest pressures all combine to blunt and discourage teacher and student alike. Local school boards worry about prayer vs. no prayer, evolution vs. divine creation, puberty vs. ignorance, and making political speeches. Regionalization could reduce the pressures of special interests, or at least let it be accommodated in a context of importance to the training of young minds.

A system must be adopted in Maryland so that all persons—regardless of where they live, their economic status or their ethnic

TABLE 3: PUBLIC SCHOOL STATISTICAL INFORMATION FOR THE PERIOD ENDING DECEMBER 1, 1982 (12)
(Comparative ratios were calculated by dividing the number of students by the number of teachers.)

REGION	COUNTY	PUPIL ENROLLMENT	NUMBER OF TEACHERS	STUDENT TEACHER RATIO	PUPIL COST County	PUPIL COST State
I.						
METROPOLITAN	ANNE ARUNDEL	65591	3577	1:18	2606	560
	BALTIMORE	89796	5249	1:17	3234	418
	BALTIMORE CITY	119673	6303	1:19	2564	710
	HARFORD	27938	1513	1:19	2493	665
		303048	16642	1:18		
II.						
EASTERN	CAROLINE	4354	259	1:17	2423	943
	CECIL	12381	712	1:17	2454	708
	DORCHESTER	5194	265	1:20	2747	852
	KENT	2517	154	1:16	2996	538
	QUEEN ANNE'S	4597	278	1:17	2689	530
	SOMERSET	3519	205	1:17	2497	736
	TALBOT	3755	243	1:16	2606	289
	WICOMICO	11409	658	1:17	2518	533
	WORCESTER	4953	331	1:15	3134	134
		52679	3105	1:17		
III.						
SOUTHERN	CALVERT	7793	419	1:19	2910	617
	CHARLES	16781	913	1:18	2612	574
	ST. MARY'S	11317	616	1:18	2602	711
		35891	1948	1:18		
IV.						
CENTRAL	HOWARD	24272	1312	1:19	2698	469
	MONTGOMERY	92517	5406	1:17	3771	195
	PRINCE GEORGE'S	112303	5393	1:21	2879	590
		229092	12111	1:19		
V.						
WESTERN	ALLEGANY	12551	701	1:18	2697	703
	CARROLL	19349	1023	1:19	2299	618
	FREDERICK	22964	1251	1:18	2538	503
	GARRETT	5259	289	1:18	2350	589
	WASHINGTON	18693	1045	1:18	2588	631
		78816	4319	1:18		

origin—are given an adequate chance to develop their minds. For it will be these trained minds that will have the responsibility for the success or failure of our society in the future. Regionalization could allow all areas of the State of Maryland to deliver to students the tools to fulfill this responsibility.

CONCLUSION

Regionalization as presented here is new and radical in Maryland. Compacts of regional cooperation, however, are not new. The CETA-Manpower program, waste treatment compacts and pollution abatement ideas are history. These ideas and agreements were compacts, and when one partner in the compact felt it was not receiving its fair share (e.g., CETA) then the regional cooperation disintegrated. What is proposed in this essay is not a compact, not an agreement, but a radical shift to a new form of government.

Certainly change is needed. A change that would help reduce the problems that eat at the very fabric of government. Special interest groups, lobbies, political action committees, and machine politics sometimes add to these problems. They often have succeeded in shaping government to their ultimate ends — ends which are often not necessarily in the interest of the majority of citizens. A regional system would make it harder for these groups to be so influential. It must be government-- elected by the people, representing the people, and responsive to the people—that will herald our survival as a viable sovereign State.

As the future becomes the present and funds become even more scarce, the cost savings from just eliminating county bureaucracies could be a profit windfall for the taxpayer. However, we can not overcome the transgressions and designs of two centuries or the disintegration of our urban areas in the last four decades by instituting drastic reform rapidly. More than likely, all that will result from too hurriedly going about the changes proposed is a greater disintegration of institutions and an increase in the chance for social upheaval. What we need to do is think about the future, but not in the petty confines of personal political survival. Reduction of resistance to this proposed government change will occur only ". . . to the degree that the changer helps the changees to develop their own understanding of the need for the change, and an explicit awareness of how they feel about it and what can be done about those feelings." (14)

The new regional government system must have a period of phasing-in — first by education and then by development of the institutions. Maryland can develop into the twenty-first century if the present is for thinking and the near future is organized for action.

REFERENCES

1. R. F. Wagner, Third Annual Report of the Mayor to the City Council and the People of New York City (New York, 1956).

2. Committee for Economic Development, Reshaping Government in Metropolitan Areas (New York, 1970).

3. Maryland Department of State Planning, Employment in Maryland-Trends and Projections 1967-2000 (Baltimore: Publication No. 82-15, 1982).

4. K. E. Boulding, "Economics and Ecology," Future Environments of North America, edited by F.F. Darling and J.P. Milton (Garden City, N.Y.: The Natural History Press, 1966), pp. 225-234.

5. State of Maryland, Report of the Constitutional Convention Commission (1967).

6. Maryland Department of State Planning, Final Population Projections (1983).

7. L. E. Mumford, The Urban Prospect (Harcourt Brace Javanovich, 1968).

8. J. T. Scharf, The History of Baltimore City and County (Philadelphia: L.H. Everts, Publisher, 1881).

9. L. C. Gottschalk, "Effects of Soil Erosion on Navigation in Upper Chesapeake Bay," Geographic Review 35 (1945), 219-238.

10. R. Benner, Erosion and Sediment Control Law, 1970 (Briefing before the Chesapeake Bay Commission, 1983).

11. Federal Water Pollution Control Administration, Urban Soil Erosion and Sediment Conrol (FWPCA Pamphlet, 1970).

12. A. Zander, "Resistance to Change: Its Analysis and Prevention," Advanced Management 15-16 (1950), pp. 9-11.

13. Report of the National Commission on Excellence in Education, A Nation at Risk (Washington: U.S. Government Printing Office #065000001772, 1983).

14. A. Zander, "Resistance to Change: Its Analysis and Prevention," Advanced Management 15-16 (1950), pp. 9-11.

COMMENTARY

The Honorable Benjamin Cardin,
Speaker of the House of Delegates

Dr. Foerster's paper is thought-provoking and points out the need for regional approaches in solving governmental problems. However, while broadly-based coordination and cooperation can mean more consistency and efficiency, Mr. Foerster's proposal to disband county government to achieve that end is the wrong approach.

Dr. Foerster's key reason for his proposal to establish regional government was cutbacks in federal funding for State and local governments. However, dividing the State into five new political subdivisions would neither improve the ability of the State to overcome federal funding constraints nor ease the burdens caused by those constraints.

The regional concept as envisioned by Dr. Foerster would not materialize in reality. Rather than streamlining State government by reducing the cabinet structure, a system of regional governments would add another layer of bureaucracy.

In addition, the five proposed regions cover too large an area, and result in too few local government units to assure representation of all segments of the population and proper control and accountability for governmental action. For example, imagine the problems inherent in a regional education system where policies for large rural segments of a region's population would be set by political forces emanating from the region's central city. This rural-urban dichotomy would lead to many similar problems. The five-region system would not work.

COMMENTARY

The Honorable C. Vernon Gray,
Howard County Council

Dr. Foerster's contention that county-level governments are wasteful and ineffective is wrong. The proposed regional-level government would obscure citizen access to government and hamper attempts to manage conflicts and meet needs. It would not serve the citizens in each region any better than the existing county structure.

The problem of disparity among the wealth bases and education budgets across the State would still exist. The disparity would simply be among five subdivisions rather than 24 subdivisions.

Dr. Foerster's point that a regional system would improve environmental management is questionable. For example, the Patuxent River Watershed which includes parts of seven counties, would involve three of the five proposed regions. The River would receive better attention under the county system where problems and solutions can be better focused and more easily addressed.

A better approach to more cost-effective government would be home rule for all counties. This would enable them to be more responsive to local problems and accountable for their solutions.

8

The Future of the Chesapeake Bay and its Resources

Ian Morris

Chesapeake Bay, Maryland's most important natural resource, is subject to massive natural changes. Its future is also dramatically affected by man's activities which change the rates of naturally-occurring progressions. Major commitment and action will be necessary to control the harmful effects of man's activities. Even so, the result will probably be in preventing further general deterioration in Bay conditions while improving some localized areas which are heavily impacted by man. Efforts to reduce sedimentation will ease problems in some areas, but shore erosion will continue as a dominant sediment contributor. Nutrient controls will prevent further general nutrient enrichment and dramatically improve conditions in some tributaries. Enormous pressures on living resources will continue, and the possibility and effects of over-fishing of desirable species deserve more attention. A successful oyster fishery in the future will depend on its transition to a process more like aquaculture or farming. Stronger links between the scientific community and regulatory agencies can improve the effectiveness of Bay management.

Few of Maryland's citizens would question the fact that the Chesapeake Bay is the most important of the State's natural resources. It bisects the State, is the largest estuary in the United States and offers more than four thousand miles of shorefront within Maryland. The social and economic values of its commercial fisheries are exceeded only by the aesthetic and recreational importance of its waters and their resources. It is therefore appropriate that a discussion of Maryland's future consider the future of its prime natural resource. It is particularly timely that such an analysis be undertaken in 1983. This year has seen the ending of a significant seven-year study by the Environmental Protection Agency (EPA); a study which has focused intense discussion on the changes of the past and on the fate lying in store for this important estuary. It is these discussions which form the basis for the present analysis.

There are some special problems associated with predicting the future of a natural system, particularly one as complex as the Chesapeake Bay. It is subject to natural changes and fluctuations, the causes of which are only poorly understood. Its future can be massively perturbed by natural climatic events (most recently illustrated by Hurricane Agnes in 1972). More important for this discussion, however, is the fact that its future will be dramatically determined by the activities of man. Any accurate predictions will depend on projections of population growth and distribution and on socio-politico-economic matters.

In one sense, the Chesapeake Bay and its resources will be the place where the consequences of all of man's activities are brought together. Future trends in the Bay will therefore be the "bottom line" for all that happens in the State, and in other states which are part of the massive drainage basin of the estuarine system.

SOME ASSUMPTIONS AND CONSTRAINTS

It is clear that any accurate and detailed view of the future depends on analyzing the various alternatives for population growth and distribution, and for social, political and economic trends. However, this author is

Dr. Morris is Director of the University of Maryland's Center for Environmental and Estuarine Studies in Cambridge, Maryland. He received his Ph.D. in Plant Physiology from University College in London, England, has served in a variety of teaching and administrative positions in the U.S., and is the author of numerous articles in his field.

not competent to make such analyses. Faced with such incompetence, therefore, I want to take a broader view of the future of the Chesapeake Bay, and to base the discussion on some simplistic assumptions about population growth, distribution, and behavior. Let us assume that the generally accepted projections for population growth in Maryland are indeed acceptable, and that there will be modest growth. Let us assume, further, that significant proportions of the population will be based in urban areas and that the major centers of Washington, D.C. and Baltimore will continue to be viable and prosperous cities fifty years from now. Similarly, let us make some simplistic assumptions of land-use patterns and the nature of man's activities in and around the Chesapeake Bay. There will continue to be a decline in the area of land in agricultural use. There will be significantly increased pressure on the Bay from continuing expansion of industrial and residential development in desirable locations, and increased prosperity will continue to be linked to shore-front development and to increased recreational pressure from marinas, boats, and vacation areas.

Stating the assumptions of the future of numbers, distribution, and activities of Marylanders in such a simplistic way can be used to highlight the fragile nature of the Bay. Even with modest projections for growth and minimum predictions of changing social, political, and economic patterns, it can be suggested that the pressure which an increasingly prosperous and demanding society will place on the Bay will be immense. Our concern for the future of the Bay need not be linked to dramatic changes to current trends in population growth and behavior.

MAN AND AN ESTUARY

One of the most important environmental developments of the past century--and most notably, of the past thirty to forty years--has been the realization that the activities of industralized man can alter the environment on a scale (both in time and space) which goes vastly beyond the immediate event. (For example, the global carbon cycle had been in a steady state in which exchanges between land/air/water were in balance for millenia until man undertook massive deforestation and the burning of fossil fuels.) Man is capable of having comparable profound effects on the Chesapeake Bay. In geological time, an estuary such as the Chesapeake Bay is an ephemeral creature; created by an act of nature and destined to disappear through equally natural forces. Inevitably and inexorably such estuaries will become filled with sediments eroded from their shores, will evolve through stages of increased enrichment and productivity, and will see massive changes in the amounts and nature of the living resources supported by these evolving bodies of waters. Man has had--and is continuing to have--monumental effects on these processes which would have otherwise occurred over geological periods. The rates at which erosion and sedimentation occur are increased dramatically, as are the rates of enrichment through the addition of fertilizing nutrients.

Man's effects on the living resources are equally rapid and dramatic. In addition, man influences natural systems not solely by changing the rates of naturally-occurring progressions. The work of industrialized man adds chemicals which are toxic to the biota of the receiving environment. Some of these chemicals (e.g., heavy metals) are naturally occurring, but man's activities are able to concentrate them to levels where they can have significant effects. Others (e.g., pesticides) are artificial compounds which the organisms of systems such as the Bay have never experienced before in the history of the planet. Through man's activities alone therefore, changes can occur over areas which go well beyond the immediate point of impact and over periods of time of years, decades, and centuries.

SOME CURRENT TRENDS

The major Governors' Conference on Chesapeake Bay held in December, 1983 was the third of its kind in fifteen years. (The others were held in 1968 and 1977.) The conference of 1977 followed completion of a major study by the Army Corps of Engineers and the third one in 1983, completion of the multi-million dollar multi-year Chesapeake Bay Program of the U.S. Environmental Protection Agency. This fifteen-year period of intense study,

analysis and debate has, in essence, been a struggle to identify changes which have occurred and might be occurring in the Bay and to assign causes to those trends. Unfortunately, there is no doubt that the ratio of data to understanding is large (arguably larger than for any other body of water), and that the Bay has suffered from agency, institutional, and individual rivalry which can only be deplored. However, for the purposes of our view of the future, it is right that we begin with some of the basic trends which are currently widely accepted; trends which have attracted sufficient attention to label 1983 the "Year of the Bay."

There are four major areas which have dominated the discussions of the early 1980s, and which can guide our approach to the future:

- the possibility that sedimentation rates are unacceptably rapid because of man's alteration of land-use patterns in the drainage basin of the Bay.

- the possibility that enrichment by nutrients is also unacceptably rapid, causing major changes associated with the phenomenon of eutrophication.

- the evidence that toxic materials are appearing in the Bay and that this "poisoning" of the waters and bottom is growing in intensity and extent.

- the possibility that there are changes in living resources which are caused by the activities of man (whether it be by alteration of habitat or by over-fishing), and which are superimposed on changes resulting from natural fluctuations.

It is not appropriate that the author add more words to the voluminous output on these issues. At the time of writing, the "central dogma" of the Chesapeake Bay Study is that man's activities have led to increased rates of sedimentation, eutrophication and of addition of toxic materials. It states further that these changes have caused declines in living resources such as the submerged aquatic vegetation and some commercially-important species of fish.

A LOOK INTO THE FUTURE

For convenience, this author structures a look into the future on the basis of this present (1983) "central dogma" of the Chesapeake Bay. In discussing the future trends of the various subject areas, it is convenient to address four questions:

- Are there trends which suggest that, if mankind does not alter its behavior, significant changes will occur in the Bay over the next fifty years?

- Are there actions now being considered which might modify the nature of future changes?

- Will these actions be effective?

- Are there areas of uncertainty which have not been considered to date, and which could have profound—but as yet, unidentified effects on the future of the Chesapeake Bay and its resources?

SEDIMENTATION

The Chesapeake Bay is being filled in. This is a geological inevitability. Man's development of the land around the Bay has dramatically increased the rate at which the Bay is being filled. The important question for the next fifty years will be whether the rate is sufficiently rapid to cause major observable changes which will radically alter the way we view the Chesapeake Bay and its resources. In the 1950s, a leading State senator could walk into the water and see his feet; now he cannot. In 2033, will his grandchildren be able to walk on the water?

It is crucial to recognize the major role which man has had and continues to have on the process of erosion and sediment loading into the Bay. It is unlikely that man can restore the sedimentation rate to the "natural" state. However, in speculating about the sedimentation problems fifty years from now, there is one positive comment to be made. Although man has drastically increased the rate at which the streams, rivers and estuaries of the entire Chesapeake Bay system are being filled, there is some evidence that, in the years since colonial times there has not been a

steady increase in the annual sedimentation rate. For example, an early peak occurred during the period of massive forest clearing. A later one occurred in some locations at the time of the second World War. Since then, the rate has declined. Much of the intensive and extensive management plans being developed in 1983 and the years immediately before have been designed to limit run-off of suspended material, whether it be soil from agricultural land, material from urban developments, or erosion of the shoreline. It seems reasonable to suggest, therefore, that the rate of sedimentation/erosion will not be higher in the year 2033. However, this statement will be true only if the broad use of substantial management practices is effective. In other words, man will place such pressure on the system (marinas, development, recreational activities, etc.) that he/she will have to work much harder at conservation and management practices, simply to remain in the same place. Also, although the rate of erosion/sedimentation might not be higher in 2033 than it is now, the fifty years will see massive movement of the land into the water. Most of this will not be controllable by man. The efforts to reduce run-off of sediments from agricultural land and from human development will ease the problems in some localized areas, but shore erosion will continue to be the dominant process. Fifty years from now, therefore, the landscape around the Bay will be different; some islands will be smaller, others will disappear. Despite the attempts at improved management of sediment run-off, it seems likely that man's continued interest in shore-front living, marinas, boating and recreation will continue to hasten the natural processes which are part of the Bay's evolution.

NUTRIENTS

The role man plays in increasing the enrichment of the Bay has three components; the nutrients in sewage, those in run-off from agriculture and those from diffuse sources in urban areas. Enrichment of upper parts of the Bay and the major tributaries has been given one of the major emphases in the results of the EPA Chesapeake Bay Program and in the proposals for improved management in the future. It seems that such practices will be introduced, that they will be effective and that fifty years from now, the most extreme consequences of over-enrichment will have been avoided. The trend highlighted in the EPA study will have been reversed.

Such an assumption is not solely blind optimism. There are several spectacular examples from around the world (the Great Lakes, Scandanavian lakes, and the River Thames) of significant improvements resulting from enhanced sewage treatment. Similarly, the improvement in the Potomac with the introduction of sewage treatment at Blue Plains is frequently cited as evidence for the possibilities of enhanced water quality within the broader area of the Chesapeake Bay system. Indeed, one of the sections in the final report of the EPA presents in quantitative terms the projected increases in nutrient loading into the major rivers feeding the Chesapeake Bay and the reductions which various control strategies would effect.

There are some cautionary comments which need to be made in connection with this general air of optimism. First, the examples of spectacular improvements have generally been in locations which were extremely enriched and where sewage was the dominant culprit. Comparable locations in some of the tributaries might therefore be expected to be the sites of major improvements. In vast areas of the Bay system, it is wrong to use the term "eutrophication" and expect dramatic improvements (or even that "improvements" are needed). Secondly, the more diffuse the sources of nutrients, the less easy they are to control. This is the case for much of the Chesapeake Bay system, e.g., the major contributor of agricultural run-off is the massive Susquehanna river basin. Thirdly, population growth, redistribution and the continued variety of uses of the Bay will continue to increase the tendency for nutrient enrichment in ways which will test the effectiveness of management practices to the limit.

In looking forward fifty years, therefore, this author has a more pessimistic view of the possibilities for improvements in the picture of nutrient enrichment. There is no doubt that without taking rigorous action man's contribution to nutrient-enrichment

will continue to deteriorate the Bay with increasing intensity and over larger areas. If rigorous management actions are introduced, it might be possible to prevent further deterioration and, in certain tributaries, might effect some improvement. (Put crudely, this statement says that: "Over the next fifty years it could get a lot worse, we are unlikely to make it much better, but we might keep it like it is.")

TOXIC SUBSTANCES

Fifty years from now, the potential for mankind to pollute the Chesapeake Bay with harmful compounds, both natural and unnatural, will still be with us, possibly at a higher level. The continued use and production by man of an ever-expanding array of chemicals will continue to pose major threats to natural resources such as the Bay. However, it must not be assumed that the trend towards increasing pollution by toxic materials is inevitable. Recent years have seen the reversal of such trends, for example the significant decrease in metal loading to Baltimore Harbor between 1970 and 1980. Similarly, movement of industrial patterns from the so-called "smoke stack" industries to high-technology can help significantly.

However, complacency over toxic materials in the environment is a disastrous attitude. A prediction that fifty years from now the Chesapeake Bay will be benefiting from reduced impact by toxic substances will depend on vigilant monitoring and rigorous controls. Without them, man will continue to wreck havoc.

SOME SUMMARY COMMENTS

Before moving to the question of living resources, it might be worth presenting a brief summary of the major points made in the earlier sections. The trends of the recent past and the present suggest that fifty years from now the water quality of Chesapeake Bay could be significantly lower than it is now. This worsening of the Bay would be reflected in increased sediment loading, over-enrichment of nutrients and a spread of toxic substances. However, the recent sensitivity to the future of the Chesapeake Bay makes it unlikely that such a worsening situation will actually occur. If proper management actions are put into place and enforced, it seems possible that fifty years from now the water quality in the Bay will be comparable to the present condition and in some upper parts of some of the rivers, local improvements might be expected.

This might seem a trivial and inconsequential way of viewing the next fifty years. However, in the opinion of this author, the pressures from man's increasing demands for access to the Bay in a variety of ways will make predictions for massive large-scale improvements unrealistic. Indeed, given such pressures it will take prodigious efforts on the part of citizens, industry and government to ensure that the worsening trend is avoided.

THE LIVING RESOURCES

One of the major reasons for viewing the Chesapeake Bay as a natural resource is the value—economic, social, aesthetic—of the living resources; the fish caught by the watermen and by the vast number of recreational fishermen, and those eaten by huge numbers of visitors and natives alike. Certainly, in the "Save the Bay" discussions of 1982/1983, one of the major points of emphasis has been the link between water quality and living resources. Dedicated individuals and organizations are currently preparing management plans designed to reverse trends suggested in the reports of the EPA Chesapeake Bay Program with a specific view to restoring habitats which will then be followed by restoration of the fisheries which have suffered the most marked declines over recent decades; notably, fisheries such as shad and striped bass.

It is this simplistic link between parameters of water quality and abundance of particular fish which is most difficult for the scientific community of the Chesapeake Bay to accept. Certainly, projecting fifty years into the future with the intention of predicting the status of any single fishery is arguably the most risky aspect of this present essay and of the present publicity about actions to "Save the Bay."

However, there are some simple statements which might help to guide us

through the uncertainties and to try to see Chesapeake Bay fisheries in the year 2033:

- It is important to understand that expressions of uncertainties in explaining the causes of fish fluctuations and declines--and, therefore, predicting future trends--are not simply the expressions of doubting academics. The abundance of fish stocks is determined by processes influenced by climatic conditions, hydrographic parameters and interactions of biological, chemical and physical mechanisms which are very poorly understood. (A comparison of trends in fish populations and water quality parameters indicates far greater fluctuations in fish populations than in water quality parameters.) In recent years, it has been increasingly admitted that most approaches to fisheries management have been pursued in accord with the natural processes now considered most important to the success of a fishery. It is a realization that is coming slowly to the Chesapeake Bay, but this author expresses the sincere hope that it will grow over the next fifty years.

- Despite this highly-fluctuating characteristic, some long-term trends in Chesapeake Bay fisheries have been identified and have, quite properly, been given attention. The best-known is the peak of the oyster fishery of 15 million bushels per year in the 1890s followed by a decline to a fluctuating level around 1 million bushels/year during the 1960s, 70s and 80s. Also, the steady decline in the important fisheries of shad and striped bass over the past three to four decades has been emphasized. Indeed, one of the major emphases of the EPA Chesapeake Bay Program has been the contrast between the declines of the anadromous fish (those which spawn in fresh water, such as shad) and the increase in those species which spawn in salt water (such as menhaden and blue-fish). This means that one should not view the recent "decline" of the Chesapeake Bay as a reduction in productivity (more fish are being caught in the Bay in the early 1980s than have ever been caught before) but as a change in species; a change linked directly by some people to the quality of the fresh water in the upper Bay and tributaries.

- The possibilities of over-fishing of the major desirable species in the Chesapeake Bay receives much less attention than might be expected and than it deserves. Despite the earlier statements about the complexity of natural processes influencing the abundance of fish stocks, the dramatic effect of man's fishing activities is well documented. Superimposed on the processes of fluctuation and cycles, fishing mortality can make a stock crash to levels which bring it near economic extinction as a fishery and which make it more difficult to recover. The Chesapeake Bay suffers from an absence of the basic information which would allow comment on fishing mortality (largely because of the vast, but unquantifiable, influence of recreational fishing). It is an absence which can only continue to hurt any attempts to develop flourishing fisheries.

The optimism of the author about the future of water quality in the Chesapeake Bay extends less to the fisheries resources than to any other aspects. The pressure of fishing mortality will only increase, particularly from the sporting and recreational community. The effect of this can obsure any effects of improving habitats, and will be compounded by the massive potential fluctuations caused by nature. It is to be hoped that creative management of the fisheries resources accompanies the commitment to improve water quality. Without it, the continued pressure of people will play a dominant role in keeping fish stocks at a low level.

SOME MISCELLANEOUS THOUGHTS

The previous sections have presented a somewhat conventional approach to viewing the future of water quality and fisheries in systems such as the Chesapeake Bay. In particular, I followed the basic approach being taken in the intensive discussions surrounding the ending of the Chesapeake Bay Program and the management plans for the future.

It is tempting to step back from the present deliberations and speculate a little more broadly. Here, I do this in a personal and random fashion, and only address a few subjects in which this author has some interest.

AQUACULTURE

The issue of aquaculture has been under intensive discussion for about three decades (but the concept extends back in history much longer). Part of the interest arose out of the possibility that algal farms could produce plant protein comparable to that produced by crops on land. The other part originated with the common analogy between fishing and hunting, and the possibility that the future would lie with farming the fish, instead of hunting them. With isolated (and highly profitable) exceptions, the general introduction of aquaculture has failed. The question to address now is: are there sufficient examples of technical or conceptual developments in the sciences of aquaculture to suggest that it will figure prominently in the Chesapeake Bay of 2033? In a general sense, this author is pessimistic and does not anticipate a Bay filled with farms rearing fish and shellfish of various kinds. However, there are two observations which make it possible that this pessimism is misplaced. At present, it is being argued forceably and well that low-technology farming of oysters is feasible. In this, larvae and seed are made available to watermen for farming. The major problems with this at the moment are not technical but have to do with issues of socio-politics and tradition. It seems certain that a successful oyster fishery in the Chesapeake Bay of 2033 will depend on effecting changes which will make it much more aquaculture/farming oriented than it is at present. The second reason for a more optimistic view of aquaculture is the obvious likelihood that such rapid and major changes will occur in our technology, so as to make any current predictions pedestrian and narrow-sighted. It seems likely that some of these—notably in the field of biotechnology—will transform the possibilities for aquaculture in and around the Chesapeake bay.

TRADITIONAL FISHERIES

I raise this subject with some trepidation, because of my own lack of competence. However, one of the major impacts of changing fisheries management, habitat alteration, increasing development near the shore, growing recreational pressure and any increased role of farming practices will be on the watermen and their families who make a living in a fishery which has a high sense of tradition. It would be relatively simple to construct a scenario which brought all the above factors together to ensure that fifty years from now such traditional fisheries would not exist on the Chesapeake Bay.

SCIENCE, MANAGEMENT AND RESOURCES

Finally, I want to end with a subject in which I might appear to have a vested interest and which might be considered something of a "hobby-horse." The next fifty years of the Chesapeake Bay will be years in which attempts to preserve the Bay and its living resources will face enormous pressures from mankind; pressures which place conflicting demands on a potentially fragile system. Success in this awesome venture will depend on all segments of the State and the region working together to ensure that the best information and expertise is made available to those charged with making wise management decisions.

Within this general area of need, this author (for obvious reasons) stresses the need for strong links to be forged between the scientific community and the regulatory agencies. Within the appropriate fields of scientific study, considerable advances are being made in the techniques we use to study aquatic systems and in the improved understanding of the processes at work in such systems. The next fifty years will see further advances which we cannot imagine at the moment. The Bay will desperately need to benefit from such advances. May it do so.

CONCLUSIONS

1. The Chesapeake Bay will still be here in the year 2033; more people will be enjoying it and others, possibly fewer, will be earning their livelihoods by harvesting its living resources. It will continue to be a major contributor to the economy and life-style of Maryland.

2. Mankind will place increasing and, in some cases, overwhelming pressures on the Bay and its resources. The optimistic prediction in "1" above will only prove true if the effects of these pressures are mitigated by management actions designed to address issues of declining water quality and living resources. It is probably optimistic to think that such management actions will make substantial improvements to the Bay except in localized areas which are particularly heavily impacted by man at the moment.

3. The future of a system as complex as the Bay will therefore depend on controlled actions by man modifying the deleterious effects of increasing pressures from man. It will be crucial that all the commitment, energy, and expertise of the relevant communities be brought to bear on this important problem.

4. There will certainly be massive changes which no one can predict.

COMMENTARY

L. Eugene Cronin
Director
Chesapeake Research Consortium

The views in Ian Morris' paper are right on target. In addition, two important lessons must be learned regarding the Chesapeake Bay. First, the Bay is a regional resource stretching far beyond Maryland and must be addressed as an entity. Second, those who study and attempt to manage the Bay can only work within the natural capacities of the system.

Major changes can be expected due to increased development in the Bay region. While the pattern of future development is a matter of conjecture, planners have projected a doubling of population, three-fold increase in water use, a five-fold increase in recreational activity on the Bay, a twelve to thirteen fold increase in electricity, and an increase in commercial shipping from 160 to 300 million tons annually. Commercial and recreational fishing on the Bay may increase so that all major fish stocks will be below naturally sustainable levels.

The four problems emphasized by Dr. Morris call for a variety of management approaches. Sediment and nutrients should be retained on the land. This helps the farmer by lowering fertilizer costs and increasing farm productivity while preventing damage to the Bay. Efforts should be made to capture and use nutrients from sewage treatment plants that are now discharged into the Bay. One answer to the problem of toxics is to capture and use appropriate substances and destroy the rest. Techniques to do this are available, though expensive. The first priority for living resources is to ensure that the environment for them is adequate. There have been enough signals that problems exist. Positive actions should be taken.

The Chesapeake Bay system is large and complex. Learning about the Bay must continue in order to find out what to do and what not to do to preserve the resource. Change is inevitable. The last fifty years have been years of damage to the Bay. The next fifty must be years of improvement.

9

The Seeds of Change: Maryland Agribusiness Moves Into The 21st Century

Alan William Kempske

Agriculture is in transition. Emphasis on farming as a way of life that can earn a living is being replaced by an economic view of farming as a business where survival is determined by management ability and efficiency. Public and private strategies for the future of agriculture in Maryland should recognize and build upon this dominant underlying trend and Maryland's fundamental agicultural strengths: excellent agricultural land and diversity of production, public commitment to preserve good agricultural land, proximity to large agricultural markets, strong shares of growing agricultural market segments, innovativeness and an ability to build a community of interests among rural and urban residents. If Maryland follows this approach, the future for its agribusiness appears reasonably bright.

Projections are assignments approached with some degree of reluctance for the technician knows it is not a matter of whether he will be right or wrong, but rather how wrong he will be. However, I can assure you there is some satisfaction in attempting to project the state of agribusiness 50 years hence. First, most people would tend to have a low expectation level for the accuracy of so distant a projection. No pressure. Second, nature will assure that, as the target date approaches, fewer and fewer will be around to recall the wisdom of these projections. No critics. Finally, any projection should fare well when compared to the course of agribusiness over the last three years. Nowhere to go but up.

Obviously, projecting fifty years into the future becomes more a task of discerning trends and patterns than being able to quantify with great precision. Yet sometimes even the trends are difficult to spot. For example, fifty years ago, how many people correctly saw the potential impact of such inputs and tools as the farm tractor, microcomputers, manufactured fertilizers, genetic technologies, and satellite imaging? Remember, fifty years ago when farmers sat around discussing horsepower, they really were discussing horse power.

Agriculture's star has shone brightly at times during the past fifty years, but I suspect there are many farmers today who would question if it has been worth it. Farm incomes are the lowest since the Depression. Farm foreclosures are up. It is difficult for a farmer just to hold on to what he has let alone expand, and it is even more difficult for a young farmer starting out. Technology has been unable to champion the cause of farmers alone.

Two terms are often used interchangeably to describe farming: "agriculture" and "agribusiness." Technically, agribusiness includes farming and the allied industries and services. But, these two words have special importance because they not only define some of the problems, they also suggest an approach to problem solving.

The farming community and those who plan for it have a choice. They may select policies and priorities that reflect an orientation to farming as a "culture" or way of life worth preserving, or as a "business."

Mr. Kempske is Program Administrator for Carroll County's Agricultural Land Preservation Program and has his own law practice. He received an M.S. in Urban and Regional Planning from Florida State University and a J.D. from the University of Baltimore School of Law. He has held a variety of positions in the planning and legal services fields.

To the extent policies and priorities view farming as a way of life, a certain level of inefficiency and subsidization will be accepted. To the extent it is viewed as a business, efficiency and management will be stressed. But, in human terms, such choices are not always easy. Our current set of programs, policies, priorities, and problems reflect an attempt to have the best of both worlds. Any projections must be tempered by this very basic consideration.

THE IMPORTANCE OF AGRIBUSINESS TO MARYLAND'S ECONOMY

If agriculture is a business, then it is big business in Maryland. Data compiled by the Maryland Crop Reporting Service show that cash receipts from the sale of livestock, crops, and products totaled $1.064 billion in 1981. These receipts generated about $2.66 billion of activity in the economy. Additionally, the most recent agricultural census (1978) showed that 61,604 people were employed in agriculture either as owner/operators, tenants, or hired hands (the agribusiness complex would increase these numbers significantly). By comparison, a large corporation like Black and Decker has sales of approximately $1.4 billion and employs about 20,800 people. Agribusiness is big business.

AGRIBUSINESS AND POLITICS

Agribusiness is often perceived as a single entity — a blend of businesses united by cause and purpose. When agribusiness speaks, it speaks with one voice. Unfortunately, this is not true. There are many voices and great diversity of interest. Programs designed to help one segment of agribusiness often end up hurting another. An example is this year's PIK program.

Designed to reduce the production of certain crops thereby reducing surpluses and raising prices, it had the potential to help corn and wheat farmers (better prices), but to hurt the beef and broiler industries (higher costs) and the seed, fertilizer, pesticide, and implement dealers (lower demand for these inputs because of fewer acres planted).

It seems improbable then that agribusiness has been able to command any political power. But it has. Diversity of interest has been more a problem at the national level. Maryland agribusiness has worked together to achieve notable successes: preferential farmland assessment, sales tax exemptions on agricultural equipment, truck tax exemptions, and an agricultural land preservation program that is a national model. However, future success will depend on the number and strength of alliances agribusiness can forge. Demographics weigh heavily against agribusiness as a singular force.

As more of the State becomes urbanized (already 11 of 23 counties are considered part of an SMSA), agribusiness's voice could become weaker. The stage was set by Baker v. Carr, 369 U.S. 186 (1962) which established the "one man one vote" rule and the scene is being acted out by population, employment, and land use shifts. Between 1970 and 1980, urban population increased 12.7% while rural population decreased 9.6%. Between 1950 and 1978, Maryland lost 1.34 million acres of farmland and 17,380 farms — nearly 1/2 of its total. It is ironic that the same efforts to halt this loss of farmland by encouraging urban infill and higher densities will also further dilute agribusiness's political power.

Several major political issues lie ahead for agribusiness. The first is concern over the future of the Chesapeake Bay as a natural and economic resource. This will be the single most important issue in the legislature in 1984 and will remain a major issue for years to come since estimates indicate it will take $150-200 million/year for ten years to clean up the Bay.

While urban areas undeniably contribute a broad range of pollutants, urban interests have been quick to point out the nonpoint pollution threats posed by fertilizers, pesticides, and herbicides. Farmers are equally quick to point out that without these inputs, current high yields could not be sustained. While the use of these inputs will not be eliminated, at least out of concern for the Bay, it is likely more restrictions will be placed on their use. To decrease agricultural run-off, it is also likely that greater stewardship of the land will be promoted, either indirectly through educational programs or directly by requiring management practices as a condition to receiving benefits or as a

condition of eligibility for various programs.

It is questionable, however, if past increases in yields can be duplicated in the future. Many believe we are reaching the top of the production curve on a number of crops and past increases were directly related to the widespread use of fertilizers, herbicides, and pesticides. In fact, in certain areas, prolonged single cropping has diminished the quality of the soil to a point where profitable farming would be impossible without soil treatments. Unless less controversial alternatives can be found, Maryland agriculture will do well just to sustain its current yields.

The second major issue facing agribusiness is how to deal with huge subsidies and surpluses in a way that addresses both the concerns of farmers and the poor. In the past, the farm lobby has been strong, gaining cooperation from urban liberals for support on food stamp and nutrition programs. But, tight budgets have made cooperation difficult in the face of increased competition for available funds. The problem has been accentuated by the fact that many legislators serve a totally urban constituency that may know or care little about agriculture. This point was made dramatically several years ago when an urban legislator announced in a committee hearing that he could not understand why everyone was so concerned about the fate of the farmer since his constituents all bought their food from the grocery store.

There will be increased pressure to release some of the stored surpluses to the poor. Agriculture should openly promote such releases, provided they can be done in a controlled manner. There are several reasons for this. First, it is inconceivable that we should tolerate hunger in any segment of our population while tremendous stockpiles of food slowly go bad. Second, controlled releases of these products would not undercut a meaningful share of the market since the target populations are, by reason of income, not likely to be making significant purchases of these commodities anyway. Finally, by taking such an initiative, agriculture can do much to improve its image with several groups it needs as political allies, the urban interests and the poor.

FINANCING AGRIBUSINESS

Since agribusiness is big business, it generates big demands for capital. Even a modest-size farm may require $500,000 for land, equipment, and livestock. In the past, some lenders and farmers relied on inflation to underwrite ever larger debt loads since theoretically, the underlying collateral was also increasing in value. However, high interest rates on loans, depressed crop prices, and a cooling of inflation soon showed the wisdom of that approach.

In the future, commercial and government lending guidelines will emphasize the farmer's management ability and efficiency. Farmers will be treated as businessmen and loans will be evaluated more on the business's ability to repay based on net income projections and efficiency and less on the value of the underlying collateral. While today a farmer can shop around until he finds a bank that will lend him money, this will be less likely in the future. As banking mergers continue, lending policies will become more standardized.

Currently, government lending institutions are receiving a lot of criticism for the quality of many of their loans. There is a widespread belief that a number of these programs subsidize marginal operators and that this situation is exacerbated by policies that require applicants to have been turned down elsewhere first. Since we have entered a long term cycle of fiscal restraint in government, the time for a number of fundamental changes in these programs seems at hand. While these changes will strengthen the programs and agribusiness by stressing management, efficiency, and ability to repay, many marginal operators are bound to fall along the way as avenues of credit are closed off.

Another critical issue is how to assist the young farmer. While a few will get their start through the family farm, others will be required to bid for farms on the open market. With debt loads and loan rates that almost assure failure and with little management experience, their prospects will not be bright. Yet, there are potential sources of assistance. First, a program like the Maryland Agricultural Land Preservation Program, once it is fully funded, could be modified to earmark a

certain percentage of funds for farmers starting out. These funds could be used either to purchase the farm's development rights with the easement money being applied against the purchase price or to operate as a revolving loan fund that would be available, at no or low interest, to a farmer willing to dedicate the farm's development rights to the State.

Another technique is the use of the limited partnership. While this concept is not new, it has not been widely accepted by farmers, possibly because it does dilute the ownership interest of the farmer. This attitude will change however — by necessity.

The traditional view of financing a farm has been through debt financing, or borrowing for operating and expansion. But, debt requirements have already placed farming beyond the reach of many. By equity financing, or raising capital by sharing ownership, the funding requirements are spread across a number of investors who may be attracted by the potential for tax benefits through depreciation, investment tax credits, and capital gains treatment, not to mention the possibility of land appreciation. Recent changes in tax laws have shown government's receptivity to strategies calculated to encourage business investment. These strategies will, of course, also benefit agribusiness.

Finally, local jurisdictions will need to adopt meaningful zoning controls that keep development from bidding up the price of good farmland. Unless the public is willing to accept the consequences of $20/bushel corn and $35/bushel soybeans, there are no cash crops (other than several that would raise a few eyebrows at the Drug Enforcement Administration) that would allow agriculture to bid against development for good land. Effective local zoning is essential to keep farmland accessible to farmers. Transfer of development rights (TDR) programs, while useful, will only be successful where the development pressures and infrastructure will support well-defined and justifiable receiving areas.

SELLING AGRIBUSINESS: IMAGE IS IMPORTANT

If there is one aspect of agribusiness that has been woefully deficient, it has been the development of a broad scale and well-coordinated public relations and marketing campaign designed to create a more favorable image of farming and to sell more products and open new markets.

A recent article about the PIK program in The Wall Street Journal mentioned a joke that is currently making its way around the country. It illustrates all too well the public image suffered by farmers:

> "Three dogs, belonging to a businessman, a burglar, and a farmer, are hungrily eyeing a side of beef in a butcher shop. The businessman's dog suggests they work for the butcher as watchdogs to earn enough to buy the meat. The burglar's dog suggests they growl, scare everyone away and steal it. But the farmer's dog says all they have to do is whine and moan and they'll get whatever they please."

The farming community has to accept some of the blame for this kind of public opinion. Agriculture is a business, and businesses cannot survive without public relations and advertising. But, agribusiness has tried.

There is only one way to overcome years of this negatively reinforced image of agriculture. Programs must be established in schools and communities, particularly in urban areas, to educate the public about agriculture and agricultural issues. We cannot rely on Mike Wallace talking to yet another farmer who has suffered foreclosure to tell the story that needs to be told. Nor can we rely on the ads of the sausage and dairy topping makers who create an image of agriculture that is equally misleading.

Farmers must recognize that the more they merely tend to production and isolate themselves "down on the farm," the more they isolate themselves politically and economically. Farmers markets and fairs have been a step in the right direction, but only a step. Agribusiness needs to make more effective use of the media and redirect some of its efforts away from rural

areas, where people already have a feel for agriculture, to urban areas where milking a cow and brown eggs are still something of a mystery. Agribusiness, more than any other profession, should know that you reap what you sow and tend to properly.

A public relations campaign of this magnitude will be long and expensive and the dollars invested may not show an immediate return. But, as farmers begin to see themselves more as businessmen and as demographics continue to chip away at agribusiness's political base, there will be a consensus for action and a willingness to invest the necessary funds. These investments may be made by agribusinesses that join together in large advertising cooperatives, funding their messages through membership dues and product surcharges that are passed on to the public. Dairy cooperatives have already discussed taking 1¢-2¢/cwt. for advertising. Others will follow.

TEN MORE THINGS TO WATCH FOR

1. Maryland agribusiness will thrive compared to other areas of the country for three reasons:

a. Maryland has adequate water supplies and the West does not. The West's current advantage in certain crops is directly related to its ability to irrigate;

b. Maryland is centrally located with easy access to one-half of the total United States market, our "export" market. Increased fuel and transportation tax costs will provide us a competitive advantage in a number of markets;

c. Maryland will continue to show great diversity in agricultural production, further insulating it from cyclical variations in particular markets.

2. The outlook for certain markets will be particularly bright:

a. Dairy. The number of farms will decline through attrition, development pressures, and increased start up and production costs, but production levels should remain constant due to larger herd sizes and breeding and optimum ration programs that will be aided by widespread farm use of computers. Agressive marketing ("It's Fitness You Can Drink!"), the introduction of new products (UHT milk), and proximity to large metropolitan markets all favor the dairy industry.

b. Fresh fruits and vegetables. In recent years, the total acres declined because of the decline in commercial processing acres. (Today, there are about 12 canneries left in the State; during the 1930s, there were 140.) But, several factors indicate this will be a "hot" market in the future: Maryland's location relative to major markets; the current trend to "pick your own," seen as both a source of food and increasingly as a recreational activity; the higher net returns from such crops (between $750-$2500/acre) compared to grains like corn (about $50/acre) that will allow profitable farming on smaller acreages, an important factor as land costs continue to rise; and, the targeting of this market by the Maryland Department of Agriculture for intensive advertising campaigns ("Favor the Maryland Flavor").

c. Grains. Corn and soybeans will remain important and viable as long as Maryland has a viable poultry industry. The broiler industry consumes an amount of corn equal to 70% of the State's production and an amount of soybeans equal to 100% of the State's production. This in-state market means anywhere from a $.50-$1.00/bushel advantage for local corn producers who can receive the higher prices while still underselling the Midwest market because of transportation costs. Increased fuel and transportation tax costs will broaden our competitive advantage.

d. Poultry. Aggressive marketing by the industry, its integrated structure, and innovations like contracts based on efficiency, plus increased chicken consumption aided by expanding markets (fast food) and low cost relative to other sources of protein should ensure the long term growth and stability of this industry.

e. Eggs. Production has doubled in the last five years. A long term trend has developed with egg production moving south from New England to Pennsylvania and Maryland due to energy costs and grain supplies. Eggs are also another cheap source of protein (at 80¢/dozen, large eggs cost about 43¢/lb.).

3. Educational programs offered through the Cooperative Extension Service and the University of Maryland will focus more on management and marketing to balance the traditional production orientation of farmers. Computer skills, already being developed in public schools, will be refined to aid in marketing strategies and management decisions.

4. While there will be some resistance to accepting the value and application of computers by this generation, that will certainly not be true of the next generation which is already becoming computer literate before college. Computers will become so accepted that their use will be mandatory for the farmer who wants to remain competitive. Coupled with increased farm mechanization and electronic sophistication, computers will be able to take care of feed, watering, and cleaning duties automatically, and they will be connected to automatic sensing devices in the fields that will largely replace the need for scouting programs for diseases and pests. They will also monitor crop and soil moisture levels to indicate optimum irrigation and harvest times. Small transponders, implanted under the skin of livestock, will replace branding as a source of identification. These transponders will be linked to the computer and will allow the farmer to monitor the weight and health of livestock on a frequent basis. Using this information, "canned" and "downloaded" programs will be available to assist the farmer in culling his herds and in designing optimum breeding and feeding programs. Computers connected to satellite telecommunication links will also provide services like crop forecasting, market information, weather, remote auction buying and selling, banking, and shopping. Increased mechanization and computerization will inevitably reduce the need for traditional hired labor, but it will create new jobs for people with technical skills.

5. The horse industry will be recognized as an important part of Maryland agribusiness. The current figures demonstrate this importance: racing tax revenues (1982), $17 million; sales tax revenues from horses with racing potential (FY 1983), $1.1 million; and, a current estimated cash flow of $400 million/year on an investment of about $500 million. Several developments are likely in the future:

a. The State's search for additional revenues will lead to night racing along with off-track betting;

b. A number of farms close to development will sell out and be divided into "gentlemen farms." Horses have traditionally been popular with these types of farms. Additionally, horses represent a leisure time investment and as the work force has more leisure time, more people will buy horses. Sales of feed, products, and services should increase significantly. Maryland should maintain its position as the sixth leading horse breeding state in the nation.

6. There will be a move away from certain oil-based inputs like fertilizers, pesticides, and herbicides, partly because of environmental concerns and partly because of the cost and long term availability of oil. Certain alternative inputs, like treated sludge, will become more accepted. But, not all sludge will be usable due to the presence of toxic substances and not all alternatives will be as efficient as what they replace. Genetic improvements in plants will help offset some declines in yields. However, if demand for agricultural products should grow rapidly, more land would be required to grow more crops; hence, the long range importance of farmland preservation programs and management practices designed to preserve the productive capabilities of the land. As more marginally productive land is brought under production, these management practices will need to be more widespread.

7. Due to moral issues, genetic engineering in livestock will be limited to the improvement of vaccines and hormones and the continuation of embryo transplant and twinning technologies. Most livestock will become more prolific breeders. While research as a percent of total investment will lag behind other industries, technological advances will be aided by spillovers from other disciplines (notably computers, electronics, and medicine).

8. There will be continued interest in the development of alternative fuels,

although ethanol will not likely replace gasoline or diesel fuel on Maryland farms. It would take 60% of the nation's corn crop to achieve a 10% blend of ethanol in the more than 100 billion gallons of gas we use nationally each year. Maryland grows comparatively too little corn and already has an excellent market for its corn provided by the poultry industry to be seriously interested in ethanol production. What does seem likely is that individual farms or small cooperatives will experiment with limited systems producing ethanol from grains, methanol from waste wood, and methane from manure to supplement more traditional fuels.

9. The United States Department of Agriculture has predicted that by the year 2000, the country's 50,000 largest farms will account for 63% of all agricultural sales (up from 31% in 1974). In the past, government policy has had the effect of encouraging large farms. In 1978, only 1% of the farmers received nearly 30% of the direct government payments. Because of Maryland's small average farm size (145 acres in 1978), direct competition against these larger producers will be difficult. Therefore, the State's Department of Agriculture will work to carve out a place in the market for the small farm. The State will attempt to capitalize on the strength and diversity available from small farms by:

a. Promoting "pick your own" operations and by developing fresh fruit and vegetable markets, both in-state and out-of-state;

b. Investigating new types of farming like "aquaculture" that will either use shoreline areas or newly constructed ponds and facilities. These new farms may be combined with other types of operations, like poultry, in closed systems that will yield up to $5000/acre. Crayfish production has already begun on the lower Eastern Shore and interest has been expressed in raising hybrid red snappers. Aquaculture would not be that novel to Maryland. In a sense, the seeding and harvesting of oyster beds is a form of aquaculture;

c. Promoting the production of specialty crops and crops with less domestic and foreign competition, like edible soybeans;

d. Protecting and enhancing our market share of the poultry industry which would protect the local market for our corn and soybean producers.

10. Maryland's ability to increase its export base is enhanced considerably by the fact that it is adjacent to Washington, D.C. When asking to be given tours of American farms, foreign representatives are likely to see Maryland farms. Further refinements in food preservation that increase shelf life without refrigeration (UHT milk and irradiated consumables are just the beginning) will help Maryland secure foreign markets, particularly in less developed countries. However, three limiting conditions must be accepted. First, the federal government through trade agreements, tariffs, and embargoes can override any market development efforts undertaken by the State. Second, international monetary problems (e.g., a lack of hard currency to buy imports or debt restructuring that leaves little money to buy imports) can affect the accessibility of foreign markets, and their resolution is beyond State control. Third, to protect local producers, foreign countries may impose import duties that also restrict access to their markets.

The federal government will move slowly away from supply and price manipulation strategies. The move will be slow because export market growth cannot, by itself, reduce our huge surpluses. Programs to reduce production will have to be phased out slowly while farmers learn to produce for the market and not the government.

The federal government's major long term agricultural role will be to open new markets and to protect existing and new markets with subsidies only when they are threatened by unfair foreign competition. This market orientation will reflect a long term choice of production and efficiency over the social values of farming and will cause many marginal operators to go out of business. Maryland farmers should, however, fare reasonably well since our "export" market is more domestic, we have easy access to Baltimore Harbor, and our entry in foreign markets is likely to be in special areas in which we enjoy a competitive advantage.

A LOOK BACK . . . AND AHEAD

The significance of the coming new year has not been lost to those who speculate about our future. However, as far as the future of Maryland agribusiness is concerned, there are no predictions of an Orwellian dimension to make.

If a new order is on our agricultural horizon, it is the specter of the agribusinessman waiting patiently to inherit the legacy of today's farmer. Our farmer of today will become part of our agricultural heritage just like the first reaper and the horse drawn plow. If transported to the future, he would be an anachronism, much like those first implements would be today.

Society will choose increased efficiency and production over the social values inherent in a particular lifestyle. It has before. Those who do not become or remain competitive will fall along the way. The increased suburbanization of Maryland will hasten that process as demand for land makes forced retirement an attractive option to the marginal operator.

But, the future appears reasonably bright. The history of Maryland agribusiness has been one of evolution and adaptation. While major transitions have occurred locally and even regionally, the overall structure of Maryland agribusiness has been sound. It should remain so.

Agriculture is a business, a business in which each State resident has a vested interest. But, it is a special kind of business. For instance, unlike some of its corporate counterparts, we cannot live without it. Also, trading its "stock" might present some interesting challenges to your local broker. But, if Maryland agribusiness were a corporation listed on the New York Stock Exchange, chances are you would want to invest in it. It is well-diversified, has outstanding location relative to major domestic markets, is working hard to develop foreign markets, is promoting the introduction of new products, has an abundance of natural resources and has established programs to preserve them for the future, has the beginnings of an effective marketing program, and it enjoys a favored position with the legislature. Somehow I feel very comfortable and confident projecting its success — even 50 years from now.

The author gratefully acknowledges the contributions of the following individuals whose interviews provided data and a perspective for this paper:

Dr. Ralph Adkins
Assistant to the Director
Maryland Cooperative Extension Service

Senator Raymond E. Beck
Carroll and Baltimore Counties

Dr. Earl H. Brown
Professor of Agriculture, Trade and Policy
Department of Agriculture and Resource Economics
University of Maryland

David Bruning
(farmer and agribusinessman)
Peter's Pond
Cedartown
Snow Hill, Maryland

Snowden Carter
General Manager
Maryland Horse Breeders Association

Wayne A. Cawley, Jr.
Secretary
Maryland Department of Agriculture

Ralph L. Chapman
President
Central Implement Co., Inc.
Snow Hill, Maryland

Mike W. Delano
Extension Agent, Ag Science
Worcester County

Charles R. Fulton
Vice President
Feed Mill Production
Holly Farms Poultry Industries, Inc.

Robert L. Jones
County Extension Director
Carroll County

Dr. Robert G. Lawrence
Associate Professor
Department of Agriculture and Resource Economics
University of Maryland

Thomas Mason
(canning company co-owner)
Ralph L. Mason, Incorporated
Newark, Maryland

F. Grove Miller
President, The Maryland State Fair
Chairman, Board of Trustees
Maryland Agricultural Land Preservation Foundation

Jack Miller
Public Affairs Director
Maryland Farm Bureau

John W. Parks
Senior Vice President
Carroll County Bank and Trust Company

Bradley H. Powers
Assistant Chief
Marketing Services
Maryland Department of Agriculture

Louna S. Primm
Vice President
Commercial Loan Officer
Carroll County Bank and Trust Company

Richard W. Story
Director
Carroll County Economic Development Commission

Dr. John Wells
ESTEL Coordinator
Maryland Cooperative Extension Service

J. B. Wheeler, Jr.
Vice President
Farm Credit Banks of Baltimore

COMMENTARY

Robert Gray
American Farmland Trust

Mr. Kempke's paper presents a good overview of Maryland's agriculture industry, an industry which has been very resilient in the face of a large historical loss of agricultural land.

Economic factors of production important to agriculture are capital, labor, technology, and land. Capital is a difficult problem due to high interest rates. These rates may stabilize to assure a viable future for agriculture. Agriculture is less dependent on labor and this trend will continue. Maintaining a good agricultural land base is extremely important. A strong State agricultural land preservation policy is critical to retention of agricultural land in Maryland's Piedmont region. The battle to retain agriculture in the Piedmont will be won or lost in the next twenty years. The Piedmont's dairy industry is declining and starting to move out of the State due to the inability of dairy farmers to compete with rising land prices and the cost and unreliability of renting land.

Infilling within urban areas will reduce pressure to develop agricultural land; however, Mr. Kempke's position that infilling will also reduce the political clout of agriculture is open to question.

Regional political perspectives must be developed. While Eastern Shore agriculture has political clout, Piedmont agriculture does not. Farmers in the Piedmont must develop a regional perspective.

The role of government in agriculture is changing due to growing exports, the problem of balancing production and supply, and changing political views (e.g., removal of price supports and loan programs). Government can play a positive role in reducing erosion and sedimentation by discouraging production on highly erodible soils. This policy could cut in half the amount of sediment now entering the Chesapeake Bay.

Mr. Kempske is correct in his generally bright outlook for Maryland agriculture; however, the long-term viability of agriculture in the Piedmont is in doubt.

COMMENTARY

F. Grove Miller
Chairman
Maryland Agriculture Land Preservation Foundation

Mr. Kempske did an excellent job in describing the pulse of agriculture in Maryland. Following are a few supplemental points.

Government programs will never get supply in sync with demand. Programs such as price supports and grain supply encourage overproduction. Many of these programs should be eliminated from Maryland agriculture.

Maryland farmers are partly responsible for the problems of the Chesapeake Bay. Since farmers want fertilizer and insecticides to remain on the land, agriculture stands ready to do what it can do to correct the problems of the Bay,

Use value assessment for agriculture is not preferential assessment and should not be so labeled.

Technological improvements in agriculture have not even begun to scratch the surface. For example, cow and milk production will continue to increase, as well as the use of genetic improvement techniques such as embryo transplants.

Financial problems must be solved, high interest rates reduced, and government financial aid programs (such as drought relief) better targeted.

The Maryland horse industry is very important and will continue to be so in the future.

The Maryland Agricultural Land Preservation Foundation is a locally controlled program and must remain so to be successful. Counties such as Carroll, Howard, and Frederick, which have promoted the program, have done well.

10

The Next Fifty Years: Maryland's Future Urban Housing and Central City Redevelopment

Allen C. Goodman

New economic and social conditions favor re-use and redevelopment of centrally located urban land. Until the 1970s, conditions favored the spreading outward of residential development from city centers and the virtual abandonment of large sections of urban areas. Spiraling petroleum prices, smaller households with different needs, low prices for central city houses and land and renewed interest in city living have made reinvestment in central city land desirable. While the next fifty years will see considerable growth in housing units, most of the future housing stock has already been built. Using selected housing indicators and recent census data, the likely location and pattern for future redevelopment in the Baltimore and Washington areas was presented. Policymakers should devote attention and resources to infrastructure support for reinvestment, and to the needs of current residents who now live in these areas.

Through the first part of the twentieth century, urban residential development continued resolutely outward. Induced by inexpensive land at the urban periphery and decreasing commuting costs to the city's center, urban areas spread out to envelop more land and decentralize housing and related public and private services. The result was a falling central city and increasing suburban population, as well as the abandonment of large tracts of central city real estate.

Several changes in the 1970s, however, portend new patterns for the future. These include higher commuting costs, higher peripheral land costs, and higher costs for necessary public sector infrastructure such as road and sewerage facilities. Further, the housing stock, especially in many parts of the inner city, is reaching the end of its fifty to one hundred years of useful life. Already, in many parts of our urban areas, clearing and/or renovation of existing structures for new residences have begun to supplement new construction in the provision of housing and urban services. Some development will continue at the periphery, to be sure, but many economic and social factors suggest the re-use and redevelopment of centrally located urban land both for residential and other purposes.

This essay will discuss the provision and evolution of housing in urban areas, using Maryland's two major urbanized areas as special examples. Why is housing built where it is built, how long does it last, and how is it replaced? Given these stylized stories, it is then possible to project Maryland's population into the twenty-first century, and to "pinpoint" future residential development in Maryland's urban areas.

URBAN HOUSING AND URBAN LAND

Cities, their productive facilities, their roads, and their housing, have typically developed around a central district, or downtown. Explanations for these downtowns usually fall into two categories One relates to transportation. Location of a port or trading facility makes adjoining land very valuable, since proximity allows traders to minimize the costs of getting their goods to market. A second

Dr. Goodman is Associate Professor of Political Economy at the Johns Hopkins University. He also serves as Research Scientist at the Center for Metropolitan Planning and Research. He received his Ph.D. in Economics from Yale University, served in a number of academic and consultant positions, and is the author of publications on housing, transportation, economics, and planning.

explanation relates to the organization of economic activity; many types of industrial and commercial activity depend on the proximity of related activities. Legal, financial and office services, for example, form a triad of activities that feed upon each other and may lead to recognizable high density districts.

The location of port or commercial facilities at a specified place makes land at that place very valuable. As a result of the desire to economize on the amount of land used, taller structures are often built, leading to higher density. Movement away from the downtown allows more land to come into use (due to simple geometry), making it cheaper. Lower density land usage then results.

Housing, of course, enters the analysis since the workers in the downtowns and the surrounding areas must have some place to live. Builders must compete with other users for land on which to build residences, and must face the same set of land costs. Accordingly, housing that is built close to the urban center may take the form of smaller, denser structures (often multi-story apartments, for example), whereas housing that is built farther out, on cheaper land, can be single story, often on large tracts of land. Casual observation of most traditional United States cities supports this description of urban structure.

Maryland's two major urbanized areas provide examples of each of these rationales for central areas and their surrounding development. Baltimore's development stems from its origin as a transportation hub, a connecting point with the port, the railroads, and the turnpikes. Washington, on the other hand, is the quintessential office area with large concentrations of office buildings in its center. Both developed high density housing in the areas close to the downtown and lower density housing farther out. Both have seen substantial expansion of their suburban hinterlands in the post-World War II period into low density housing of Baltimore and Anne Arundel counties (and farther, in the Baltimore SMSA) and Montgomery and Prince George's counties (and farther, in the Washington SMSA).

These stories about urban development and structure, like all very general theories, can present an observer with troubling anomalies. Granted that there is considerable high density development in the central cities, why do we also see scattered parcels of never-developed land, or larger areas of low-density abandoned buildings very close to the urban centers? How, also, does one explain the development of subcenters like Towson and Rockville, for example, substantial distances from the central area, yet possessing many amenities (and disamenities) of central areas?

The key to this puzzle is that the three major determinants of urban spatial structure, and hence, urban housing patterns, are the locations of roads, industrial capital, and residential capital. These three types of resources are expensive to build, difficult to change, and very long-lived. With respect to expense, even the most modest new single house in an urban area now costs $50,000 or more to build. As for change, room additions to existing houses run in the tens of thousands of dollars. Concerning longevity, housing capital depreciates at no more than one to two percent per year. Moreover, it is expensive to remove. Demolition of an acre of two-story brick row houses (approximately 50 houses) would cost almost $100,000. Demolition of an acre of four-story apartments would cost four times that much.

In short, what you see (now), is what you get (later), well into the long term, in looking at the location of housing. The houses, the roads that serve them, and their residents' employment locations will last fifty to one hundred years or more. A large portion of what will be around fifty years hence has already been built. These include the large stock of post-World War II houses and roads. Moreover, we can also locate new sites for housing based on what we currently see.

To do this, step into a developer's shoes. He or she realizes that some people would like small housing units, and others large ones. Some people might prefer to live close to downtown, preferring proximity to the job, to commuting. Others might willingly pay the cost of commuting an hour or more per day to work for the larger houses on cheaper suburban land. The story of post-World War II housing, then, is that on the whole, people wanted space. Transportation to the suburbs was cheap, and there simply was not land available in

the centers of cities to build new housing. This was especially true when the cost of city land, including clearing, was compared to the cost of already-cleared land in the suburbs.

In the last decade, however, some of these conditions may have changed. Some commentators have observed consumer disillusionment with the "suburban ideal" of the house in the suburbs and its unexciting lifestyle. Two jumps in petroleum prices led to substantial increases in heretofore inexpensive commuting to the central city. Central city house and land prices became so low relative to suburban construction, that demolition and reconstruction of existing units became viable alternatives to the construction of new units on vacant land. Significant, although not yet substantial numbers of housing units were now being built on central city land; and many planned developments in the far suburbs were postponed or shelved entirely.

PROJECTING HOUSING TRENDS

Along with the temerity to describe housing markets with simple models comes the temerity to project into the future. This section looks at the amounts and the locations of households in Maryland's major urban areas in the next fifty years. The demand for housing at given times will largely be related to population and household size. We will briefly discuss methods for projecting these, and then present some tentative projections. Given these numbers, where the households will be located depends on the supply of housing units in the various locations. Since these are the major topics of this essay, they will be discussed in more detail.

Many people have at least passing familiarity with the techniques used to project population at, say, the national level. We obviously know the size of the current population as well as the age structure; that is, how many people are there in each age range? Given these data, demographers will guess birth rates and death rates over a relevant period to consider a net population increase. For an entire country this can give plausible results, if one can also account for net immigration and emigration. Although the problems of illegal immigrants and uncounted emigrants exist, they are tractable at the national level. As a result, predictions at the nationwide level are subject only to small errors relative to the sizes of the estimates themselves.

Forecasting smaller areas is much harder, because people are mobile among regions. It is much more difficult to project the population of Maryland into the future than the country as a whole, because it is much easier to migrate into or out of Maryland, than it is into or out of the entire United States. Estimates for metropolitan or even smaller areas are even more difficult for this reason. For future planning they are necessary, however. Since the demand for housing rests on the numbers of households in the metropolitan areas, these projections are used. Table 1 shows an increase in the State population to the year 2010 (with a population of approximately 4,611,000), followed by a slight decline to the year 2030. The populations of the Baltimore and Washington SMSAs (Maryland portion) peak in the year 2000, at 2,276,000 and 1,352,000 respectively. The numbers of households, reflecting falling household size, continue to rise. The projected number of households for the Baltimore metropolitan area in 2030 is 1,054,000, approximately 39.2 percent higher than 1980. The projected number for the Washington suburbs is 650,000 households, up 50.1 percent from the 1980 figure. These figures reflect the fact that the Middle Atlantic region is basically a zero growth area in terms of population, but that household size has fallen and should probably continue to fall into the future. These households, then, represent the demand for housing into the year 2030.

How, then, do we represent supply? The 1980 Census enumerates both owner and renter housing by construction date, with the oldest group dating from 1939 and before. As a result, it is possible to determine the number of housing units, at the census tract level, that were over forty years of age, between thirty and forty, and so on. It is then possible to "age" these houses just as demographers age cohorts of people to determine future population. We "know" that a neighborhood whose houses are twenty years old now, will be "younger"

in fifty years than a neighborhood whose houses are now thirty years old.

That analysis is incomplete, though. Two houses of the same age may have different qualities reflected in their values. One would expect houses that are worth one hundred thousand dollars today to last longer than houses of the same age that are worth ten thousand dollars. Fifty years hence, the more expensive houses are more likely to be around than the others.

Still another measure for supply projection is the value/rent ratio. The value of a housing unit, in the market, should have some relation to the rent that it could fetch in the market. As a result, the value should reflect the long-term stream of rents. If investors are sanguine about the future of the house and/or neighborhood and expect values to rise, they would bid up the house values in the expectation of still higher values, leading to a high value/rent ratio. Conversely, investor pessimism could lead to fear of capital loss in purchasing a house. This pessimism would lead to lower housing values and lower value/rent ratios. Low value/rent ratios also suggest the possiblity of abandonment, demolition, and/or future renovation and rebuilding.

A final piece of information is the vacancy rate. Certainly this rate indicates the extent to which the housing is not currently considered useful. A high vacancy rate in conjunction with high quality housing may simply indicate that the market is not doing well, and that the houses will sell in the near future (this is actually symptomatic of areas where new construction is occurring). A high vacancy rate in conjunction with older, low quality housing may suggest that the housing stock is deteriorating to the extent that it is hard to fill the units, even at a low price. Such housing may be a candidate for demoliton or replacement in the future.

All of these indicators suggest that we may construct a profile of aging housing. We will pinpoint, at the census tract level, those areas in which housing is expected to deteriorate. Depending on housing demand, some new housing will be built both in these areas and in the traditional suburban areas at the edge of the current metropolitan area.

INDICES OF FUTURE REDEVELOPMENT

The preceding section discusses which measures can be used to predict redevelopment. What is not clear, however, is how these measures can be combined to form a meaningful score. The proposed method assigns ranks to census tracts according to the measure being used. These ranks are then combined to form composite scores that provide economic meaning about future redevelopment.

Consider again the example with housing age and value. There are 887 census tracts in the Baltimore metropolitan area (Baltimore City, and Anne Arundel, Baltimore, Carroll, Harford and Howard counties) and the Washington suburbs of Montgomery and Prince George's counties.

We divide the 887 tracts into fifteen equal-sized categories based on the percentage of units older than forty years. Fifty-nine tracts fall into the oldest category ranging from 77.0 to 100.0 percent, and are assigned a rank of 15. Similarly, fifty-nine tracts fall into the youngest category, with a range from 0.0 to 0.26 percent, and are assigned a rank of 1.

The same type of ranking can also be done with respect to house value. Fifty-nine tracts fall into the lowest category ranging from zero to $19,960; these are assigned a rank of 15. Once again, fifty-nine tracts fall into the highest category ranging from $119,801 to $215,700 and are assigned a rank of 1. To get a composite score for a particular tract, add the two rank numbers. Tracts with scores of 2 contain the youngest, most expensive housing; conversely, tracts with scores of 30 contain the oldest, least valuable housing. Housing in areas with low scores is least likely to be subject to redevelopment; areas with high scores will be subject to redevelopment. Additional sets of rankings such as vacancy rates and value/rent ratios can be added to enrich the indices.

Some remarks are in order on the nature of these indices. Adding the rankings together implicitly weights each characteristic equally. This suggests, for example, that vacancy is as important as value, or value/rent ratio, or age, and is clearly rather arbitrary. Also, in the example above, a very old, high-valued tract

might get the same score of 16 as a very young, low-valued tract. Although such confusion in the middle of the composite scale is problematic, we are, in fact, most interested in the ends of the scale. That is, a very old, low-valued tract (with a score closer to 30) would be a more likely site for redevelopment than the very young, low-valued tract with the score of 16.

A strength of the index method is that it does not guarantee that a given percentage of the tracts will be judged as meeting redevelopment criteria. Although 6.7 percent of the tracts will have the lowest values on any single attribute scale, the summing of rankings need not follow these percentages. It is conceivable for as few as one tract to be in a given category, depending on the measures used.

Also, the index method allows us to "time" the redevelopment efforts. Those tracts with the "highest" redevelopment scores would be candidates for the earliest redevelopment, whereas those with slightly lower scores would be candidates for slightly later redevelopment. Although the exact timing is a matter of conjecture, comparison of index scores should give some indication of the relative timing of future redevelopment.

RESULTS

In this section, we present results in a series of maps and discussion. The study area is the five counties of the Baltimore Metropolitan Area, Baltimore City, and Montgomery and Prince George's Counties. Although it would seem awkward at first glance to group them all together, it is more awkward not to do so. If the two Washington suburban counties were ranked separately, the results would be misleading because it is clear that the worst housing in these two counties does not represent the worst housing in their metropolitan area, Washington D.C. (which was not available for analysis in this study). To the extent, then, that there is less old housing than there should be (due to Washington's exclusion) these counties' housing will rank lower than they might; on the other hand, the Virginia suburbs and some of the good housing in the District are also excluded, biasing measures the other way. With luck, these biases cancel each other out.

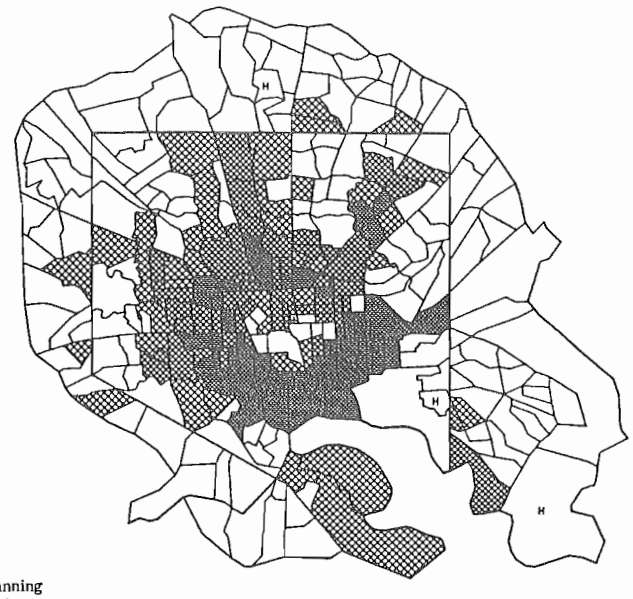
Maps 1 and 2 show the folly of trying to use a single indicator for the prediction. Of the fifteen rankings, numbers 1 through 12 are indicated in white, indicating the "youngest tracts." The oldest tracts are indicated in increasing levels of shading. In Map 1, for Baltimore City, we see several recognizably older areas which might reasonably expect redevelopment, but we also see Roland Park and Mount Washington, high quality areas that are dubious candidates. Map 2 is even more striking, looking at the Washington suburbs. The single biggest concentration of older housing is in the Bethesda-Chevy Chase area. By the criterion of housing age, this might be plausible, but no one would seriously consider housing in this area as redevelopment material.

Maps 3 and 4 present a more sophisticated index using both age and house value. The darker shaded areas indicate census tracts where redevelopment might be expected to occur most quickly (i.e., those with the highest scores); the lighter shaded areas are those in which redevelopment would come more slowly, and the unshaded areas (scores of 22 or less) indicate little likelihood of redevelopment. This and subsequent measures indicate that most redevelopment will occur in Baltimore City, with a smattering of activity in eastern Baltimore County, and in isolated areas of Prince George's County. The redevelopment opportunities in Baltimore City appear to be strongest in southeast and in southwest Baltimore. Note that the downtown area is already under redevelopment, and stands out as the "hole in the doughnut" of this analysis.

Even the more sophisticated analysis using age and value may lead to some problems since the value measure does not really indicate possible speculative activities. Some housing may have low value simply because it is small or low in quality, the type of housing that lower income individuals do and must occupy. Adding the value/rent measure to the index helps to specify those areas in which not only is the housing old and low valued, but also is not currently considered a good speculative investment. This index varies from a value of 3 (new housing, high value, high value/rent) to 45 (old housing, low value, low value/rent), and the areas with

MAP 1: AGE,
METROPOLITAN BALTIMORE BELTWAY AREA

RANK	NO. OF CENSUS TRACTS
1.00 - 12.00	158
12.01 - 13.00	38
13.01 - 14.00	51
14.01 - 15.00	51

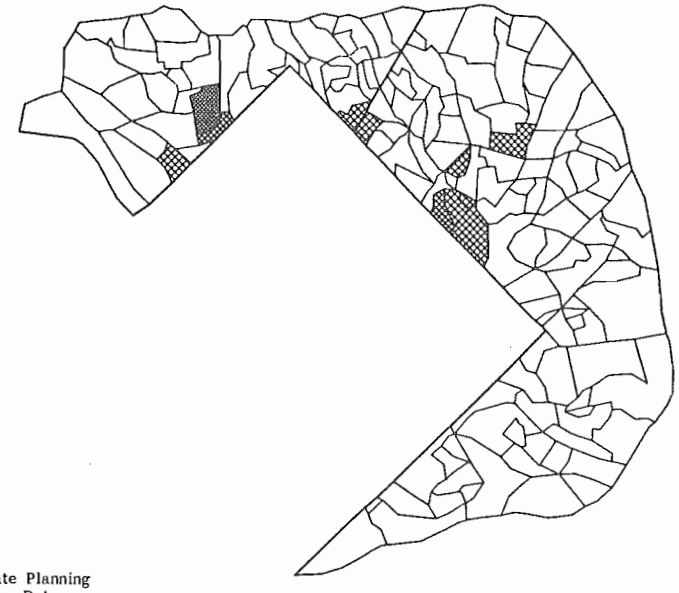


SOURCE: Department of State Planning
Office of Planning Data

Tracts marked H do not meet the study criterion.

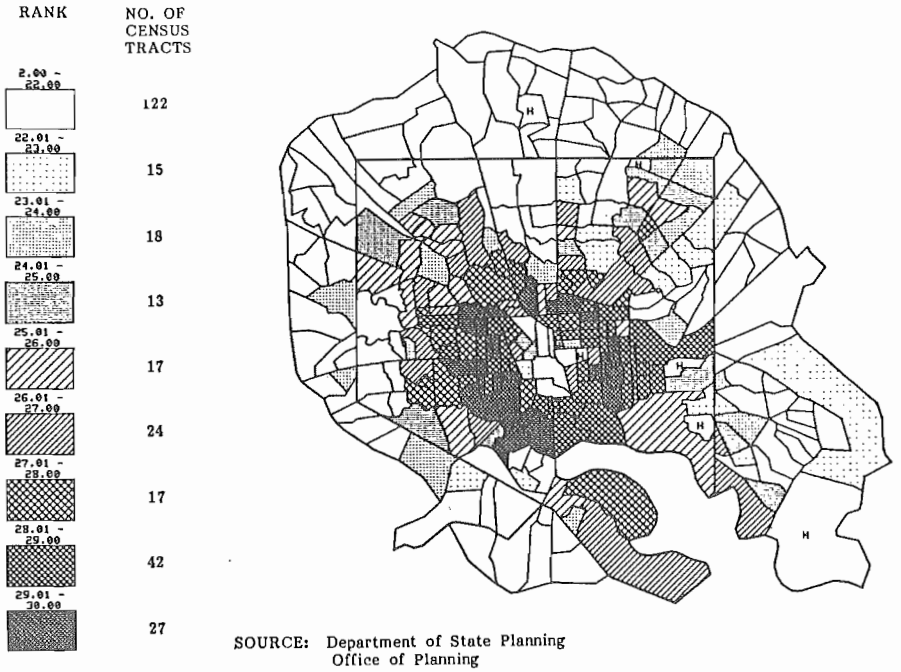
MAP 2: AGE,
SUBURBAN WASHINGTON BELTWAY AREA

RANK	NO. OF CENSUS TRACTS
1.00 - 12.00	135
12.01 - 13.00	8
13.01 - 14.00	2
14.01 - 15.00	1



SOURCE: Department of State Planning
Office of Planning Data

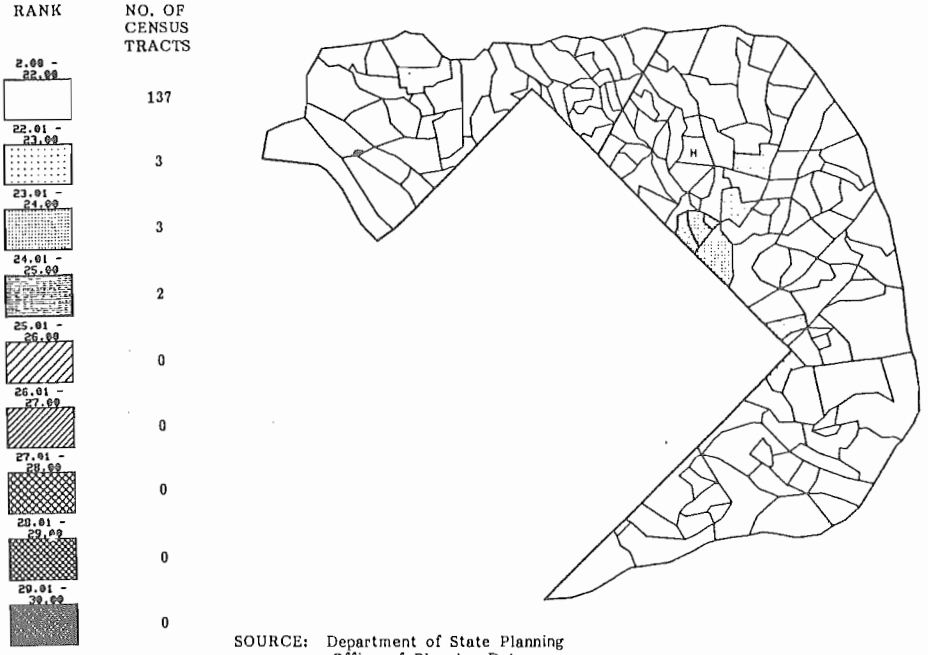
MAP 3: AGE + VALUE,
METROPOLITAN BALTIMORE BELTWAY AREA



SOURCE: Department of State Planning
Office of Planning

Tracts marked H do not meet the study criteria.

MAP 4: AGE + VALUE,
SUBURBAN WASHINGTON BELTWAY AREA



SOURCE: Department of State Planning
Office of Planning Data

Tracts marked H do not meet the study criteria.

MAP 5: AGE + VALUE + VALUE/RENT, METROPOLITAN BALTIMORE BELTWAY AREA

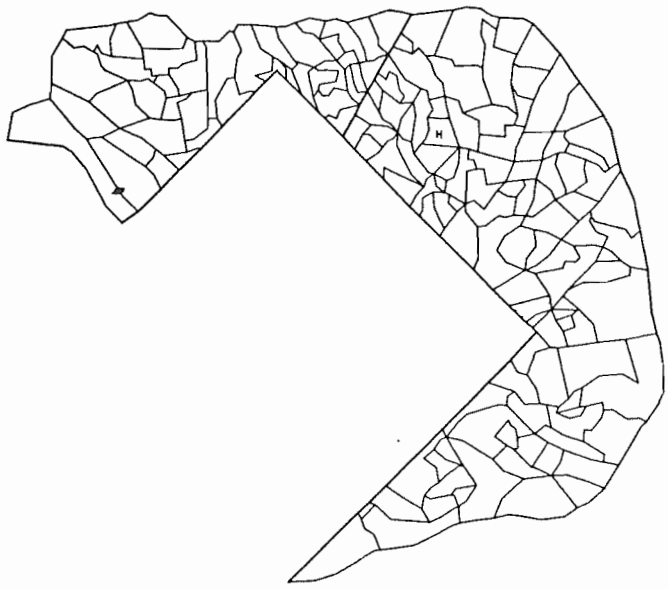
RANK	NO. OF CENSUS TRACTS
3.00 - 36.00	170
36.01 - 38.00	13
38.01 - 39.00	12
39.01 - 40.00	7
40.01 - 41.00	11
41.01 - 42.00	16
42.01 - 43.00	14
43.01 - 44.00	30
44.01 - 45.00	22

SOURCE: Department of State Planning
Office of Planning Data

Tracts marked H do not meet the study criteria.

MAP 6: AGE + VALUE + VALUE/RENT, SUBURBAN WASHINGTON BELTWAY AREA

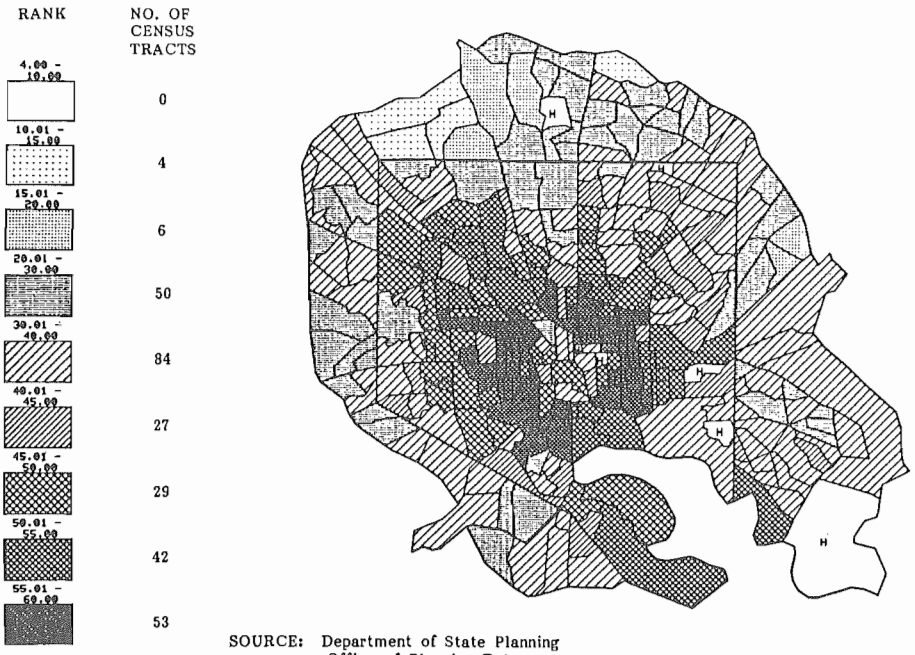
RANK	NO. OF CENSUS TRACTS
3.00 - 36.00	144
36.01 - 38.00	1
38.01 - 39.00	0
39.01 - 40.00	0
40.01 - 41.00	0
41.01 - 42.00	0
42.01 - 43.00	0
43.01 - 44.00	0
44.01 - 45.00	0



SOURCE: Department of State Planning
Office of Planning Data

Tracts marked H do not meet the study criteria.

MAP 7: AGE + VACANT + VALUE + VALUE/RENT,
METROPOLITAN BALTIMORE BELTWAY AREA



SOURCE: Department of State Planning
Office of Planning Data

Tracts marked H do not meet the study criteria.

scores over 36 are noted in Maps 5 and 6. In particular, these delineate areas within Baltimore City, once again specifying a particular area in southwest Baltimore.

The most sophisticated indicator adds vacancy rate to the analysis. A score of 4, therefore, indicates new housing, high value, high value/rent, low vacancy; whereas a score of 60 indicates old housing, low value, low value/rent, high vacancy. Vacancy rates are typically substantially higher for rental than for owner housing, so this measure delineates the more renter-oriented neighborhoods from the others. Map 7 shows where the largest amount of redevelopment activity, according to the indices, would occur. While Baltimore City would have the highest concentration of activity, it is apparent that adjoining areas of Baltimore and Anne Arundel Counties have some sections that are not dissimilar.

Looking at Map 7 more closely, it is interesting to try to predict the timing of redevelopment through the scores calculated. The most darkly shaded region (excluding Holabird Industrial Park and the Maryland State Penitentiary) contains parts of east Baltimore and a goodly portion of southwest Baltimore. A somewhat arbitrary way of examining timing is to assume that those areas with the darkest shading would redevelop first, and that the redevelopment efforts would diffuse through those areas with the lower scores.

Table 2 examines those census tracts within the highest score category (55 through 60) to pick those tracts with the most immediate redevelopment potential. Tract 105 (east Baltimore), tract 1204 (near north) and tracts 1602, 1603, and 1902 (west and southwest) show scores of 60, indicating the highest (and soonest) redevelopment potential. Twenty more tracts have scores of 59; ten have scores of 58; and, ten have scores of 57. To put these scores into perspective, it should be noted that only two tracts outside of Baltimore City have scores of 50 or higher; tract 4214 in Dundalk has a score of 51, and tract 8030.01 in Prince George's County has a score of 50.

It is easy, but incorrect, to interpret these types of scores as successes (in providing suburban housing) or failures (in

TABLE 1: MARYLAND POPULATION AND HOUSING PROJECTIONS

(thousands)

Year	State Population	Baltimore Metropolitan Area		Washington Metropolitan Area	
		Population	Households	Population	Households
1980	4217	2174	757	1244	433
1985	4362	2229	799	1282	462
1990	4460	2257	839	1307	489
1995	4531	2274	876	1334	516
2000	4570	2276	910	1352	543
2010	4611	2248	965	1344	580
2020	4608	2203	1018	1334	619
2030	4519	2119	1054	1300	650

I am grateful to Michel Lettre of the Department of State Planning for sharing projection methods with me, but I absolve him of all responsibility for these figures. The precise method used is available on request.

the deterioration of central cities) of specific policies. The fact is, however, that central cities developed earlier, and hence aged earlier. All through the United States, poorer people live in central cities, implying lower priced housing, more rental housing, and hence more vacancies. The simple economics of housing markets suggests that as these housing units deteriorate, getting older and less valuable, they will provide opportunities for redevelopment inside the urban areas rather than at the periphery. This analysis has attempted to show where this redevelopment might occur.

CONCLUSIONS

This essay has attempted to use some economic common sense to predict the housing redevelopment through both the private and public sectors that could occur in Maryland's metropolitan areas through the next fifty years. Changes in energy, land and infrastructure costs may make central city land much more attractive for residential development. Indications are that the renovation efforts that started in the 1970s could continue and grow in the coming decades. The recent downtown and harbor areas' revitalization efforts might constitute only a small fraction of the ultimate redevelopment potential in the central city.

The guiding premise in the analysis is that existing housing units are long-lived, and that current housing markets provide good information about the future with respect to house quality and market speculation. This information suggests that the major residential redevelopment in the Maryland housing market will occur in the Baltimore Region, specifically in Baltimore City. The analysis neither guarantees that all of the areas highlighted will experience redevelopment, nor that some of the areas not mentioned will not redevelop. On the other hand, it does consider the information that is available to both private and public developers, both in the planning of new residences, and in the planning of public facilities and programs to serve both new and old residents alike.

It can be argued that the analysis ignores the "human factor," that is, the people who currently live in the areas being analyzed. This is obviously not unimportant, especially

TABLE 2: CENSUS TRACTS WITH THE MOST IMMIMENT REDEVELOPMENT IN BALTIMORE CITY

	SCORE		
60	59	58	57
East			
105	104	602	103
	201	703	203
	202	802	702
	603	804	909
	704	807	1004
	806		
	808		
	1001		
North			
1204	908		
	1205		
West			
1602	1303	1403	1402
1603	1501	1502	1503
1902	1601	1506	1508.02
	1803	1801	1604
	1901	2004	
	1903		
	2001		
	2003		
South			
	2102		2301
	2503.01		

in terms of neighborhoods' efforts to revitalize their own specific areas, or in terms of social or ethnic ties that are not easily quantified. It must be noted, however, that housing units last much longer than most occupants' tenures, and that the development decision is often closely linked to the condition of the housing stock.

What, then, does this mean to Maryland's citizens and planners? Central area redevelopment could indeed mean an increasing tax base for Baltimore City. Replacement of older, lower quality housing with newer, higher valued units should lead to increases in property values, and more tax revenues. This could also bring about increased business activity to serve the residents through the retail and the commercial sectors of the urban economy.

Residential redevelopment also suggests that urban officials will have to devote increased attention and resources to the infrastructure in the center of the city. Just as the housing stock is older than elsewhere, so are the roads, sewers, libraries, recreational and other public facilities that are necessary to serve a vital urban population. Maintenance and improvement of such facilities are crucial in the provision of a good quality of life in any location. They may be essential in providing the "fertile ground" that is necessary for residential redevelopment to occur at specific central city locations.

Perhaps most importantly, special attention must also be directed toward the current residents of the areas that may be redeveloped. These people hardly constitute

a random sample of the population. They are likely to have lower incomes and less education, they are more likely to be elderly, and they may generally be less economically and geographically mobile than the rest of the population. Redevelopment efforts by both the private and the public sectors could lead to pressures for these individuals to relocate elsewhere in the City or in the metropolitan area.

The extent to which residents are displaced and the locations to which residents must move are crucial problems for all policy makers. Successful policies must minimize the pain of dislocation, and must also strive to avoid the individual and neighborhood disruptions reminiscent of the problems attendant to the urban renewal programs of the 1950s and 1960s. Careful thought is necessary by members of the private and public sectors, by planners and the general citizenry alike, to coordinate the redevelopment activities and the needs and wants of the new residents with the relocation activities and the needs and wants of the old.

---

*I wish to thank Nancy Ancel and Michel Lettre of the Department of State Planning and Bruce Hamilton, David Puryear and Ralph Taylor of Johns Hopkins for their information and cooperation. The views and opinions expressed here are my own and do not reflect those of either the Department of State Planning or the The Johns Hopkins University.

COMMENTARY

Leon N. Weiner
Leon N. Weiner and Associates, Inc.

Dr. Goodman's general conclusion that, in all probability, redevelopment will continue to occur in Baltimore's center city is valid. Not only should central cities continue to be revitalized, but the existing housing stock should be maintained to prevent its deterioration.

Economic imperatives favor high density residential development in urban areas. It uses less land, limits the miles of suburban highway needed, decreases the need for expansive water and sewer services, and generally makes more cost-effective use of infrastructure.

The nation's poorest people live, not in urban areas as suggested by Dr. Goodman, but in rural areas.

Long-range projections by planners and economists tend to be unreliable. Birth rates, housing market trends, and economic conditions are simply too complex and variable to be used as the basis for determining the state of the housing market fifty years from now. Therefore, Dr. Goodman's methodology and its detailed results are open to question.

COMMENTARY

Lola Smith
Housing Assistance Corporation

Housing is the most dynamic part of the social, economic, and fiscal fabric of this country. It is the capital investment that makes communities not only possible but viable. Strong neighborhoods are the foundation of vital cities. Dr. Goodman ignored the human factor in his analysis.

The next fifty years will be unequaled in the unsatisfied need for housing for many Maryland citizens who have low or moderate incomes. Dr. Goodman is correct in emphasizing that as the center city experiences revitalization, displacement and relocation of center city residents will become crucial problems.

APPENDIX

A-1

Life in Maryland Today and Tommorrow As Seen By a Straw Poll of Marylanders

Maryland students and other adults were asked in a straw poll what they thought the most important issues facing Maryland were and what the priorities for the future should be. They responded that economic and employment issues topped all others in importance and severity. Most thought environmental conditions would stay the same or get worse. Yet, they tend to be optimistic toward Maryland's future. Their optimistic attitude bodes well for Maryland as many of our respondents are or will be influential in shaping its future. These and other attitudes on life in Maryland today and tomorrow were revealed in this straw poll.

In 1983 the Maryland State Planning Commission celebrated its 50th Anniversary. In those fifty years, enormous changes have taken place in Maryland and the rest of the nation.

Past generations accomplished much to improve the quality of life in Maryland. What must today's generations do to improve the quality of life for ourselves and future generations?

The future is a choice. In many ways we select the future that we and our children will live in.

The State Planning Commission took this opportunity to examine the issues facing Maryland today and to look ahead to the emerging issues of tomorrow. And to what should be done about them. As part of our effort, we asked Marylanders what they thought the most important issues were and what the priorities for the future should be. Our straw poll was taken in various meetings, high school and college classes, and in other places around the State. Although 457 persons participated, we know our straw poll doesn't represent the opinions of all Marylanders. But it does offer clues.

WHO WERE OUR RESPONDENTS?

We included two main groups of respondents in our straw poll: adults active in their organizations or professions and students. In the first group were 232 persons holding leadership positions in local, State, and private organizations—including elected and appointed officials, professionals active in fields such as planning, architecture, business, education, and farming; and active participants in organizations varying from statewide professional groups to local church and retiree groups. Many of these persons were highly educated (65 percent held college or graduate degrees) and high income (56 percent were from households with annual incomes over $30,000). They tended to be persons who were probably aware of issues, actively involved in planning for the future, and influential in their organizations or professions.

We also wanted to know the view of young people. It is their future as well as ours which is affected by decisions made today. So we included 225 high school and college students from different areas of the State studying contemporary issues and similar subjects.

WHAT DID THEY SAY?

Each respondent completed a questionnaire which asked for opinions on a wide range of matters of vital importance to Maryland. (Table 1 shows the overall results of the poll on a copy of the questionnaire. Table 2 shows how student responses compared to those of other respondents.)

We found the following attitudes among our respondents:

- Economic and work issues (especially employment and unemployment) were the most important issues facing Maryland.
- Employment and jobs, and drugs and alcoholism topped all other topics in severity as problems in Maryland.
- The average Marylander twenty years from now will be better off in life expectancy, but worse off in taxation.
- There was strong support among our respondents for spending more on job training, public schools, and improving the environment.
- Some economic conditions in Maryland will improve in the next twenty years, others will get worse.
- Environmental conditions in Maryland will not improve in the next twenty years.
- More of our respondents would be willing to pay higher taxes to see government solve problems they believe important than would not.
- Our respondents tended to be optimistic toward Maryland's future.

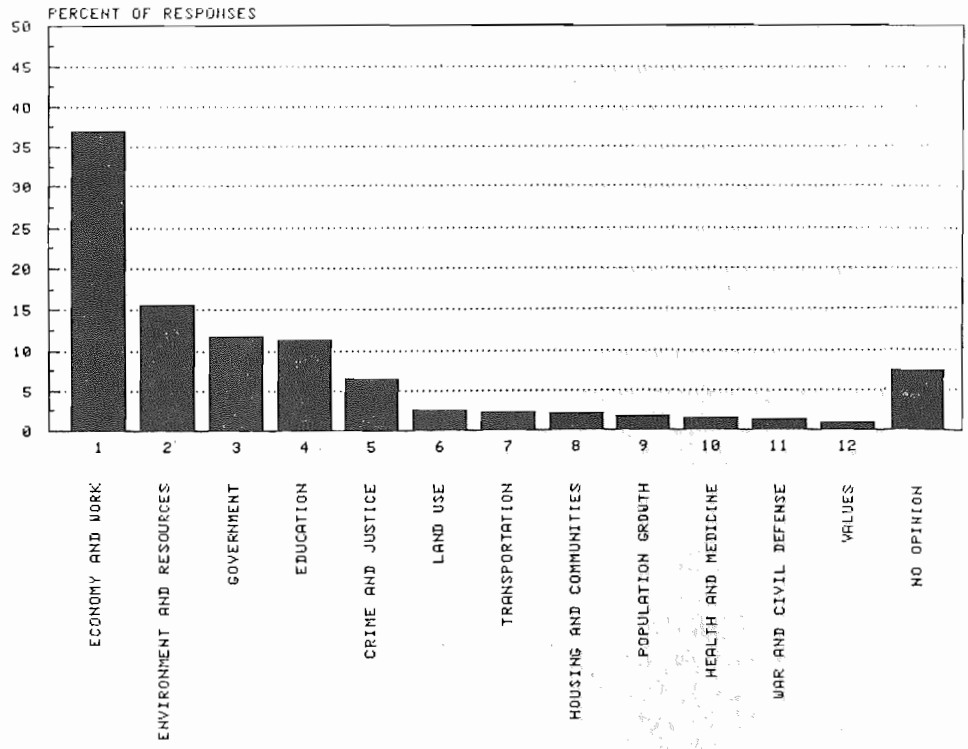
WHAT IS THE MOST IMPORTANT ISSUE FACING MARYLAND TODAY?

We posed that open-ended question to our respondents, and they cited any issue they felt most important. Figure 1 shows how frequently they mentioned various issues. The greatest percentage of issues they cited were in the categories of economy and work (37 percent), environment and resources (16 percent), government (12 percent), and education (12 percent).

In the category of economy and work the most prevalent specific concerns by far were employment or unemployment. Others were economic development, attracting and retaining business, poverty, job training, business environment, inflation, and dredging the Port of Baltimore.

Issues mentioned in environment and resources included Chesapeake Bay (the most prevalent issue), pollution control, conservation, deterioration of the environment, waste management, farmland preservation, clearcutting forests, and cleaning the Potomac.

FIGURE 1: WHAT IS THE MOST IMPORTANT ISSUE FACING MARYLAND TODAY?



Most of the specific concerns in the category of government were about what government does or how it does it—such as government finances, funding and taxation (the most prevalent concerns), maintaining an appropriate balance between economic and environmental programs, limits of government responsibility, public intervention in private land use decisions, concerns about elected officials, overregulation, and the need to enforce existing laws.

In the category of education our respondents were concerned about the public school system (the most prevalent issue), educational standards, facilities, low pay for teachers, a general lack of education, and continuing education.

Other categories in which issues were mentioned included crime and justice, land use, transportation, housing and communities, population growth, health and medicine, war and civil defense, values, families and children, and science and technology.

Our student respondents cited issues more frequently than other respondents in the categories of economy and work and education, and less frequently in government and environment and resources.

HOW ARE VARIOUS TOPICS RATED AS PROBLEMS IN MARYLAND TODAY?

The public agenda for action in the future is to a large extent shaped by what people think are today's problems. So we asked our respondents to rate each of fifteen topics as problems in Maryland today.

Employment and jobs was rated as either serious or very serious by more respondents than any other topic, by students as well as others. Also viewed as relatively more serious were two other economic topics—the economy and public finances. But curiously, our student respondents felt public finances was not as serious as our other respondents.

Drugs and alcoholism received the second highest number of serious or very serious ratings, and public safety and crime the fourth. What is it that drugs and alcoholism, and public safety and crime have in common that causes people to view them as relatively more serious than other topics? Perhaps it is the fear of possible unknown threats to personal safety and health which affects all people to some degree—regardless of their efforts at prevention.

Public schools received the third highest percentage of very serious ratings. Students and other respondents seemed very much in agreement on public schools. But when the percentage of responses which were either very serious or serious is combined, public schools falls to eighth place on the list.

Interestingly, waste disposal and quality of the environment seemed to be viewed by our student respondents as less serious than by others.

Keep in mind that people were asked to rate these topics as problems. They were not asked to rate their importance. The basic goals inherent in each topic on the list are of great importance to many Marylanders.

WILL THE AVERAGE MARYLANDER BE BETTER OFF, WORSE OFF, OR ABOUT THE SAME 20 YEARS FROM NOW?

Another way of forecasting future problems is to look at changes that may affect the personal lives of people in the future. We asked our respondents whether they thought the average Marylander will generally be better off, worse off, or about the same in twelve aspects of daily life 20 years from now.

Life expectancy was the aspect of life which the largest percentage said will change (better off or worse off) in the future. The second and third highest percentages of respondents thought taxation and environment would change.

Life expectancy is where the average Marylander may be better off as compared to other areas. Other areas where life may be better are recreational opportunity, educational opportunity, health care, and income and life style.

Aspects of life which the largest percentage of respondents thought would stay the same included family relationships, and personal happiness and satisfaction.

Taxation is the area where the average Marylander may be worse off according to our respondents. Their "worse off" opinions outnumbered "better off" by a margin of 11 to 1. Many also thought environment,

and personal safety and freedom from crime would be worse.

Economic and job opportunities were viewed differently by students and other respondents. A higher percentage of student respondents thought the average Marylander would be worse off in economic and job opportunities.

SHOULD STATE AND LOCAL GOVERNMENTS SPEND MORE, LESS, OR ABOUT THE SAME ON CERTAIN PROGRAMS?

State and local programs will change as new priorities are established for the needs of current and future generations. Government spending on various programs will similarly change within the limits of affordability and fiscal constraints perceived by society. We asked our respondents whether they thought State and local governments should spend more, less, or about the same on each of fourteen programs.

Job training was the program which the largest percentage would change spending (spend more or less). And they were clearly in favor of spending more. Public schools was second in the percentage who would change spending. And like job training, they were clearly in favor of spending more. Our student respondents were even stronger than other respondents in support of spending on public schools. Not surprisingly they were also stronger in support of spending for public colleges and universities.

Top priority for spending changes in favor of job training and education should come as no surprise, as the largest percentage of respondents said employment, unemployment, and education were the most important issues facing Maryland today. In another survey, Baltimore Magazine reported that a majority of the area leaders they polled favored "more government efforts to retrain workers" to help relieve unemployment as compared to "reduced taxes and regulation of business."[1] They also strongly supported more spending for education as compared to four other programs.

Spending for improving the environment was also strongly supported, with the opinions of our students matching very closely those of other respondents. Support for waste disposal was also strong, but it was not quite as strong among students.

For welfare programs, while a relatively small percentage would not change spending, the rest were clearly in favor of spending less. We noted that job training had the most support for increased spending and welfare the least—an interesting sentiment among our respondents which emphasizes the feeling prevalent today in favor of human resource development and self-improvement as compared to increase in income maintenance for poor people.

Recreation and parks was the program which the largest percentage would not change spending (they would spend the same).

WILL ENVIRONMENTAL CONDITIONS IN MARYLAND GET BETTER, WORSE, OR STAY THE SAME IN THE NEXT 20 YEARS?

Environment and natural resources were high on the public agenda in the 1970s. Responses to other questions indicate they continue to be major concerns of Marylanders. To get more specific about our respondents' perception of future environmental changes, we asked whether they thought conditions will get better, get worse, or stay the same in the next 20 years for ten areas of natural resources and environmental concern.

None of the conditions was thought to get better.

Hazardous wastes was the condition which the largest percentage of respondents thought will change (get better or worse). And they clearly thought it would get worse.

Chesapeake Bay and its tributaries was second in the percentage who expect change. Although more expect the Bay to get better than any other condition listed, they were outnumbered nearly 2 to 1 by those who think it will get worse.

For many of the conditions, our students were even more pessimistic than other respondents—especially for air quality and Chesapeake Bay.

WILL ECONOMIC CONDITIONS IN MARYLAND GET BETTER, WORSE, OR STAY THE SAME IN THE NEXT 20 YEARS?

Economic concerns emerged as dominant issues as the nation recovers from the worse recession in recent memory. Responses to other questions on our straw poll showed they are the dominant issues among our respondents. To get more specific about economic problems, we asked them whether they thought conditions would get better, get worse, or stay about the same in the next 20 years for fifteen areas of economic concern.

Technological advances was the condition which the largest percentage of our respondents said will change (get getter or worse). And by a wide margin they thought technological advances would get better.

In addition to technological advances, conditions in six other areas were expected to get better as compared to getting worse: urban redevelopment, service industry jobs, trained manpower, transportation facilities, port facilities, and labor productivity.

Six conditions were expected to get worse as compared to getting better: interst rates, raw materials, manufacturing jobs, government regulations, job security, and unemployment.

Our respondents' views on employment trends are similar to those revealed in Baltimore Magazine where more than half the Baltimore area leaders surveyed agreed that "most of the remaining jobs in heavy industry will be eliminated by the year 2000." They expect employment growth in computers, telecommunications and other information services, tourism, leisure-related jobs, and financial services to pick up the slack left by manufacturing's decline.

A foreboding note appeared in both surveys. Baltimore Magazine reported that some labor leaders "question the promise of technology and services to create jobs and maintain wage levels." Two-thirds of our respondents thought unemployment would stay the same or get worse, and our students were even more pessimistic on unemployment than other respondents. They were also less optimistic about the prospects for service industry jobs. Resolving the unemployment problem will be a persistent and formidable challenge in the years ahead.

WOULD THEY BE WILLING TO PAY HIGHER TAXES TO SEE GOVERNMENT SOLVE PROBLEMS THEY THINK ARE IMPORTANT?

If local and State governments are to implement programs to solve problems, they must be provided with the necessary financial resources. We asked our respondents if they would be willing to pay higher taxes to see government solve problems they think are important.

While 21 percent of our respondents offered no opinion, 46 percent said yes and 33 percent no. A higher percentage of students offered no opinion, but of those that did, the percentage who said yes was about the same. A number of respondents qualified their answers, however, with remarks like, "restructure spending," "spend more wisely," "if everyone pays fair share," "start making hard decisions."

Paradoxically, taxation was the aspect of personal life which the largest percentage of respondents thought would be worse off for the average Marylander twenty years from now (in response to question 4). Apparently, they believed the severity of the problem they thought most important outweighed the aggravation of the higher taxes it might take to solve the problem.

WHAT IS THE GENERAL ATTITUDE TOWARD MARYLAND'S FUTURE?

Our respondents' answers to previous questions indicated they expect progress in many areas of life in Maryland, but also revealed a number of problem areas. For an overall assessment of how our respondents viewed Maryland's future we asked whether they were very optimistic, optimistic, neutral, pessimistic, or very pessimistic toward Maryland's future.

Our respondents tended to be optimistic toward Maryland's future. While a third were either neutral or offered no opinion, optimistic attitudes (either optimistic or very optimistic) exceeded pessimistic by a wide margin. While more of our student respondents were neutral or offered no opinion (40 percent), for the rest the

percentage of optimistic attitudes was about the same. For students and other respondents, the degree of optimism is tempered—very optimistic attitudes were exceeded by (simply) optimistic by a wide margin.

We should not be surprised that our respondents, like other Americans, tend to be optimistic. One polling organization suggests it is "because we are a nation of immigrants who came to America in pursuit of a dream for the future—a dream of achievement, security and freedom." Or perhaps, the authors continue, "our optimism is predicated upon our formidable achievements and our faith that we can continue to achieve in the future, regardless of the temporary obstacles we may face today."[2]

While recent nationwide surveys continue to show a spirit of optimism among Americans, they also reveal two findings which dampen that optimism: persons who have a lower income or educational attainment, or who are not in professional, technical or similar occupations tend not to be as optimistic about the future.[3] (Except for students, our respondents were mostly high income, well-educated professionals). And surprisingly, the vast majority of Americans born in the baby boom years from 1946 to 1964 now believe the financial futures in store for their children will not outstrip their own.[4]

Nonetheless, we believe the optimistic attitude among our students and other respondents, many of whom are or will be influential in shaping the future of their communities, bodes well for Maryland's future.

REFERENCES

1. "Where Do We Stand?" Baltimore Magazine. (August 1983), pp. 51-61.

2. William Moss Survey Research Center, The Study of Life in the World Tomorrow, How Americans View the Economy in the Year 2000, (Washington: William Moss Institute 1982), p. 2.

3. William Moss Survey Research Center, The Study of Life in the World Tomorrow, Optimism Regarding the Future (Washington: William Moss Institute 1983), pp. 5-6.

4. American Council on Life Insurance, Baby Boom Survey (Washington: ACLI 1983), as reported in The Sun, October 10, 1983.

All respondents (n=457)
(percent of responses)

TABLE 1

MARYLAND STATE PLANNING COMMISSION QUESTIONNAIRE
YOUR VIEW OF TODAY AND TOMORROW

The State of Maryland is celebrating the 50th anniversary of its State Planning Commission this year. On October 27th at the Baltimore Convention Center a conference and dinner will be held to celebrate the occasion.

The future is a choice. In many ways, we select the future that we and our children will live in. We are taking this opportunity to examine issues and the way we should deal with them. Please take a few minutes to share your ideas with us.

1. **What do you think is the most important issue facing Maryland today?** Economy and Work (37%), Environment and Resources (16%), Government (12%), Education (11%), Crime and Justice (7%), no others more than (3%), no response (7%).

2. **In the next 20 years, do you think the issue which you have identified will become more important** 76% **, less important** 4 **, or stay about the same** 11 **.** no response: 9%.

3. **How would you rate the following as problems in Maryland *today*?**

	Very Serious	Serious	Not Serious	Don't Know/ No Response
a. employment & jobs	43%	46%	9%	2%
b. the economy	31	49	15	5
c. public finances	23	48	18	11
d. public safety & crime	31	49	17	3
e. health care	13	41	40	6
f. drugs & alcoholism	38	45	13	4
g. waste disposal	28	38	24	10
h. quality of the environment	28	36	29	7
i. housing & communities	16	45	31	8
j. poverty	23	43	24	10
k. family stability	16	42	30	12
l. transportation facilities	8	34	53	5
m. public schools	33	33	28	6
n. higher education	24	31	38	7
o. civil rights/equal opportunity	18	29	46	7

4. **With respect to the circumstances listed below, do you think the average Marylander will generally be better off, worse off, or about the same *20 years* from now?**

	Better Off	Worse Off	The Same	Don't Know/ No Response
a. economic & job opportunity	30	32	26	12
b. taxation	6	66	23	5
c. personal safety & freedom from crime	19	38	36	7
d. health care	40	20	29	11
e. life expectancy	61	14	19	6
f. environment	30	39	23	8
g. recreational opportunity	43	15	35	7
h. income and life style	34	26	27	13
i. housing & community facilities	35	27	29	9
j. personal happiness & satisfaction	23	18	43	16
k. family relationships	20	24	41	15
l. educational opportunities	44	20	29	7

5. **Do you think state and local governments in Maryland should spend more, less, or about the same on the following programs?**

	More	Less	The Same	Don't Know/ No Response
a. attracting industry	50	13	28	9
b. job training	75	7	16	2
c. improving the environment	67	6	23	4
d. waste disposal	58	7	28	7
e. police & fire protection	54	3	41	2
f. health care	49	6	42	3
g. social services	37	25	32	6
h. welfare	24	42	27	7
i. housing & community development	46	13	37	4
j. recreation & parks	36	15	46	3
k. public schools	64	9	23	4
l. public colleges & universities	59	7	29	5
m. mass transportation	40	24	34	2
n. highways & bridges	50	11	35	4

6. With respect to natural resources and the environment in Maryland, do you think the following situations will get better, worse, or stay about the same in the *next 20 years*?

	Get Better	Get Worse	Stay Same	Don't Know/ No Response
a. water supplies	13%	55%	25%	7%
b. flooding	14	29	43	14
c. Chesapeake Bay & its tributaries	26	48	13	13
d. hazardous wastes	17	63	12	8
e. agricultural resources	21	41	27	11
f. forest preserves	16	44	30	10
g. wildlife	14	53	25	8
h. fisheries	18	46	26	10
i. air quality	17	59	18	6
j. contamination problems	14	56	18	12

7. With respect to the economy, development, and jobs in Maryland, do you think the following will get better, worse, or stay about the same in the *next 20 years*?

	Get Better	Get Worse	Stay Same	Don't Know/ No Response
a. energy supplies	40	36	16	8
b. interest rates	17	56	15	12
c. raw materials	12	51	22	15
d. trained manpower	46	22	22	10
e. unemployment	23	44	23	10
f. job security	20	41	28	11
g. manufacturing jobs	22	43	20	15
h. service industry jobs	47	18	21	14
i. transportation facilities	42	18	29	11
j. infrastructure support	16	15	23	46
k. port facilities	37	11	26	26
l. urban redevelopment	48	14	25	13
m. technological advances	79	4	7	10
n. labor productivity	37	25	26	12
o. government regulations	19	41	24	16

8. In general, what is your attitude toward Maryland's future? Are you optimistic or pessimistic?

Very optimistic	8%	Neutral	27	Very Pessimistic	3
Optimistic	44	Pessimistic	12	Don't Know/ No Response	6%

9. Would you be willing to pay higher taxes to see government solve problems you think are important?

Yes 46% No 33 Don't Know/ No Response 21

10. Finally, we would like some information about you and your family. (No Response)

a. In what County do you live? Region: Balto/Wash: 53% Southern Md: 12% Eastern Shore: 24% Western Md: 7% — 4%

b. What is your age?

under 18 25%, 18-30 32, 31-45 21, 46-65 17, over 65 4 — 1

c. What is your sex? Female 41% Male 58 — 1

d. What is your race?

White 72%, Black 23, Hispanic --, Other 3 — 2

e. What is your approximate *family* income?

less than $10,000 6%, 10-20,000 17, 20-30,000 24, 30-45,000 20, over 45,000 25 — 8

1 or 2 persons: 28% no children in household: 27% — 5

f. How many people in your household? _____ How many of these are 18 or under? _____

g. What is the highest grade of school you completed?

Grade school --, Some high school 22%, Completed high 11, School or GED --,

Some college 29, College graduate 18, Graduate degree 17 — 2

Thank you. We appreciate your help.

Student respondents (n=225): other respondents (n=232)
(percent of responses) TABLE 2

MARYLAND STATE PLANNING COMMISSION QUESTIONNAIRE
YOUR VIEW OF TODAY AND TOMORROW

The State of Maryland is celebrating the 50th anniversary of its State Planning Commission this year. On October 27th at the Baltimore Convention Center a conference and dinner will be held to celebrate the occasion.

The future is a choice. In many ways, we select the future that we and our children will live in. We are taking this opportunity to examine issues and the way we should deal with them. Please take a few minutes to share your ideas with us.

1. **What do you think is the most important issue facing Maryland today?**[a] Economy and Work (39:34%), Environment and Resources (13:18), Government (7:16), Education (15:8), Crime and Justice (10:3), no others more than (2:5), no response (11:4).

2. **In the next 20 years, do you think the issue which you have identified will become more important** 73:79%[a] **less important** 5:3, **or stay about the same** 11:10. no response 11:4.

3. **How would you rate the following as problems in Maryland *today*?**[a]

	Very Serious	Serious	Not Serious	Don't Know/ No Response
a. employment & jobs	42 44%	47 45%	8 9%	3 2%
b. the economy	24 38	52 45	17 13	7 4
c. public finances	13 33	52 44	21 15	14 8
d. public safety & crime	29 34	49 49	20 14	2 3
e. health care	10 17	39 43	45 34	6 6
f. drugs & alcoholism	35 40	46 43	14 12	5 5
g. waste disposal	23 33	33 43	31 18	13 6
h. quality of the environment	19 36	38 34	34 24	9 6
i. housing & communities	12 20	47 44	32 29	9 7
j. poverty	23 23	41 45	22 25	14 7
k. family stability	10 22	41 42	35 25	14 11
l. transportation facilities	4 12	30 37	60 46	6 5
m. public schools	35 32	33 33	27 29	5 6
n. higher education	27 22	32 31	36 41	5 6
o. civil rights/equal opportunity	17 19	32 26	41 50	10 5

4. **With respect to the circumstances listed below, do you think the average Marylander will generally be better off, worse off, or about the same *20 years* from now?** [a]

	Better Off	Worse Off	The Same	Don't Know/ No Response
a. economic & job opportunity	30 31	41 23	16 36	13 10
b. taxation	6 5	65 66	22 24	7 5
c. personal safety & freedom from crime	20 18	41 35	32 40	7 7
d. health care	41 38	17 24	32 26	10 12
e. life expectancy	54 67	16 11	21 17	9 5
f. environment	22 38	45 33	22 23	11 6
g. recreational opportunity	47 40	12 17	32 38	9 5
h. income and life style	35 34	27 25	27 28	11 13
i. housing & community facilities	36 34	30 24	24 33	10 9
j. personal happiness & satisfaction	27 19	19 16	38 49	16 16
k. family relationships	20 21	20 27	45 36	15 16
l. educational opportunities	48 39	22 17	22 37	8 7

5. **Do you think state and local governments in Maryland should spend more, less, or about the same on the following programs?** [a]

	More	Less	The Same	Don't Know/ No Response
a. attracting industry	42 58	17 10	30 26	11 6
b. job training	76 73	7 6	14 17	3 4
c. improving the environment	67 67	6 6	23 24	4 3
d. waste disposal	51 64	8 7	32 24	9 5
e. police & fire protection	60 48	3 3	35 47	2 2
f. health care	50 47	5 6	41 42	4 5
g. social services	41 33	23 28	31 33	5 6
h. welfare	24 23	46 38	23 32	7 7
i. housing & community development	45 47	14 12	36 38	5 3
j. recreation & parks	38 34	14 16	45 47	3 3
k. public schools	76 52	4 15	17 29	3 4
l. public colleges & universities	70 49	4 10	24 34	2 7
m. mass transportation	36 44	23 25	39 28	2 3
n. highways & bridges	47 54	12 10	37 32	4 4

[a] First figure shows percent of students' answers, second figure shows percent of other respondents' answers.

6. With respect to natural resources and the environment in Maryland, do you think the following situations will get better, worse, or stay about the same in the *next 20 years*? [a]

	Get Better	Get Worse	Stay Same	Don't Know/ No Response
a. water supplies	13 13%	52 57%	28 22%	7 8%
b. flooding	11 18	20 38	56 31	13 13
c. Chesapeake Bay & its tributaries	17 34	52 44	15 11	16 11
d. hazardous wastes	12 22	69 56	12 13	7 9
e. agricultural resources	24 19	38 44	31 23	7 14
f. forest preserves	16 16	47 41	29 32	8 11
g. wildlife	16 12	58 48	20 29	6 11
h. fisheries	15 22	52 39	24 28	9 11
i. air quality	10 23	70 48	15 21	5 8
j. contamination problems	11 16	60 53	18 18	11 13

7. With respect to the economy, development, and jobs in Maryland, do you think the following will get better, worse, or stay about the same in the *next 20 years*? [a]

	Get Better	Get Worse	Stay Same	Don't Know/ No Response
a. energy supplies	42 38	38 34	15 18	5 10
b. interest rates	20 14	62 50	9 20	9 16
c. raw materials	13 11	59 43	17 27	11 19
d. trained manpower	43 49	27 18	22 22	8 9
e. unemployment	24 22	52 37	16 30	8 11
f. job security	23 17	43 39	25 32	9 12
g. manufacturing jobs	25 19	36 49	20 18	19 14
h. service industry jobs	32 61	24 11	26 16	18 12
i. transportation facilities	36 48	16 19	37 22	11 11
j. infrastructure support	10 21	11 18	23 23	56 38
k. port facilities	28 46	10 12	32 20	30 22
l. urban redevelopment	44 52	16 12	25 24	15 12
m. technological advances	79 78	4 4	6 8	11 10
n. labor productivity	39 34	23 27	25 28	13 11
o. government regulations	23 15	36 46	28 19	13 20

8. In general, what is your attitude toward Maryland's future? Are you optimistic or pessimistic? [a]

Very optimistic	8:8%	Neutral	32:23	Very Pessimistic	2:3
Optimistic	37:51	Pessimistic	13:12	Don't Know/ No Response	8:3

9. Would you be willing to pay higher taxes to see government solve problems you think are important? [a]

Yes 42:50% No 29:38 Don't Know/ No Response 29:12

10. Finally, we would like some information about you and your family. [a] (No Response)

a. In what County do you live? Region: Balto/Wash: 32:73% Southern Md: 21:7 Eastern Shore: 34:24 Western Md : 11:4 — 2:6

b. What is your age?

under 18 50:-%, 18-30 44:21, 31-45 5:36, 46-65 1:34, over 65 -:7 — -:2

c. What is your sex? Female 47:35% Male 53:62 — -:3

d. What is your race?

White 70:73%, Black 25:22, Hispanic -:-, Other 3:2 — 2:2

e. What is your approximate *family* income?

less than $10,000 9:3%, 10-20,000 22:12, 20-30,000 29:20, 30-45,000 22:18, over 45,000 11:38 — 7:10

f. How many people in your household? 1 or 2 persons: 11:38 How many of these are 18 or under? no children in household: 38:46 — 1:8

g. What is the highest grade of school you completed?

Grade school -:-, Some high school 41:3, Completed high 12:10, School or GED -:-,

Some college 40:19, College graduate 3:33, Graduate degree 2:32 — 2:2

Thank you. We appreciate your help.

[a] First figure shows percent of students' answers, second figure shows percent of other respondents' answers.

A-2
Past Trends, Future Projections

Each person attending the Futures Conference received a "Maryland Chartbook: Characteristics of Change, 1930-2000," prepared by DSP's Office of Planning Data. It presented, in a concise graphical format, selected statistical data showing Maryland's social and economic changes during the period since State Planning was established in 1933.

The Department prepares and periodically updates projections which are used by State and local agencies in planning for development, facilities, and programs. Its current projections were also included in the Chartbook.

To serve as a reference and stimulus for planning and action, the past trends and future projections in the Chartbook are reproduced on the following pages:

CONTENTS

Page

3. Income

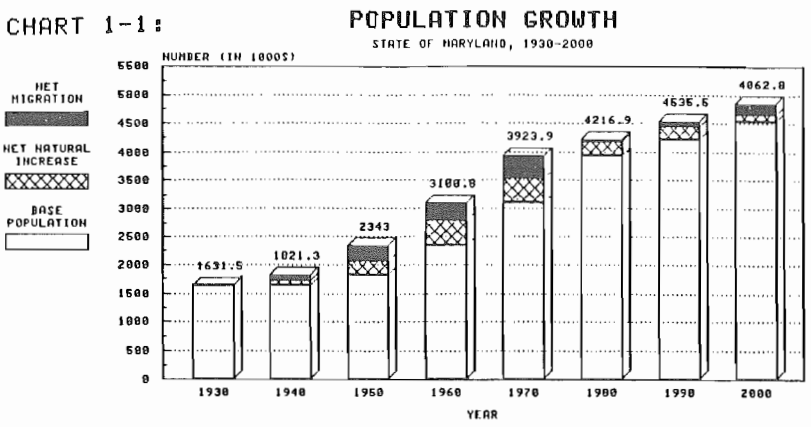
4. Housing

5. Energy

6. Land Use

7. Transportation

CHART 1-1:



POPULATION GROWTH, STATE OF MARYLAND, 1930-1980

	Year	Total Population	Percent Change	Absolute Population Change	Net Natural Change (Births-Deaths)	Net Migration
	1930	1,631,526	—	—	—	—
	1940	1,821,244	11.6	189,718	78,501	111,217
	1950	2,343,001	28.6	521,757	239,955	281,802
	1960	3,100,089	32.3	757,088	437,710	319,378
	1970	3,923,897	26.5	823,208	437,038	386,170
	1980	4,216,975	7.5	293,078	243,611	49,467
Projected	1990	4,535,450	7.6	318,475	252,840	65,635
Projected	2000	4,682,800	7.2	327,450	153,110	174,340

SOURCE: Census of Population 1930-1980.
DSP Final Projections October 1983.

CHART 1-1: Population Growth, 1930-2000

1. Maryland's population increased more than two and one-half times from 1930 to 1980. The most rapid period of population growth occurred between 1950 and 1970 when both net natural increase (births less deaths) and net-migration (in-migration less out-migration) were greatest. During this period the State grew at an average annual percentage rate of 2.4% compared to only .7% for the decade of the 1970s.

2. The total population of Maryland is projected to increase by 15.3% between 1980 and 2000. This assumes the State will continue to grow at about the pace established in the 1970s, .7% annually.

3. Net Natural Increase (the surplus of births over deaths) declined since 1970 as the result of low fertility levels. While births are expected to increase somewhat during the 1980s, they will be offset by more deaths associated with the aging population.

4. Net Migration (difference between in-migration and out-migration) accounted for 46.9% of Maryland's population growth between 1960 and 1970. Between 1970 and 1980, net migration accounted for only 16.9% of population growth.

5. For Maryland to achieve population growth of about 300,000 for the 1980-1990 and 1990-2000 periods, net migration must increase significantly over the 1970-1980 period, doubling from 1980-1990 and doubling again from 1990-2000. Even so, net migration would be substantially below the levels of the 1940s, 1950s and 1960s.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Decennial Censuses 1930-1980; Department of State Planning Population Projections, October 1983.

CHART 1-2A: METROPOLITAN REGION POPULATION TRENDS

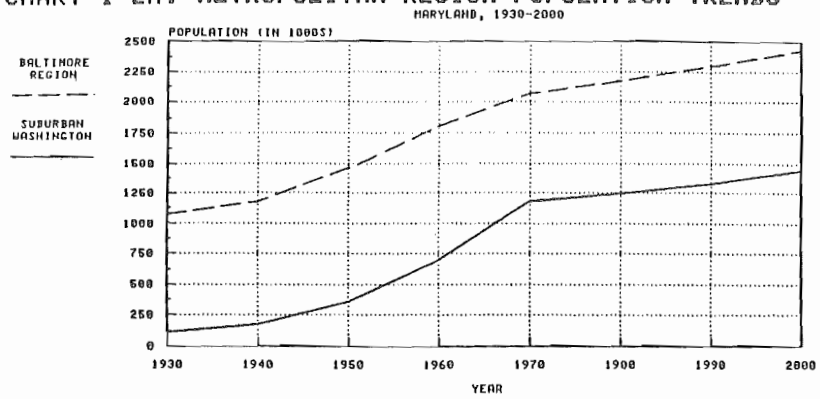


CHART 1-2B: NON-METROPOLITAN REG. POPULATION TRENDS

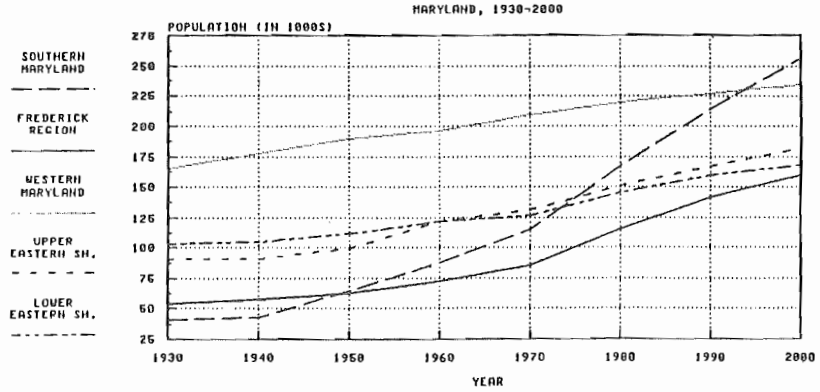


CHART 1-2A: Metropolitan Region Population Trends, 1930-2000 *
CHART 1-2B: Non-Metropolitan Region Population Trends, 1930-2000

1. Between 1930 and 1970 the Suburban Washington Region was the fastest growing region in the State. In 1970, its share of State population stood at 29.5% compared to 6.7% in 1930. The region's share of State population declined to 29.5% in 1980. The region's share of State population is expected to remain about the same through the year 2000.

2. While the Baltimore region's population has doubled since 1930, its share of State population declined from 65.5% in 1930 to 51.6% in 1980. By the year 2000, its share of State population is expected to be just under 50%.

3. Between 1970 and 1980, population in the Southern Maryland Region increased 44.5%, the highest growth rate for any region in the State. In 1980, the region accounted for 4.0% of the State's population. The region is projected to grow at the highest rate over the next 20 years with a 5.3% share of total population by 2000.

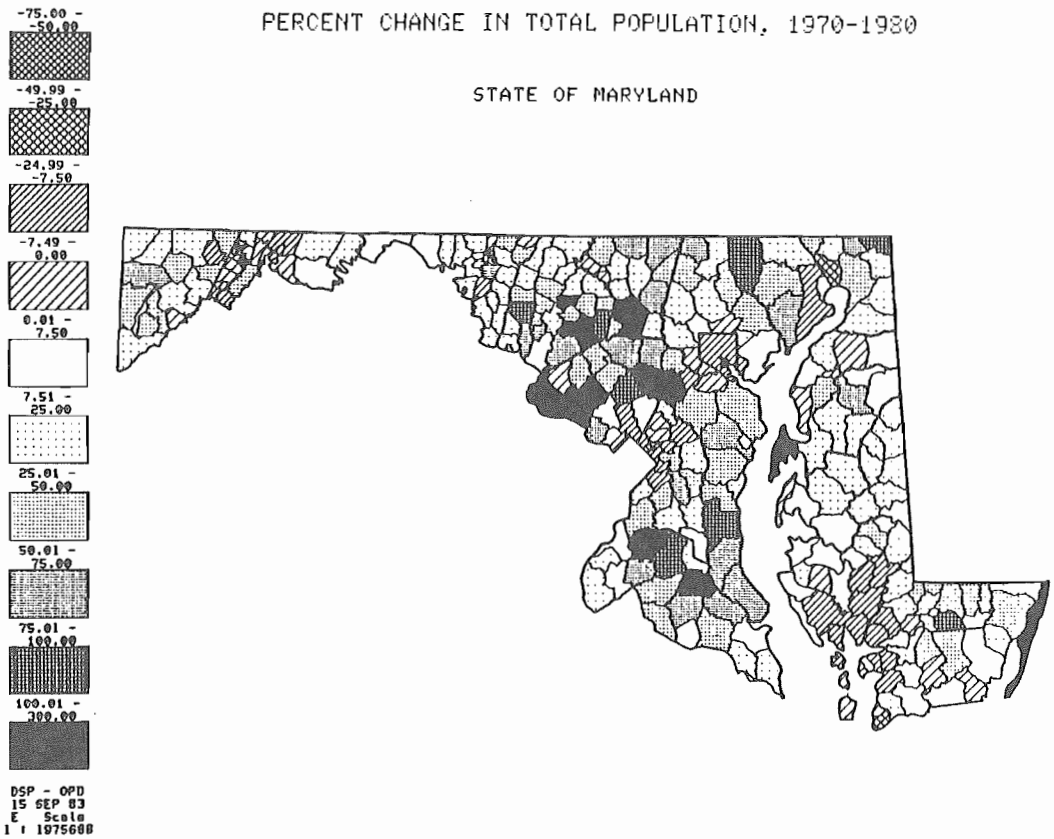
4. The Frederick Region, the second fastest growing region of the State in the 1970s, is expected to continue to increase its share of total State population from 2.7% in 1980 to 3.3% by 2000.

5. Small increases in percentage share of State population are expected in the Upper and Lower Eastern Shore regions. A small decline in share is expected in the Western Maryland Region.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Decennial Censuses, 1930-1980; Department of State Planning Population Projections, October 1983.

* Planning Regions: Baltimore Region - Anne Arundel, Baltimore, Carroll, Harford, Howard counties, Baltimore City; Suburban Washington - Montgomery, Prince George's counties; Southern Maryland - Calvert, Charles, St. Mary's counties; Frederick - Frederick County; Western Maryland - Allegany, Garrett, Washington counties; Upper Eastern Shore - Caroline, Cecil, Kent, Queen Anne's, Talbot; Lower Eastern Shore - Dorchester, Somerset, Wicomico, Worcester counties.

MAP 1-1:



MAP 1-1: Percent Change in Total Population, 1970-1980

1. Population losses between 1970 and 1980 occurred principally in Baltimore City, the older county suburbs adjacent to Baltimore City and Washington, D.C., and in rural portions of the Eastern Shore and Western Maryland. The losses in the older suburban areas are associated with declining household size as children grew up and left the household. In addition, an outward movement to the newer suburbs took place. The rural decline is typically associated with losses in the employment base.

2. Large population growth occurred in outlying portions of the older suburban counties such as Montgomery and Anne Arundel. The newer suburban counties such as Carroll, Frederick, and Howard as well as Charles and Calvert in Southern Maryland and Queen Anne's on the Eastern Shore, had areas that experienced rapid growth. These outer counties are still within commuting distance of both the older job centers and the expanding job opportunities in the older suburban counties. For similar reasons, the portion of Cecil County nearest to Wilmington, Delaware had a large increase in population.

3. The resort areas, Ocean City in Wicomico County and Deep Creek Lake in Garrett County, had sizeable increases in population.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Decennial Censuses 1970 and 1980; population change displayed on the map is by Minor Civil Division.

CHART 1-3: POPULATION BY AGE GROUPINGS

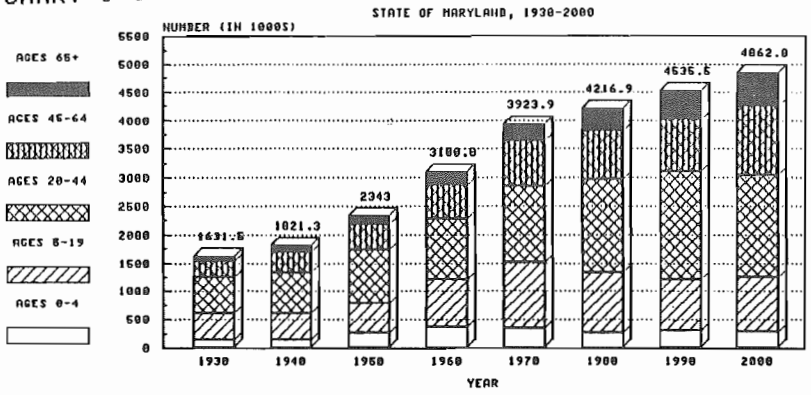


CHART 1-4: % SHARE OF POPULATION BY AGE GROUPINGS

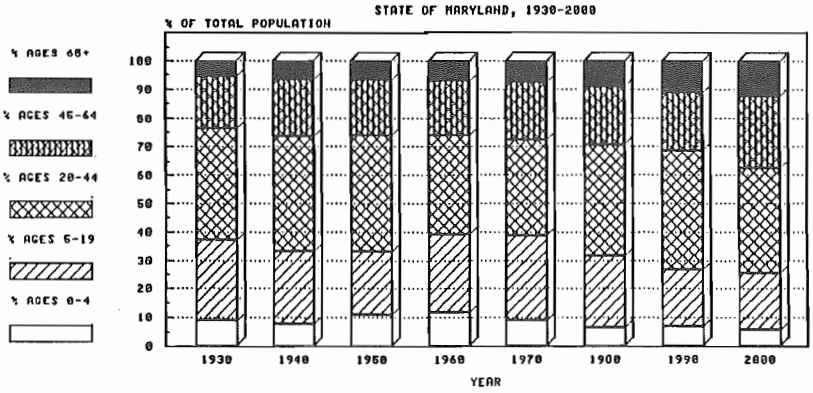


CHART 1-3: Population by Age Groupings, 1930-2000
CHART 1-4: Percent Share of Population by Age Groupings, 1930-2000

1. After the low births of the 1930s, both the absolute number and the percent of all persons 0-4 years old started to increase in the late 1940s. This pattern continued into the 1960s riding the baby boom wave. Children under five years old represented 7.5% of the population in 1940 and increased to 11.8% in 1960 before starting to decline. With the "baby bust" of the 1970s this age group declined to only 6.5% of the State's 1980 population. Births during the 1980s are expected to result in a slight increase in persons under 5 years old to 6.8% in 1990 before trailing off to under 6% in the year 2000.

2. In both absolute and percentage terms the population aged 65 and over increased from 1930 to 1980. In absolute terms the elderly population increased 325% while the State's total population increased 158%. As a result, the elderly represented 9.4% of the State's 1980 population compared to 5.7% in 1930. In the year 2000, the elderly are anticipated to increase by over 50% and to represent 12.5% of the State's population.

3. The baby boom of the late 1940s, 1950s, and early 1960s, coupled with in-migration during this period resulted in the State's 5-19 year old population reaching just over 1.17 million or almost 30% of the State's population in 1970. By 1980, this age group declined in absolute terms to 1.05 million and only 25.0% of the population. The 5-19 year old group is expected to decline in size to under 900,000 in 1990, just less than 20% of the population.

4. The aging of that portion of the State's population most affected by both the baby boom and the large net in-migration of the 1950s and 1960s, resulted in the large increase in the number of 20-44 year olds from 1970 to 1980. This group increased in size by over 24% during the last decade while the State's total population increased only 7.5%. This group is expected to grow twice as fast as the State's total population during the 1980s before starting to decline in size in the 1990s. It is this age group that places considerable pressure on the need for job formation.

5. The age group 45-64 years old will start to increase significantly in size during the 1990s as the baby boom generation continues to age. By 2000, this age group is expected to represent nearly 25% of the population compared to just over 20% in 1980. In absolute terms, this age group is expected to increase by nearly 42% while the State's population increases by 15%.

SOURCE: U.S. Department of Commerce, Bureau of the Census, 1930-1980; Department of State Planning Population Projections, October 1983.

CHART 1-5: POPULATION BY RACE

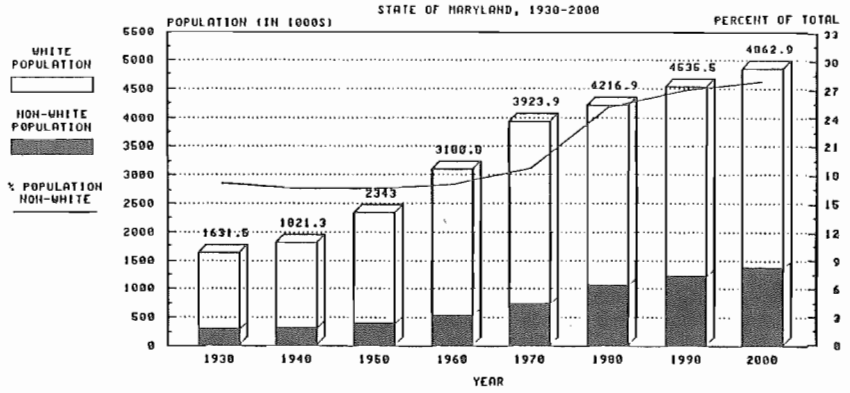


CHART 1-5: Population by Race, 1930-2000

1. From 1930 to 1960 the nonwhite population increased at about the same rate as the white population, with nonwhites comprising about 17.0% of total population during this period.

2. From 1960 to 1980 nonwhites grew slightly faster than the white population. Between 1970 and 1980 the nonwhite population grew by 329,128 persons compared to a loss of 36,050 in white population. As a result, the nonwhite population represented 25.1% of the State's population in 1980 compared to 18.6% in 1970. Over half (174,518) of the increase of in nonwhites between 1970 and 1980 occurred in Prince George's County (in part reflecting out-migration from Washington, D.C.).

3. Approximately 45.0% of the projected increase in total population from 1980 to 2000 will consist of nonwhites. As a result, the nonwhite populations share of total population is expected to increase from 25.1% in 1980 to just under 28% by the year 2000.

SOURCE: U.S. Department of Commerce, Bureau of the Census, 1930-1980; Department of State Planning Population Projections, October 1983.

CHART 2-1: TOTAL RESIDENT EMPLOYED PERSONS

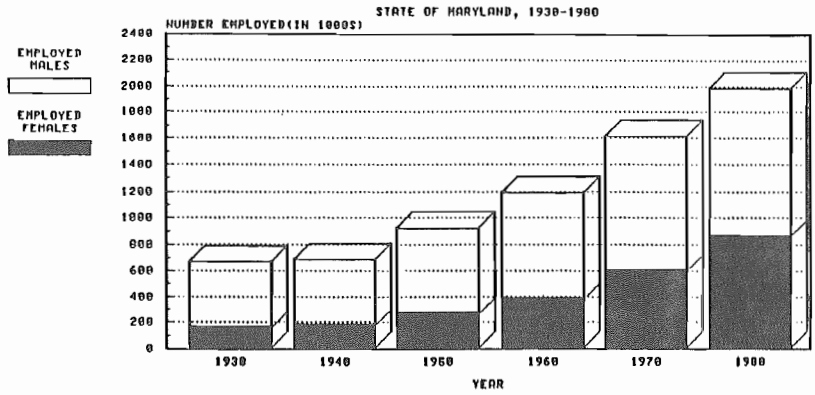


CHART 2-2: LABOR FORCE PARTICIPATION RATES

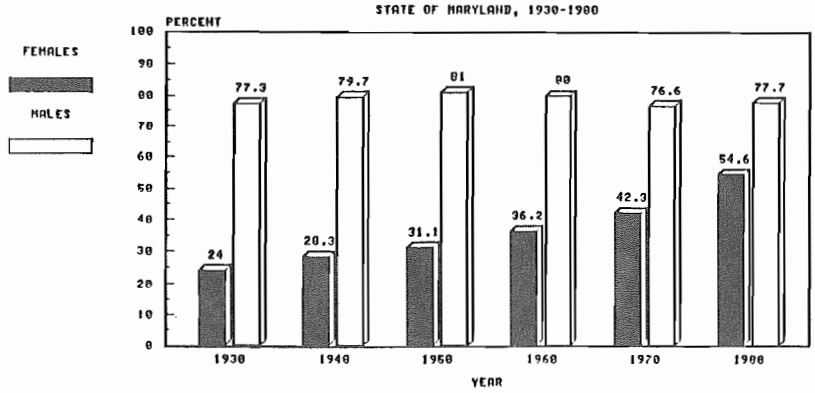


CHART 2-1: Total Resident Employed Persons, 1930-1980

1. The number of employed Maryland residents increased almost threefold from 672,906 in 1930 to 1,989,654 in 1980.
2. The number of employed female residents increased from 158,295 in 1930 to 866,351 in 1980, a fivefold increase compared with a twofold increase for males.
3. In 1980, females comprised 43.5% of all employed residents as contrasted to 23.5% in 1930.
4. Between 1930 and 1980 female resident employment increased by 708,056 in contrast to the increase in male resident employment of 608,892.

CHART 2-2: Labor Force Participation Rates, 1930-1980

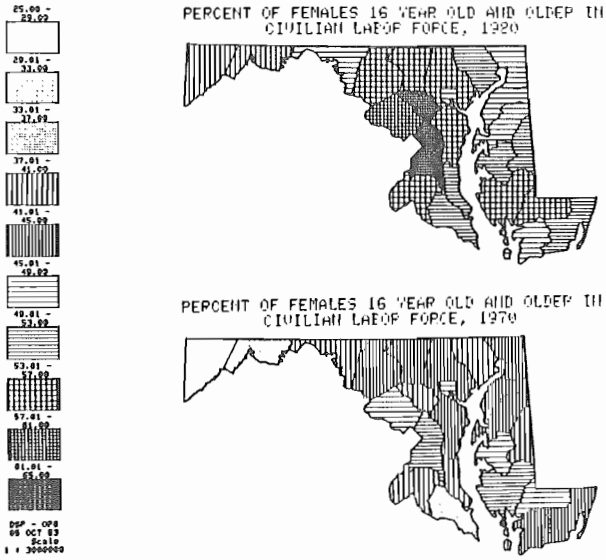
1. In 1930, the male labor force participation rate* in Maryland was 77.3%. By contrast, the female labor force participation rate was 24.0%.
2. In 1980, the male labor force participation rate was 77.7%, showing almost no change from the 1930 rate.
3. The expansion of job opportunities for women, coupled with women with children entering and remaining in the labor force, caused the female labor force participation rate to increase from 24.0% in 1930 to 54.6% in 1980.

---

*Labor force participation is the number of persons in the labor force (employed and unemployed) divided by the total number of persons within a specified age group (in 1930 this was persons 10 years and older, in 1940-1970 persons 14 years and over, and in 1980 persons 16 years and over).

SOURCE: U.S. Department of Commerce, Bureau of the Census, Decennial Censuses 1930-1980.

MAP 2-1:



MAP 2-1: Percent of Females 16 Years Old and Over in the Labor Force

1. The increase in female labor force participation rates over the last decade is due to expanded employment opportunities and to changed attitudes towards employment. This phenomon appears widely dispersed throughout the State with the exceptions of Western Maryland and some Eastern Shore counties.

2. The highest female labor force participation rate* in 1980 is found in Prince George's County (65.0%), followed by Howard County (61.5%) and Montgomery (58.9%). These rates can be compared to the overall State participation rate for females of 54.6%.

3. The relatively high female labor force participation rates in Howard, Prince George's, and Montgomery counties are due to the employment opportunities either in the county or within commuting distance.

4. In 1980, the lowest female participation rates are found in Allegany, Garrett, Cecil, Washington ar Somerset counties (38.7%, 39.2%, 47.0%, 47.4%, and 48.2% respectively).

---

*Percentage of females 16 years and over in the labor force.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Decennial Censuses, 1970 and 1980.

CHART 2-3A: RESIDENT EMPLOYED BY INDUSTRIAL SECTOR

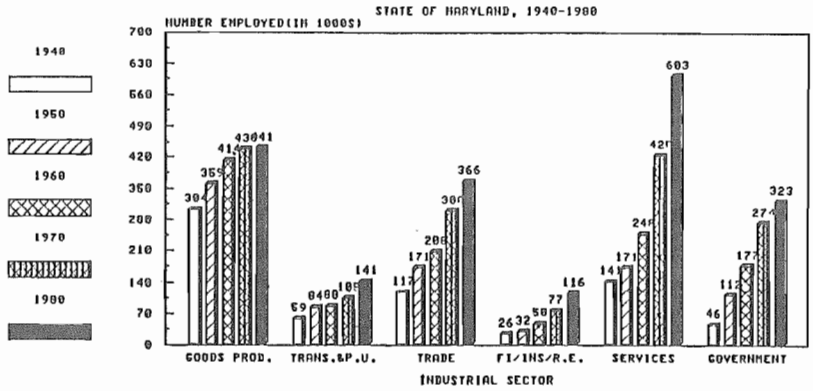


CHART 2-3B: % SHARE OF EMPLOYED BY INDUST. SECTOR

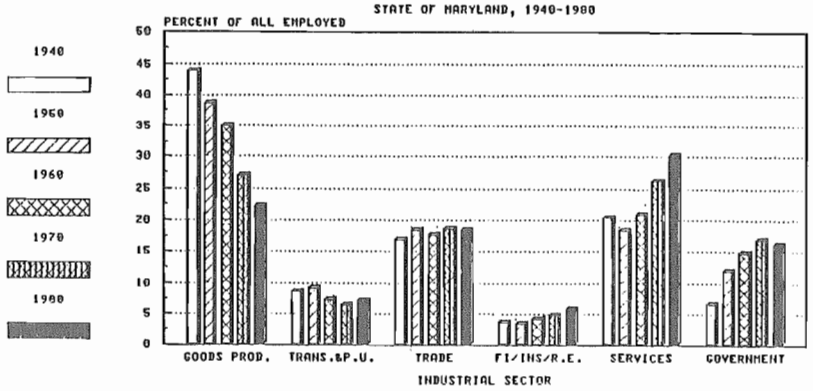


CHART 2-3A: Resident Employed by Industrial Sector, 1940-1980
CHART 2-3B: Percent Share of Employed by Industrial Sector, 1940-1980

1. The Goods Producing sector (Agriculture, Forestry and Fisheries, Mining, Construction, and Manufacturing) accounted for 43.9% of the State's total employed residents in 1940 but only 22.6% in 1980. Even so, the number of persons employed in the goods producing sector increased by more than 45% during the 40 year period.

2. The steady decline in the share of persons employed in the goods producing sector was the result of increased levels of activity in the Services; Government; and Finance, Insurance, and Real Estate sectors. Combined, these sectors grew from 30.8% in 1940 to 52.3% of the resident employed in 1980.

3. The number of State residents employed in the Services sector increased fourfold from 141,076 in 1940 to 603,079 in 1980. As a percent of total State employed persons, services have increased from 20.4% in 1940 to 30.3% in 1980.

4. The more than doubling of the share of persons employed in government from 6.7% in 1940 to 16.9% in 1970 was the result of increased employment opportunities in federal, State and local service coupled with the ease of commuting to federal installations in Washington and Virginia from such Maryland counties as Montgomery and Prince George's, as well as Anne Arundel, Calvert, Charles, and Howard counties. While the number of employed residents in government increased more than sevenfold from 1940 to 1980 this increase shows signs of slowing. While the number of government employed residents increased 17.9% from 1970 to 1980, the percentage share of all resident employed in government declined from 16.9% to 16.2%.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Decennial Censuses 1940-1980.

CHART 2-4: EMPLOYMENT (JOBS) ACTUAL AND PROJECTED

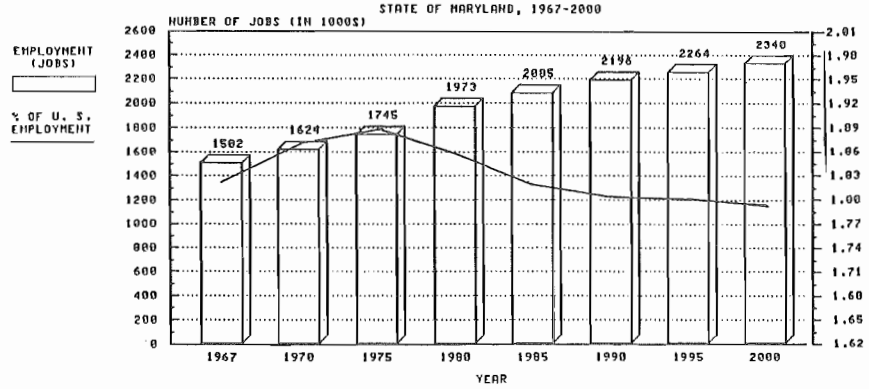


CHART 2-4: Employment (Jobs) Actual and Projected, 1967-2000

1. Between 1967 and 1980 the total number of jobs (part-time and full-time) located in Maryland increased 47,900 or 31.4%. Over the ten year period from 1970 to 1980, the number of jobs increased 349,000 or 21.4%. While the State's total population increased only 7.5% between 1970 and 1980 the population 16 years and older increased 19.7%. This large increase in the "employment age" population coupled with the increase in the female labor force participation rate explains the large increase in the demand for jobs over the decade.

2. Over the next twenty years (from 1980 to 2000), the number of jobs is expected to increase by a little less than 19%. This anticipated slowdown in the demand for job growth is expected as growth in the number of persons 16 years and over, combined with increases in the labor force participation rate for females, slows in comparison to the experience of the 1970s.

3. Maryland's share of total United States jobs is projected to decline slightly from the high reached in 1975 of 1.88% to 1.79% in 2000.

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis, April 1982; Projections prepared by Maryland Department of State Planning.

CHART 2-5A: EMPLOYMENT (JOBS) BY INDUSTRIAL SECTOR

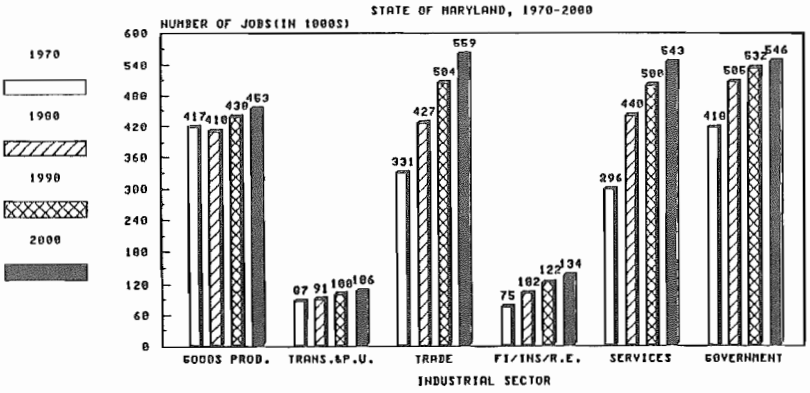


CHART 2-5B: % SHARE OF JOBS BY INDUSTRIAL SECTOR

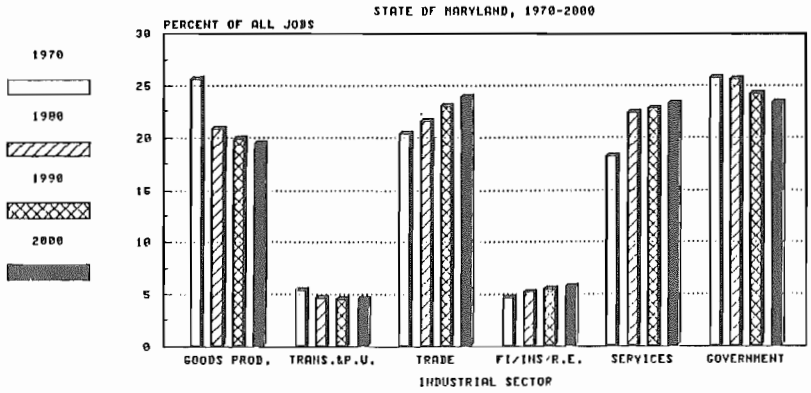


CHART 2-5A: Employment (Jobs) by Industrial Sector, 1970-2000
CHART 2-5B: Percent Share of Jobs by Industrial Sector, 1970-2000

1. The Goods Producing sector is expected to grow only slightly from 410,000 jobs in 1980 to 453,000 jobs by 2000. Its share of total jobs is expected to decline from 20.8% in 1980 to 19.5% by 2000, significantly less than the 1970-1980 loss in share of slightly over 5%.

2. The gap in jobs left by the decline in the relative share of the Goods Producing sector is more than made up by the increased relative share in the Trade; Finance, Insurance, and Real Estate; and Services sectors.

3. Jobs in the services sector are expected to increase by over 100,000 in the next twenty years with the share of total jobs increasing but at a slower rate than the last decade. In Maryland, the growth in services has been related to population growth and to the expansion of federal government employment during the last two decades.

4. While the number of jobs in Maryland in the Government sector is expected to continue to increase slightly, the share of all jobs in Maryland in government is expected to decline from 25.6% in 1980 to about 23% in 2000.

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis, April 1982; Projections prepared by Maryland Department of State Planning.

CHART 3-1: TOTAL PERSONAL INCOME

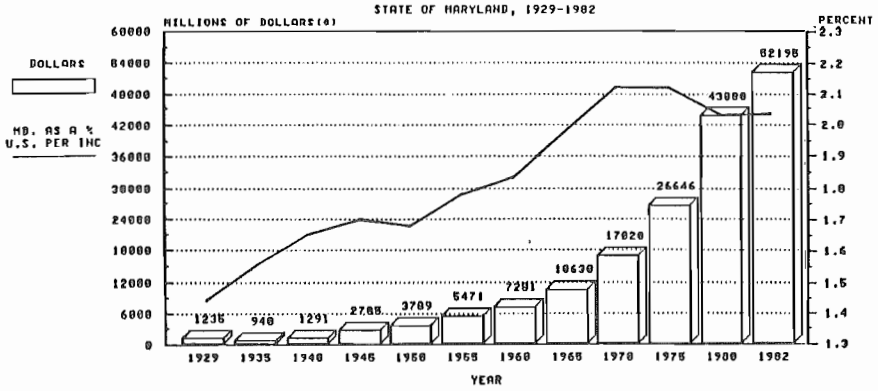


CHART 3-2: TOTAL POPULATION

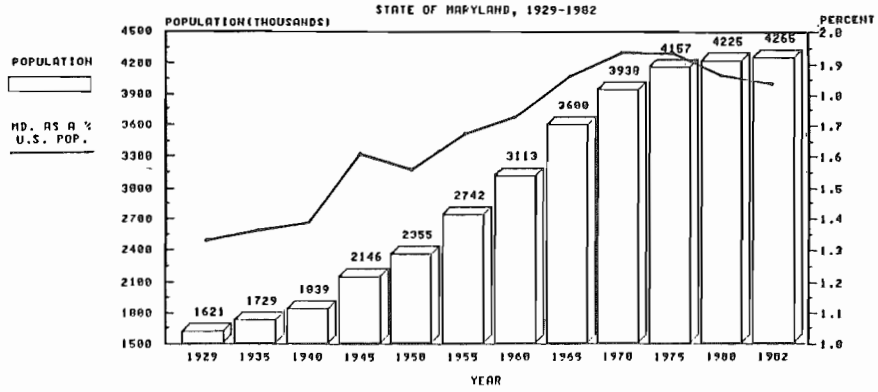


CHART 3-1: Total Personal Income, 1929-1982
CHART 3-2: Total Population, 1929-1982

1. Unadjusted for inflation, total personal income in 1982 was forty-two times higher than total personal income in 1929, while the State's population increased about 2½ times.

2. From 1929 to 1982 the State's share of the nation's total personal income generally followed the State's share of the nation's total population. From 1929 through 1975, Maryland's share of the nation's population increased from less than 1.3% in 1929 to 1.9% in 1975. The State's share of total personal income also increased from 1.5% in 1929 to 2.1% in 1982. In recent years, the slight decline in the State's share of total personal income followed the State's decline in percent of total national population.

3. The portion of total personal income that is disposable (i.e., total personal income less taxes) declined for Marylanders from 89.2% of total personal income in 1950 to 81.8% in 1982.

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis, August 1983.

CHART 3-3: PER CAPITA PERSONAL INCOME

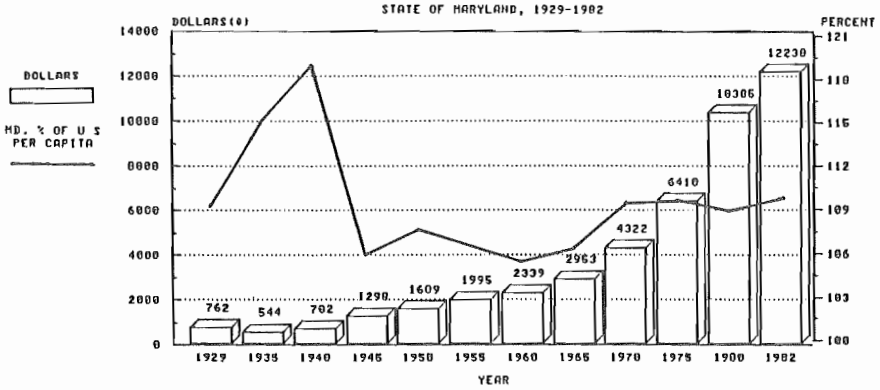


CHART 3-4: PER CAPITA PERSONAL INCOME

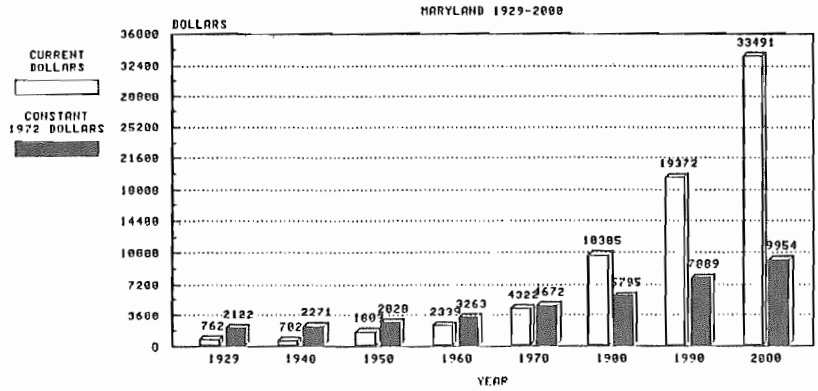


CHART 3-3: Per Capita Personal Income, 1929-1982
CHART 3-4: Per Capita Personal Income, 1929-1983

1. Unadjusted for inflation, per capita personal income for Marylanders (total personal income divided by the State's total population) increased sixteenfold from 1929 to 1982.

2. Since 1945, the State's per capita personal income has been between 6 and 10 percent higher than that of the nation as a whole. In 1982 per capita personal income in Maryland was 10.2% above the national average.

3. Adjusted for inflation, Maryland's 1980 per capita income was over 2½ times larger than per capita income in 1929. It is expected that in constant dollar terms, per capita income over the next twenty years will increase 72% over 1980 levels. By comparison, per capita personal income between 1960 and 1980 increased 78% in constant dollars.

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis, August 1983. Projections based on preliminary work by the Maryland Department of State Planning, Summer, 1982.

CHART 4-1: HOUSEHOLDS AND PERSONS IN HOUSEHOLDS

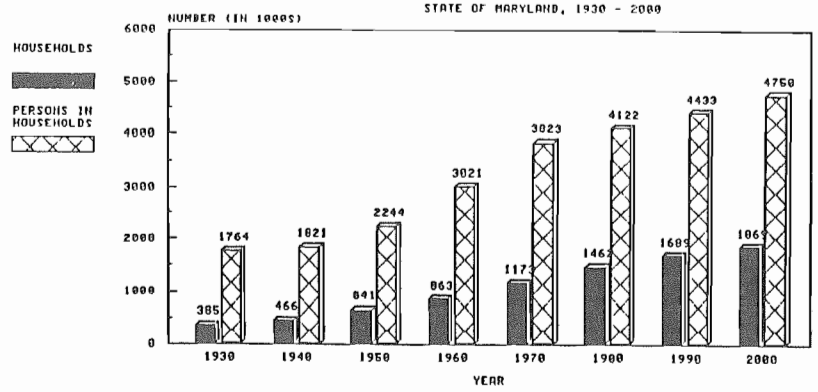


CHART 4-2: PERSONS PER OCCUPIED HOUSING UNIT

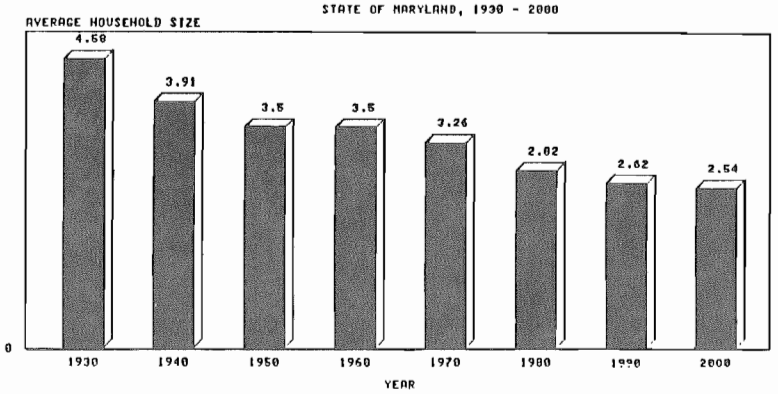


CHART 4-1: Households and Persons in Households

1. From 1930 to 1980 the number of persons in Maryland living in households increased 134% from 1,764 thousand to 4,122 thousand persons.

2. There was a 280% increase in the number of households over the same period, from 385 thousand to 1,462 thousand households.

3. Over the next twenty years the State's household population is expected to increase about 15% while the number of households is expected to increase about 28%.

CHART 4-2: Persons Per Occupied Unit

1. The increase in households at a much faster rate than persons living in households is the result of the sharp decline in household size. In 1980 the average size of a household was 2.82 persons, a little less than two-thirds the average of 4.58 persons per household in 1930.

2. The average size of a household is expected to continue its decline from 2.82 in 1980 to just over 2.5 in 2000. This continued decrease, however, is about one-half the average annual rate of decrease over the period 1930-1980 and about one-third the rate of decrease during the 1970s.

SOURCE: U.S. Department of Commerce, Bureau of the Census. Decennial Censuses 1930 to 1980; Projections prepared by Department of State Planning.

CHART 4-3A: YEAR ROUND HOUSING UNITS

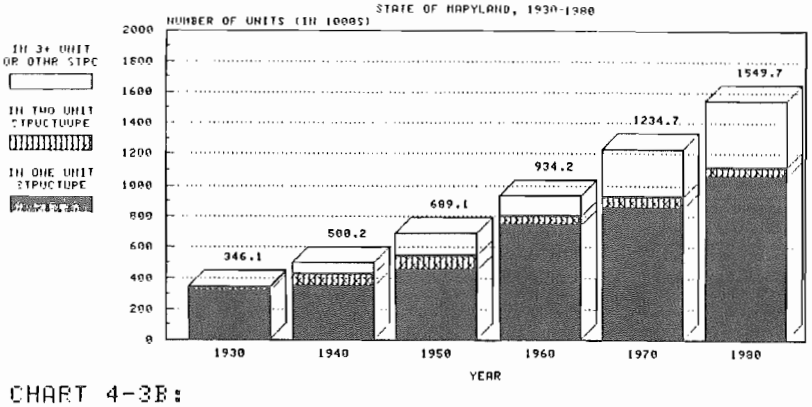


CHART 4-3B:

PERCENT OF YEAR ROUND HOUSING UNITS BY STRUCTURE TYPE

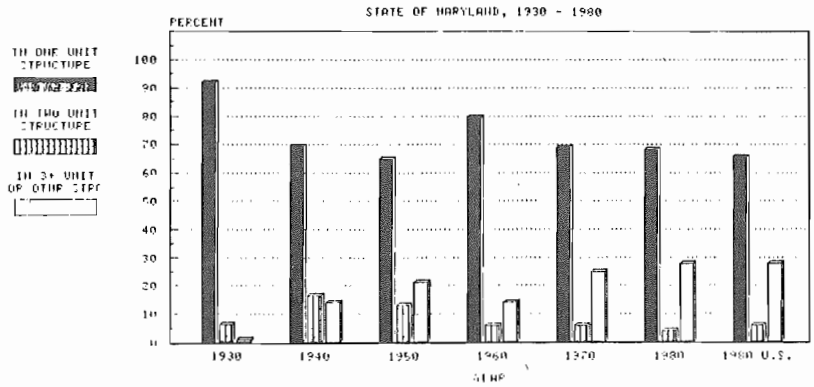


CHART 4-3A: Year Round Housing Units, 1930-1980
CHART 4-3B: Percent of Year Round Housing Units by Structure Type, 1930-1980

1. There were 1,549,680 year round housing units in 1980, an increase of over 1.2 million or 348% from the 346,117 dwelling units in 1930.

2. Although the single family dwelling is the most common type of housing in Maryland, it has lost the prominence it held in 1930 when nine out of ten dwellings were single family units. In 1980, less than seven of ten units were single family units, and only five of those seven were single family detached units.

3. The number of units in multi unit structures increased nearly eighteenfold from 27,871 units in 1930 to 494,322 units in 1980. Housing units in other structures (for example, mobile homes) were less than two percent of the housing inventory from 1960 to 1980 compared to 5.1% in 1950.

4. From 1930 through 1950, the duplex or 2 unit structure was the most prominent multi family structure type. By 1960, structures containing five or more units, notably garden and high rise apartment buildings, were more prominent among multi unit structures.

5. In 1980, Maryland's percentage of units in specific structure types was comparable to nationwide figures. Maryland had a slightly larger percentage of single family units (68.1% compared to 65.9% nationally), while nationally there was a slightly higher percentage of two unit structures (6.1% compared to 4.1% in Maryland) and units in other structures (5.1% compared to 1.8% in Maryland).

SOURCE: U.S. Department of Commerce, Bureau of the Census, Decennial Censuses, 1930 to 1980.

CHART 4-4A: AGE OF YEAR ROUND HOUSING UNITS

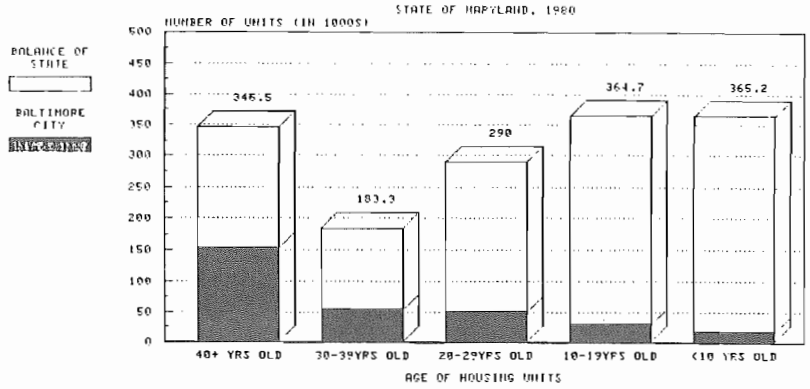


CHART 4-4B: AGE OF YEAR ROUND HOUSING UNITS

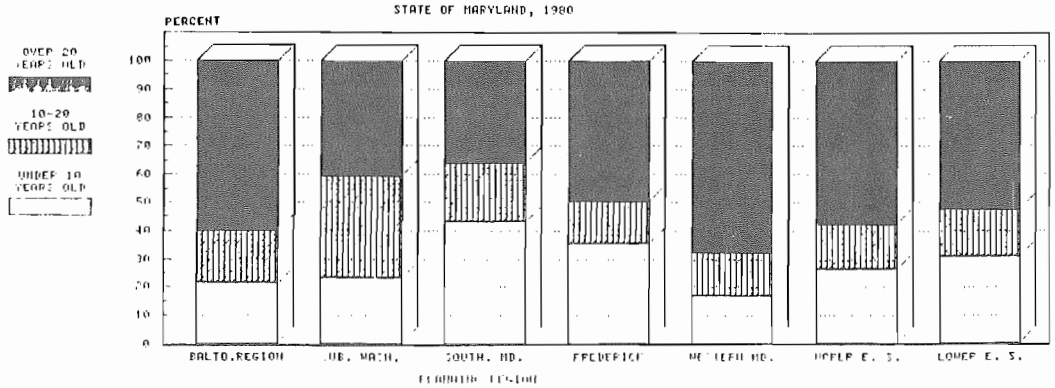


CHART 4-4A: Age of Year Round Housing Units

1. Almost one-half of all year round housing units in Maryland were less than twenty years old (47.1%) in 1980. This figure compares favorably with the national figure of 46%.

2. Slightly more than one-fifth of the housing unit inventory (346,571 units) in 1980 was constructed prior to 1940, and 43.9% of those housing units were located in Baltimore City. Discounting these units, only 13.8% of the balance of the State's housing inventory in 1980 was over forty years old.

CHART 4-4B: Age of Year Round Housing Units

1. From a regional standpoint, the highest percentages of housing units constructed within the last ten years were located in the Southern Maryland (43.3%), Frederick (35.7%), and the Lower Eastern Shore (31%) regions.

2. Newer units in Southern Maryland and Frederick were primarily in response to population growth during the 1970s. These two regions were the State's fastest growing regions from 1970 to 1980 (44.5% for Southern Maryland and 35.2% for Frederick). Factors explaining the high percentage of housing units less than ten years old on the Lower Eastern Shore include a combination of population growth, second home construction, and a change in the concept of the housing unit (specifically, counting for the first time vacant mobile homes intended for occupancy on the site where they stood).

3. The lowest percentages of housing units constructed between 1970 and 1980 were in the Western Maryland (16.9%) and Baltimore (21.5%) regions. However, the Baltimore Region less Baltimore City had a slightly higher percentage of year round units less than ten years old than did the Lower Eastern Shore Region (31.1%).

4. The highest percentage of housing units constructed before 1960 was in Western Maryland where over two-thirds of the region's housing stock was over twenty years old (67.4%). Discounting the housing units in Baltimore City, the Baltimore Region had the lowest percentage of housing units constructed before 1960 (26.9%). Otherwise, the lowest percentage of housing units over twenty years old was in Southern Maryland (35.7%), followed closely by the Suburban Washington Region (40.2%).

SOURCE: U.S. Department of Commerce, Bureau of the Census, 1980 Census.

CHART 5-1: ENERGY CONSUMPTION BY FUEL TYPE

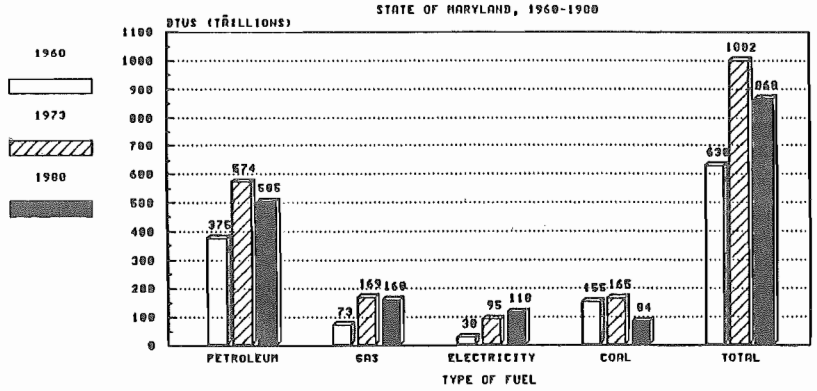


CHART 5-2: ENERGY CONSUMPTION

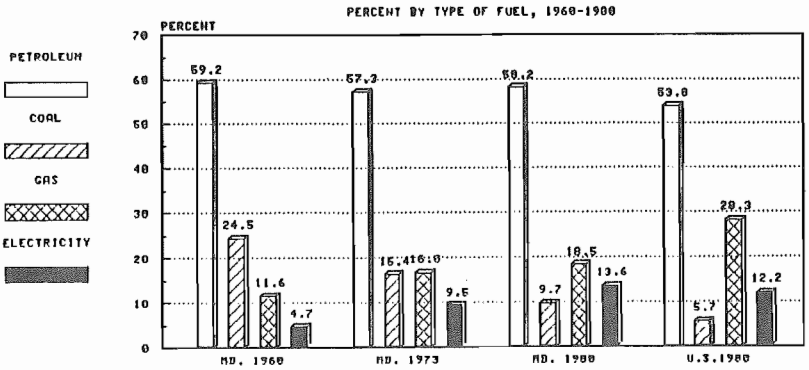


CHART 5-1: Energy Consumption by Fuel Type, 1960-1980

1. While Maryland's use of petroleum as a direct source of energy has declined 12% from 1973 to 1980 it increased 35% from the 1960 level.
2. Use of gas as a direct energy source declined 5% from 1973. Consumption in 1980, however, was over twice the 1960 level.
3. Electricity as a direct energy source increased nearly fourfold from 1960 to 1973.
4. The use of coal as a direct energy source declined nearly one-half from the 1960 and 1973 levels.

CHART 5-2: Energy Consumption - Percent by Type of Fuel, 1960-1980

1. Maryland in 1980 was more oil-dependent than the rest of the nation. Oil accounts for 58.2% of all energy fuels used in Maryland, compared to 53.8% for the nation. This dependency has declined only slightly from 59.2% in 1960.
2. Electricity's share of energy use in Maryland has increased almost threefold from 1960's 4.7% share to 1980's 13.6%, marginally exceeding the 12.2% share for the nation.
3. Natural gas accounts for an 18.5% share of energy use in 1980, far below the national figure of 28.3%.
4. Coal's share of energy use has declined in Maryland from 24.5% in 1960 to 9.7% in 1980. Even so, this is far above the 5.7% national average (due largely to Bethlehem Steel's massive Sparrow's Point facilities).

SOURCE: Department of Natural Resources, Energy Administration, Power Plant Siting Program, Draft Cumulative Environmental Impact Report, May 1983.

CHART 5-3: ENERGY CONSUMPTION BY CUSTOMER TYPE

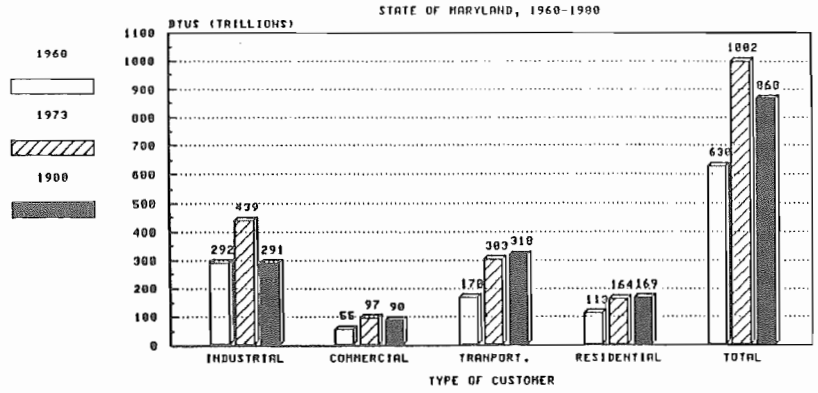


CHART 5-4: ENERGY CONSUMPTION

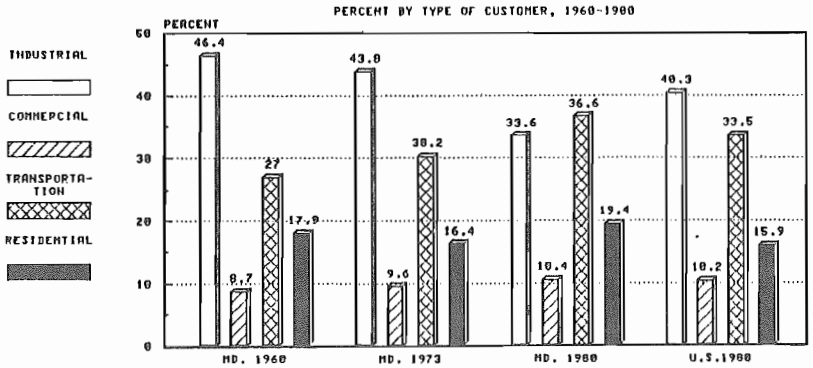


CHART 5-3: Energy Consumption by Customer Type, 1960-1980

1. Changes in energy use among the "energy customers" in Maryland is attributable to both energy conservation efforts, as well as to the slowdown in the increase in the State's population and to the decline in manufacturing activity in recent years.

2. Industrial use of energy in 1980 is actually less than the 1960 level, after having increased over 50% from 1960 to 1973.

3. Commercial use increased over 75% from 1960 to 1973, then declined nearly 7% from 1973 to 1980.

4. Transportation use increased over 75% from 1960 to 1973, with an increase of less than 5% from 1973 to 1980.

5. Residential customer use increased over 45% from 1960 to 1973, while increasing by less than 3% from 1973 to 1980.

CHART 5-4: Energy Consumption - Percent by Type of Customer, 1960-1980

1. As a result of the changes in the amount of energy use by customers, the percent of all energy used by industries in Maryland declined from 46.4% in 1960 to 33.6% in 1980. Nationwide, industrial customers used 40.3% of all energy.

2. The percent of all energy used by commercial customers was comparable for Maryland and the nation in 1980, slightly over 10%.

3. The percent of all energy used for transportation in Maryland in 1980 was 36.6% compared to 33.5% for the nation.

4. The percent of all energy used by residential customers in Maryland in 1980 was 19.4% compared to 15.4% for the nation.

SOURCE: Department of Natural Resources, Energy Administration, Power Plant Siting Program, Draft Cumulative Environmental Impact Report, May 1983.

CHART 6-1: LAND USE PATTERNS

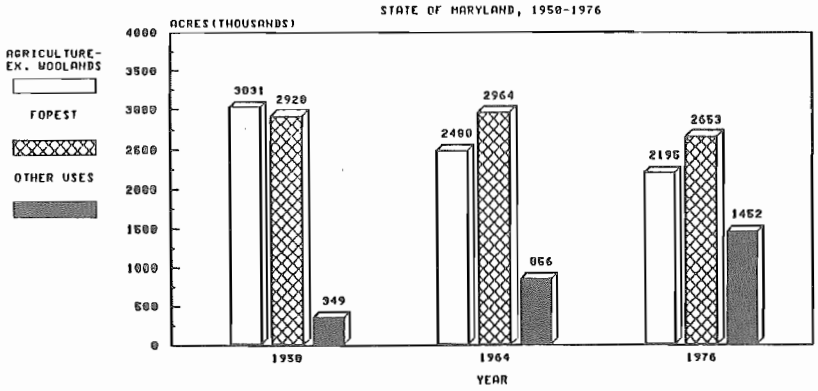


CHART 6-2: LAND COVER/USE PATTERNS-ACTUAL&PROJECTED

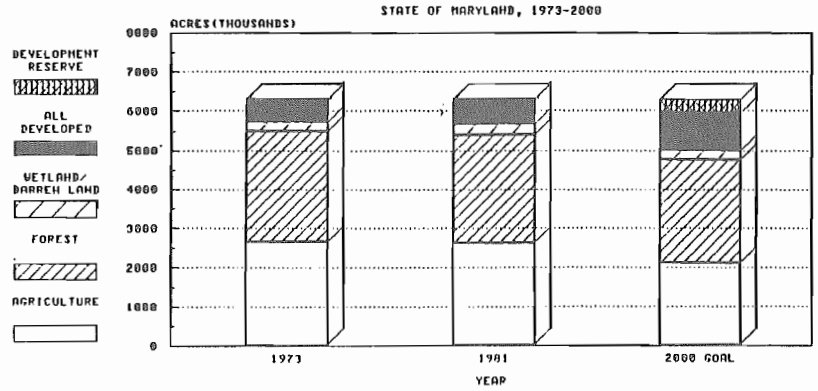


CHART 6-1: Land Use Patterns, 1950-1976

1. Statewide, from 1950 to 1964 there was almost no change in forest land acreage. The 145% increase in acres of developed land was at the expense of acres of land in agricultural use. This suggests that any losses of forest to agricultural acreage were made up by reforestation of cleared lands.

2. By 1976, development pressures resulted in a further decline in agricultural land use. In addition, forest land declined (with perhaps the conversion of forest to agriculture to make up in part for the continued loss of agricultural land to developed uses).

3. While developed land uses increased over 300% from 1950 to 1976 (a period of large population and housing growth in the State), land in agricultural use decreased almost 30% and land in forest cover decreased by more than 9%.

SOURCE: Agricultural land use (excluding woodlands) basd on U.S. Department of Agriculture, Census of Agriculture data; Forest land use estimates based on State surveys; Other uses calculated as a residual.

CHART 6-2: Land Cover/Use Patterns - Actual and Projected*

1. From 1973 to 1981, land in agricultural cover declined by about 42,000 acres and land in forest cover declined by about 37,000 acres. These losses in agricultural and forest acreage account for development on about 78,000 acres (nearly 70,000 or 90% of which was residential development).

2. Anticipated growth over the next twenty years suggest a demand for 300,000 acres of land for development with an additional 335,000 acres held in reserve for all post 2000 development. To support a viable agricultural base, the State must maintain in excess of 2.1 million acres under agricultural cover. This would leave approximately 2.6 million acres under forest cover and 250,000 acres in other uses (barren, wetlands).

---

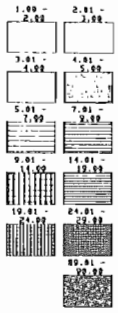
*These data are based on an analysis of land cover from high altitude photography and are, therefore, subject to some interpretation with regard to actual land use.

SOURCE: Department of State Planning, 1973 and 1981 land use/cover data basd on interpretation of high altitude photography; Land demand projections by Department of State Planning.

CHART 6-3: Conversion of Agricultural and Forest Land: 1973 to 1981

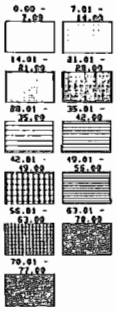
	1973 Agriculture to 1981 Developed	1973 Forest to 1981 Developed	1973 Forest to 1981 Agriculture	1973 Agriculture to 1981 Forest
Maryland	44,960	32,307	15,712	7,898
Piedmont	28,582	12,620	2,509	3,635
Southern Maryland	5,601	14,227	2,304	2,560
Western Maryland	2,662	1,946	755	852
Eastern Shore	8,115	3,514	10,144	851
Maryland	44,960	32,307	15,712	7,898
Baltimore Region	20,653	14,259	2,458	2,790
Suburban Washington	5,267	4,742	1,338	1,869
Southern Maryland	3,949	7,174	1,018	1,318
Frederick	4,314	672	0	218
Western Maryland	2,662	1,946	755	851
Upper Eastern Shore	4,864	2,099	4,378	378
Lower Eastern Shore	3,251	1,414	5,766	474

MAP 6-1:



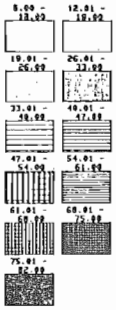
PERCENT OF LAND-URBAN BUILT UP, 1981
STATE OF MARYLAND

MAP 6-2:



PERCENT OF LAND-AGRICULTURE, 1981
STATE OF MARYLAND

MAP 6-3:



PERCENT OF LAND-FOREST, 1981
STATE OF MARYLAND

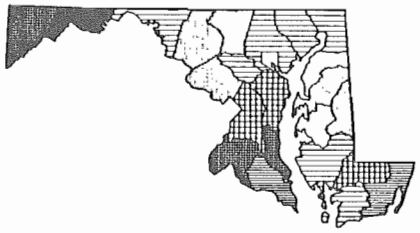


CHART 6-3: Conversion of Agricultural and Forest Land: 1973 to 1981
MAP 6-1: Percent of Urban Land Built Up, 1981
MAP 6-2: Percent of Land Agriculture, 1981
MAP 6-3: Percent of Land Forest, 1981

1. From 1973 to 1981 approximately 45,000 acres of agricultural land and 32,000 acres of forest land were used to support new development. Almost 16,000 additional acres of forest land were cleared for agricultural use (less than 8,000 acres of farm land reverted to forest during the same period).

2. Over 80% of the Statewide decrease in agricultural land between 1973 and 1981 occurred in the Piedmont Agricultural Region.* It is this region where development threatens the maintenance of large productive farm areas vital to the support of the dairy industry (Maryland's largest cash-producing agri-industry) and grain production (a critical link in Maryland's total agricultural picture).

3. Recent land use changes occurring in Southern and Western Maryland and the Eastern Shore do not indicate critical losses of agricultural land at this point. On the Eastern Shore every agricultural acre lost to urban development was more than made up by the clearing of forest land for agriculture. In addition, very little agricultural land reverted to forest cover on the Eastern Shore. Forestry was also severely affected in Southern Maryland where forest land was more than 2½ times as likely to be used to support development than agricultural land.

---

*Agricultural Regions: Piedmont - Baltimore, Carroll, Frederick, Harford, Howard, Montgomery counties; Southern Maryland - Anne Arundel, Calvert, Charles, Prince George's, St. Mary's counties; Western Maryland - Allegany, Garrett, Washington counties; Eastern Shore - Caroline, Cecil, Kent, Queen Anne's, Talbot, Dorchester, Somerset, Wicomico, Worcester counties.

Planning Regions: Baltimore - Anne Arundel, Baltimore, Carroll, Harford, Howard counties, Baltimore City; Suburban Washington - Montgomery, Prince George's counties; Southern Maryland - Calvert, Charles, St. Mary's counties; Frederick - Frederick County; Western Maryland - Allegany, Garrett, Washington counties; Upper Eastern Shore - Caroline, Cecil, Kent, Queen Anne's, Talbot counties; Lower Eastern Shore - Dorchester, Somerset, Wicomico, Worcester counties.

SOURCE: Maryland Department of State Planning, Land Use/Cover Change Analysis 1973 to 1981 based on interpretation of high altitude aerial photography.

CHART 7-1: FOREIGN AND COASTWISE TRADE

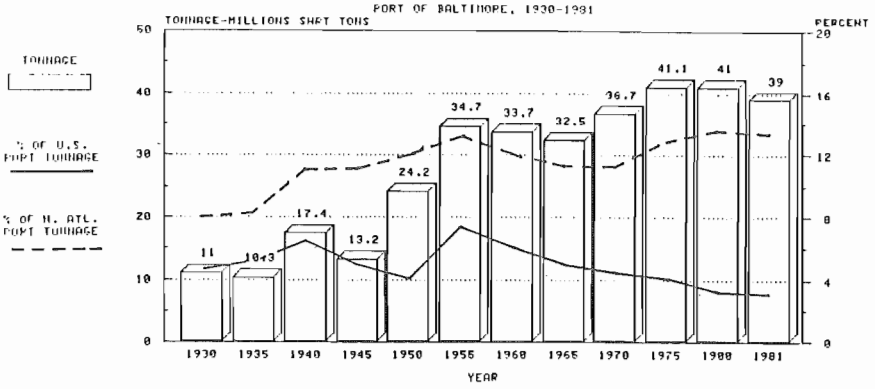


CHART 7-2: PERCENT OF TRADE FOREIGN & COASTWISE

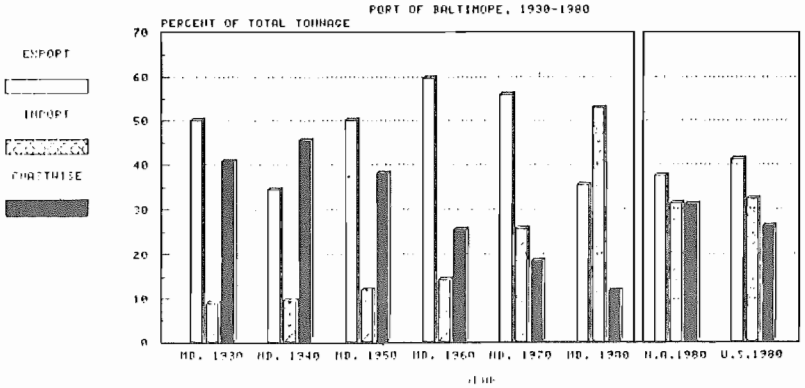


CHART 7-1: Foreign and Coastwise Trade, Port of Baltimore, 1930-1981

1. Between 1930 and 1980 total tonnage through the Port of Baltimore increased 273%.
2. The Port of Baltimore's share of total port tonnage among major North Atlantic Ports increased from 8% in 1930 to 13.6% in 1980.
3. The Port of Baltimore's share of total United State's port tonnage peaked around 1955 at 7.4% and by 1980 had declined to 3.3%.

CHART 7-2: Percent of Trade Foreign and Coastwise, Port of Baltimore, 1930-1981

1. From 1930 to 1980 the trade mix for the Port of Baltimore changed dramatically. The percent of port tonnage that is coastwise (intra-U.S. trade) generally declined with only 11.7% in 1980 compared to 40.9% in 1930. During this same period, the port became, for the most part, a handler of import tonnage (from 9.1% in 1930 to 52.9% in 1980). The export tonnage share peaked about 1960 at 59.9% and declined dramatically since then, only 35.4% in 1980.
2. Comparing the tonnage mix of the Port of Baltimore in 1980 to major North Atlantic and total United States ports shows that the port is far more dependent on import tonnage (52.9% compared to only 31.4% for major North Atlantic ports and 32.3% for U.S. ports). The Port of Baltimore also handles a smaller percent of coastwise tonnage (11.7% compared to 31.1% for major North Atlantic ports and 26.3% for U.S. ports).

SOURCE: Maryland Port Administration.

CHART 7-3: STATE HIGHWAY MILEAGE

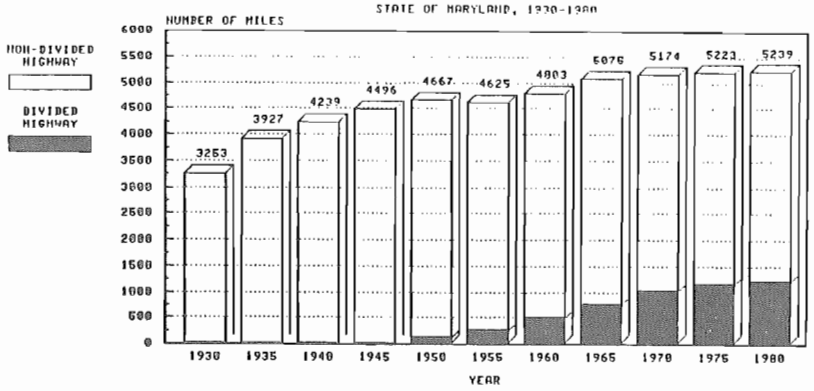


CHART 7-4: STATE, COUNTY, AND MUNICIPAL HIGHWAYS

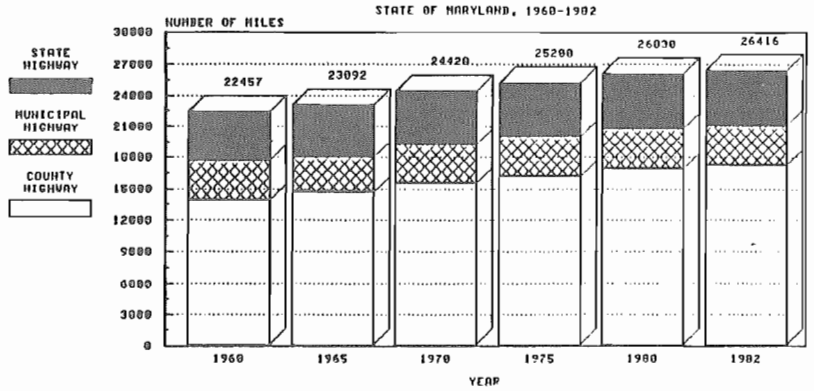


CHART 7-3: State Highway Mileage, 1930-1980

1. The number of miles of State operated highways increased 61% from 1930 to 1980.

2. The number of miles of divided highway increased from essentially zero in 1930 to over 1,200 miles or 23.3% of all State highway miles in 1980. Much of the construction of divided highways occurred between 1950 and 1970 when the number of miles increased from just over 100 in 1950 to just over 1,000 in 1970.

CHART 7-4: State, County, and Municipal Highways, 1960-1980

1. In 1960 total highway mileage in the State was 22,457 miles compared to 26,417 miles in 1982, a 17.6% increase over the 22 year period.

2. From 1960 to 1982 the State's share of total highway mileage declined slightly from 21.1% to 19.8%. County highway miles increased 24.7% over this period and increased in share from 61.6% to 65.3% of total highway miles. Total municipal miles (includes Baltimore City) remained nearly constant over the period while declining slightly in percentage share from 17.3% in 1960 to 14.9% in 1982.

SOURCE: Maryland Department of Transportation.

CHART 7-5: MOTOR VEHICLE REGISTRATIONS

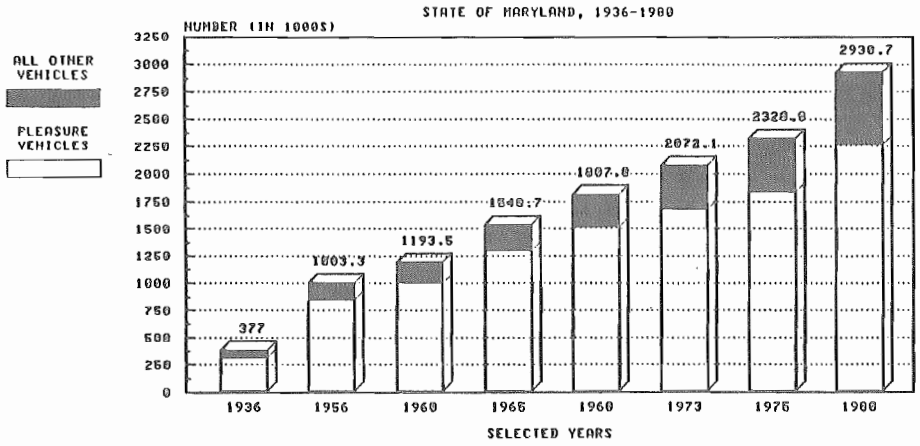


CHART 7-5: Motor Vehicle Registration, 1936-1980

1. From 1936 to 1980 the total number of registered motor vehicles increased by 677%. During this same period, the State's population increased by about 140%.

2. In 1936 there were approximately 4.6 persons for every registered vehicle. In 1980 there were only 1.4 persons for every registered vehicle.

3. In 1936 83.5% of all registered vehicles were for pleasure. In 1980 77.4% registered vehicles were for pleasure.

SOURCE: State Motor Vehicle Administration.

CHART 7-6: BALTIMORE WASHINGTON INT'L AIRPORT

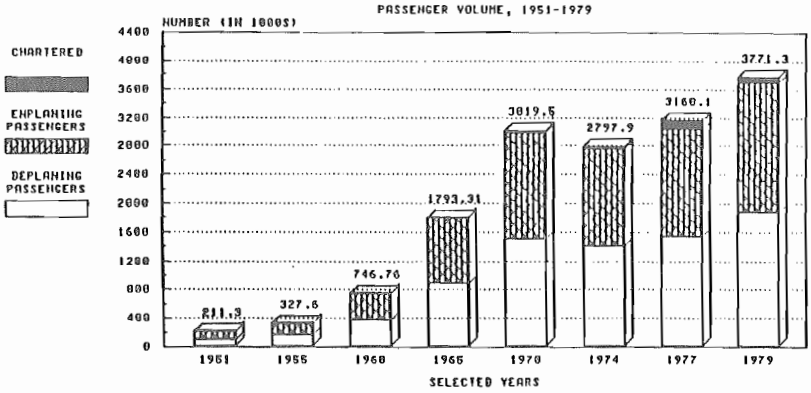


CHART 7-7: BALTIMORE WASHINGTON INT'L AIRPORT

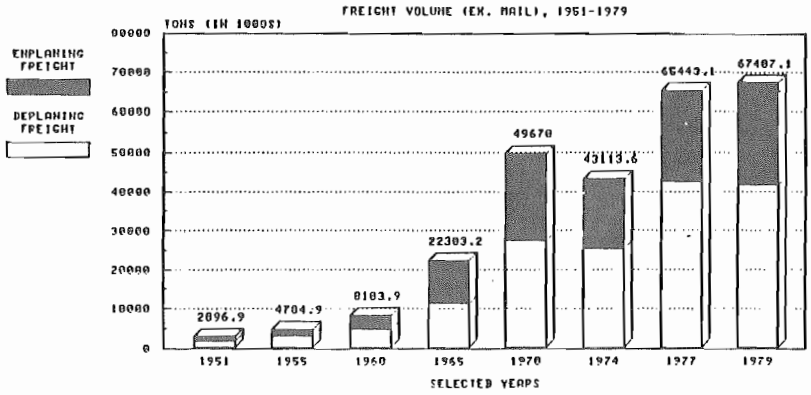


CHART 7-6: Baltimore-Washington International Airport, Passenger Volume, 1951-1979
CHART 7-7: Baltimore-Washington International Airport, Freight Volume, 1951-1979

1. Passenger volume at Baltimore-Washington International Airport* increased nearly 18fold over the period from 1951 to 1979.

2. Freight Volume (excluding mail) at Baltimore-Washington International Airport* increased over 23fold during this same period. Except for the years 1965 and 1970, incoming (departing) freight has generally represented about 40% of total freight tonnage.

*Formerly Friendship Airport.

SOURCE: Maryland Department of Transportation.

A-3

History of the Maryland State Planning Commission and the Department of State Planning

The Maryland State Planning Commission is the oldest state planning commission in the country. The Commission was created in the depths of the Great Depression at the urging of the federal government and the National Resources Planning Board. A special session of the General Assembly enacted the legislation which was signed by Governor Ritchie on December 15, 1933. On that same day, Governor Ritchie appointed the first five members of the Commission.

The new commission organized on January 11, 1934 with Dr. Abel Wolman serving as the Chairman. The other members of the Commission were: Joseph I. France, State Department of Health; William L. Galvin, Board of State Aid and Charities; Nathan L. Smith, State Roads Commission; and Helena Stauffer, Member at Large. Thomas F. Hubbard served as executive secretary to the Commission from 1934 to 1939.

During its initial years of operation, the Commission was staffed by the Works Progress Administration (WPA) at no cost to the State. The staff averaged between 10 and 15 persons. Office space and equipment were donated by Johns Hopkins University, the University of Maryland, Baltimore City, the State Roads Commission, and the Fidelity and Deposit Company. The value of services and facilities contributed was estimated at $27,000 per year.

State funding of the Commission began in the Fall of 1935 at the rate of $3,000 per year.

At the beginning of its work, the Commission chose to investigate problems in obvious need of treatment and to recommend action. This continues to be the principal method of operation by the Department of State Planning.

During its first 10 years, the Commission compiled an impressive list of recommendations which were subsequently implemented. As a result of a Commission study, the Legislative Council was created to carry on the business of the legislature during the two year interims between sessions. The Commission instituted a Six-Year Capital Improvements Program which was one of the first of its kind in the country. A Commission-recommended single plane coordinate mapping system covering the entire State was instituted. A program providing medical care for the indigent was established based upon a Commission recommendation.

The studies of the Commission in such areas as recreation, finance, land use, public welfare, health, conservation, transportation, local and State government, and capital improvements programs established the high standards which characterize state planning in Maryland.

By 1942, the Commission had acquired its first full time director, Mr. I. Alvin Pasarew. At about this same time, the major funding of the Commission was assumed by the State as federal priorities shifted to the war effort. From the establishment of the Committee on Medical Care in 1940 until the early sixties, the Commission devoted much of its energy to health concerns.

The Commission examined the need for integrated and coordinated planning of the Baltimore metropolitan area. In April 1948, the Baltimore Metropolitan District Planning and Coordinating Committee was established. In 1956, the committee gave way to the ad hoc Baltimore Regional Planning Council which was sponsored by and quartered in the offices of the State Planning Commission. The Council with a staff of three was funded under the federal

701 program and received staff service contributions from its six member jurisdictions and the State.

At the request of the General Assembly, the Commission undertook a study of wholesale food marketing in the Baltimore area. Plans for the development of a new wholesale market were submitted to the Governor in October 1948.

The size of the Commission was increased from five to nine members in 1947. Five of these members represented State agencies which were concerned with the development of the State and four were members at large. During the 1940s and 1950s, the Commission was deeply involved in capital improvements programming and developed one of the better programs of this nature in the country.

In 1956, the Commission on State Programs, Organization and Finance issued a report entitled Improving State Planning in Maryland. The report emphasized the need to aid local jurisdictions, establish long range goals, strengthen centralized coordination of planning in the executive branch and generally increase the areas of concern, expertise, and size of the state planning staff.

As a result of this report, a new state planning law was enacted. Chapter 543 of the Laws of 1959 created the State Planning Department as the Governor's staff agency in planning matters. The State Planning Commission became an advisory board to the Director of the Department. The new legislation provided that seven citizen members would hold no "salaried State office." A member of the Senate and a member of the House of Delegates completed the new nine member commission.

On July 1, 1959, when the new Department began operation, the staff included 14 persons plus the three-person staff of the Regional Planning Council. James J. O'Donnell, who had served as a member of the State Planning Commission, was appointed Director of the Department.

The new Department, upon the advice of the Commission, broadened the areas of concern in which State Planning became involved. During the 1960s, State Planning became deeply involved in water resource planning, outdoor recreation and open space planning, coordination and planning for higher education, and preservation of Assateague Island.

The Department initiated a number of inventories, studies and plans of the water resources of the State. With the creation of the Potomac River Basin Advisory Committee, the Director of State Planning became its first Chairman. He also served as the Vice Chairman of the Susquehanna River Basin Advisory Committee which prepared the interstate compact for this three-state drainage area. The Director also served on a three-member advisory committee established by the Governor to make recommendations for the proper protection, development, and maintenance of Assateague Island. Subsequently, this barrier island was established as a federally owned national seashore.

In 1968, State Planning, in cooperation with other State agencies, completed an inventory of tidal and inland wetlands. Recognizing the importance of Maryland's wetlands, comprehensive legislation regulating the use of these lands was passed at the 1970 session.

In 1965, the Department produced the first Manual of Federal Aid Programs published in response to the need for a quick and concise reference to sources of federal funding.

The first mass transit study of the Baltimore Metropolitan Area was completed in 1965. Funded by a $323,560 grant to the Department, the study produced a short-range bus improvement program and the first plans for a regional mass transit system.

During this period, the Department initiated a program of outdoor recreation and open space planning. Every five years, the Department revises and updates the State's plan for outdoor recreation and open space.

In 1963, the Regional Planning Council was established under State law. The Director served as Vice Chairman.

Throughout the 1960s and well into the 1970s, State Planning worked actively to promote and assist local planning. The Department was the conduit for comprehensive planning assistance (701) funds from the federal government. Approximately $5,000,000 was distributed to the 23 counties, 58 municipalities, and 3 regional planning agencies under this

technical planning assistance program.

In order to better assist local planning, the Department established regional field offices in Waldorf, Hagerstown, and Salisbury during 1967. Subsequently, other offices were established and original field locations shifted. The Department now has offices in Cumberland, Centreville, Salisbury, and Charlotte Hall.

In 1969, the executive branch of State government was reorganized. The State Planning Department became a cabinet-level agency and was renamed the Department of State Planning. At the time of reorganization, there were 36 persons on the staff of the Department.

During the 1970s, State Planning engaged in a broad range of planning and programming activities which included a state aviation plan, impact analysis of defense installation phase-out, a plan for the Quad County Area covering the Baltimore-Washington corridor counties of Anne Arundel, Howard, Montgomery and Prince George's and the City of Laurel, and human resources planning.

In 1969, the State Intergovernmental Assistance Clearinghouse was created within the Department. The Clearinghouse coordinates the review of projects prior to their approval and before work is started. Thus, it provides a means of clearing up possible conflicts before rather than after they become a problem. Each year, the Clearinghouse reviews over $1 billion in applications for federally-funded projects.

In 1971, the State began paying for the construction and modernization of public schools. This program which has resulted in the State financing approximately $1 billion worth of school construction is administered by the Interagency Committee for Public School Construction. State Planning is one of the three agencies comprising this committee.

In 1973, the Department began forecasting the demand for electric energy as a part of the State's Power Plant Siting Program. Similarly, in support of the public school construction program, the Department provides annual projections of public school enrollment.

In 1974, the Maryland Automated Geographic Information (MAGI) System became operational. This computer-based system has grown to include a vast amount of geographic data which can be rapidly retrieved and analyzed. The MAGI System has been nationally acclaimed and now permits the analysis of census data in relation to the physical characteristics of land.

The Land Use Act of 1974 expanded the responsibilities of the Department in several significant aspects. The Secretary was authorized to designate areas of critical State concern. Fifty-seven areas of unique character have been designated for special consideration as areas for preservation, conservation, or utilization.

Another provision of the 1974 Land Use Act allows the Department to express the State's viewpoint in local land use decisions. The Department may intervene in any administrative, judicial, or other proceedings concerning land use, development, or construction. The Department has become involved in a wide variety of land use decisions. The Department's right of intervention has been upheld by the Maryland Court of Appeals.

In 1974, the State instituted the Executive Planning Process (EPP). Working with the Department of Budget and Fiscal Planning, the Department defined and helped establish this annual program of short and long range plan preparation by the major State agencies.

The Department, at the request of the Governor, initiated a study of the delivery of District Court and other State agency services to the residents of Maryland. This study concluded that the co-location of service delivery systems would reduce duplication, improve coordination and be more economical. Over $67 million has been authorized for the design and construction of fifteen multi-service centers in ten counties and Baltimore City.

In 1979, the Department was reorganized to more clearly reflect the two principal functions of the Department, which are:

1. To plan for State Government itself, primarily through the capital budget and through assistance to State agencies; and
2. To plan for the overall growth and development of the State, allocation of resources, and coordination of economic, environmental, and social goals.

In January 1980, the Governor created

the cabinet-level State Development Council, chaired by the Secretary of State Planning. The Council prepared the State's first comprehensive set of development policies and principles. The Governor issued an executive order in May 1982 adopting these six broad principles and 72 policies to guide the economic and physical growth of the State.

As the result of a law enacted in 1980, the Department has prepared a policy plan for the Patuxent River. This plan was presented to each of the river basin counties in 1983. The Patuxent River planning program served as a model for other basin plans.

In order to provide better access to and use of statistical data, the State Data Center was created in 1979. The center maintains information in print and on computer tapes from the Bureau of Census and other sources which cover such areas as population, housing, agriculture, construction manufacturing, trade, and government.

State Planning has placed increased emphasis upon master facility planning by each State agency. As a result, the five-year capital improvements program of each agency reflects actual priorities. In this period of severe fiscal restraints, resources are allocated wisely.

The membership of the State Planning Commission was increased to thirteen in 1982 to allow a more complete geographic and cultural representation of the State. In its role as a sounding board for the Department, the Commission recognized the need for increased communication among local planning commission members across the State. The Commission also realized that planning at all levels needs the support of an active constitutency.

In the spring of 1982, the Commission held four regional workshops for local planning and boards of appeals members. At a statewide meeting of 200 planning commissioners in Annapolis, the idea of a state association of citizen planners was raised and received favorably.

The Maryland Citizen Planners Association was created at a meeting sponsored by the State Planning Commission on February 7, 1983.

State Planning in Maryland is recognized for its balanced program emphasizing the implementation of plans and programs based upon a realistic assessment of resources and near as well as long-term needs.

A-4

Maryland Citizens Who Have Served on the Maryland State Planning Commission

The first members of the Maryland State Planning Commission began their terms in 1934 under the Chairmanship of Dr. Abel Wolman. By its fiftieth anniversary, nearly seventy Maryland citizens had served on the Commission. Their service to Maryland and their valuable contributions of time, talent, and ideas are gratefully acknowledged.

MEMBERSHIP - MARYLAND STATE PLANNING COMMISSION
1934 TO 1983

*Abel Wolman, Chairman, 1934-1945	1934-1945
Harry D. Williar, Jr.	1934-1935
Dr. Robert H. Riley	1934-1935, 1939-1951
LaVinia Engle	1934-1935
William L. Galvin	1934-1951
Natham L. Smith	1935-1939, 1951-1954
Dr. Joseph I. France	1935-1939
Helena Stauffer	1935-1939
Dr. Thomas B. Symons	1939-1954
Ezra B. Whitman	1939-1945
*Henry P. Irr, Chairman	1946-1949
Robert M. Reindollar	1946-1951
Joseph R. Byrnes	1947-1951
*John B. Funk, Chairman, 1950-51	1947-1959
Charles E. Brohawn	1949-1951
E. Brook Lee	1949-1951
Garrett O. Billmire	1951
George W. Della	1951-1954, 1959
Russell H. McCain	1951-1956
*James C. Alban, Chairman	1951-1956
George M. Anderson	1951-1959
Davis C. Burroughs	1951-1952
W. Thomas Kemp, Jr.	1951-1955
R. Justin Funkhouser	1953-1954
Richard C. Zantzinger	1953-1959
Louis L. Goldstein	1955-1958
*Joseph Meyerhoff, Chairman, 1957-63	1956-1963
James J. O'Donnell	1956-1959
E. Dale Adkins, Jr.	1956-1959
Robert O. Bonnell	1956-1958
Alvin Thalheimer	1957-1959
John J. McMullen	1959
James C. Anderson	1959-1966
F. Murray Benson	1959-1963
James H. Grove, Jr.	1959-1963

Sidney H. Tinley, Jr.	1959-1978
William S. James	1959-1963
John Mc C. Mowbray	1959-1963
*Saul I. Stern, Chairman, 1963-80	1959-1980
E. Homer White, Jr.	1959-1969
James Clark, Jr.	1963-1969, 1971-1974
Myer J. Cohen	1963-1966
Alfred C. Scuderi	1963-1966
S.E.W. Friel, Jr.	1963-1966
Edward W. Cooey	1964-1981
John O. Aylor	1964-1969
Robert E. Cox	1967-1975
Dr. Joseph B. Francus	1967-1975
Donald G. Roberts	1967-1968
*Arnold M. Kronstadt, Chairman, 1980-	1969-
Carlton R. Sickles	1969-1980
John R. Hargreaves	1971-1983
A. Aubrey Walker	1973
Michael W. Skinner	1975-1980
Vera York Sherwell	1975-1976
John P. Corderman	1975-1977
Margaret D. Irvin	1977-1980
Julian L. Lapides	1977-
Leah S. Freedlander	1978-1983
George M. Brady, Jr.	1980-
George B. Reeves	1980-
+William M. Smith, Jr.	1980-
Patricia Carr Layton	1981-
+Harry L. Ballew	1981-
Thomas B. Beyard	1982-
+A. Freeborn Brown	1982-
Margaret M. Kline	1982-
Julia A. Metcalf	1982-
Martha S. Klima	1983-

TOP STAFF POSITIONS OF THE MARYLAND STATE PLANNING COMMISSION AND THE MARYLAND DEPARTMENT OF STATE PLANNING, 1934 - 1983

Thomas F. Hubbard, Executive Secretary	1934-1939
Francis D. Friedlein, Executive Secretary	1939-1941
I. Alvin Pasarew, Director	1941-1959
James J. O'Donnell, Director	1959-1968
Vladimir A. Wahbe, Secretary	1968-1979
Constance Lieder, Secretary	1979-

This Appendix shows positions held through October 27, 1983 when the 50th Anniversary of the Maryland State Planning Commission was commemorated. Since that time, Michael Kushner has been appointed to the Commission, and symbols (+) indicate resignations.

A-5
Call for Papers

CALL FOR PAPERS

THE NEXT FIFTY YEARS: MARYLAND'S FUTURE

The State of Maryland is celebrating the fiftieth anniversary of the State Planning Commission this year. As a feature of the celebration, the Commission and the Department of State Planning have formed a Futures Committee, which is preparing a booklet anticipating changes to occur in Maryland during the next fifty years and offering suggestions to aid State and local governments in preparing for the future. The Futures Committee is inviting the preparation of six to eight essays in areas such as:

governance and planning	medicine
institutional arrangements	social and family characteristics
communications	population and economy
energy	environmental and resources
cities and housing	education
industry	technology

The purpose of the invitation is to solicit creative thinking about projecting and preparing for the future. Each applicant selected to prepare an essay will receive $1,500 when the essary has been completed. The Department will enter into a contract with each proposer. Selected essays will be presented at a Futures Conference to be held at the Baltimore Convention Center on October 27, 1983. The papers will be compiled in a conference publication.

WHO SHOULD SUBMIT:

Everyone is invited. Scientists, students, scholars, professionals, artists, and other creative "thinkers" are encouraged to apply.

WHAT TO SUBMIT:

1. the proposal form on reverse side of this notice
2. one-page outline describing content of proposed paper
3. applicant's resume

WHEN AND WHERE TO SUBMIT:

The deadline for receipt of proposals is June 27, 1983. Proposals should be sent to:

Mrs. Margaret Kline
Chairwoman of the Futures Committee
Department of State Planning, Room 1101
301 West Preston Street
Baltimore, Maryland 21201

SELECTION PROCESS:

By July 1, 1983, six to eight proposals will be selected by the Futures Committee based on content, theme, and creativity of the proposed essay and qualifications of its author. Each proposer will be advised as to whether or not the proposal was selected by the Committee.

SCHEDULE FOR ESSAY PREPARATION:

Entire text of ten to fifteen double-spaced pages must be submitted by September 15, 1983.

For telephone inquiries, call Nancy Ancel of the Department of State Planning at (301) 383-7700.

A-6
Conference Program

AGENDA
FUTURES CONFERENCE
October 27, 1983
Baltimore Convention Center

9:00 - 9:30 A.M. **Registration -** Coffee and Danish will be served

9:30 - 10:15 A.M. **Plenary Session**

Welcome - Constance Lieder, Secretary
Department of State Planning

and

Arnold Kronstadt, Chairman
State Planning Commission

The Honorable William Donald Schaefer
Mayor of Baltimore

The Honorable Louis Goldstein
Comptroller

Slide Show "Change, Challenge, and A Choice - The Future is Opportunity"

10:30 - 12 Noon MARYLAND'S PAST - **Accomplishments, Problems and Issues -**

Planning in Maryland From 1933 to 1983 - Maryland Chapter of the American Planning Association

MODERATOR - Robert Marriott

George Grier - Administrative Assistant, Carroll County Board of Commissioners

Tom Harris - Director of Planning, Howard County

Franz Vidor - Director of Planning for Housing and Community Development, Baltimore City

LUNCH Free time to explore the Inner Harbor and exchange ideas

STATE PLANNING COMMISSION

Arnold M. Kronstadt, Chairman
Harry L. Ballew
Thomas B. Beyard
George M. Brady, Jr.
A. Freeborn Brown
Delegate Martha S. Klima
Margaret M. Kline
Senator Julian L. Lapides
Patricia Carr Layton
Julia A. Metcalf
George B. Reeves
William M. Smith, Jr.

FUTURES COMMITTEE

Margaret M. Kline, Chairwoman
Thomas B. Beyard
William Boucher
Joseph Coates
Frank Francois
Arnold M. Kronstadt
Daniel H. Lufkin
Julia A. Metcalf
Charles Steiner
Delegate Larry Young

1:45 - 5:00 P.M. MARYLAND'S FUTURE - **Presentation of Essays** - Concurrent Sessions

MODERATOR - Julia Metcalf

1:45 - 2:45 P.M.

GOVERNMENT **From Here to Where: Future Think, Conceptualizing Regional Survival**
John Foerster, Associate Professor Oceanography Department - U.S. Naval Academy

Respondents: **The Hon. Benjamin Cardin**, Speaker of the House
The Hon. C. Vernon Gray, Howard County Council

2:50 - 3:50 P.M.

POPULATION **The People of Maryland Fifty Years From Now**
Charles Laidlaw, Visiting Associate Professor, Institute for Urban Studies - University of Maryland

Respondents: **Kalman Hettleman**, University of Maryland, School of Social Work and Community Planning
Dorothy J. Lehrman, Student Representative to Board of Regents, University of Maryland

4:00 - 5:00 P.M.

CHESAPEAKE BAY **Future of the Chesapeake Bay and Its Resources**
Ian Morris, Director and Professor, Center For Environmental and Estuarine Studies - University of Maryland

Respondents: **Dr. L. Eugene Cronin**, Director Chesapeake Research Consortium
Francis J. Russell, Potomac Fisheries

MODERATOR - George Reeves

1:45-2:45 P.M.

EMPLOYMENT **Maryland Megatrends: 21st Century Implications of Change to a Services-Producing Workforce**
Paul Larkin, Program Planning Committee of the World Future Society

Respondents: **Dr. Brent Johnson**, Secretary Dept. of Employment and Training
Sister Kathleen Feeley, SSND President, Notre Dame College

2:50 - 3:50 P.M.

AGRICULTURE **The Seeds of Change: Maryland Agribusiness Moves into the 21st Century**
Alan Kempske, Agricultural Land Preservation Program Administrator - Carroll Co.

Respondents: **Robert Gray**, American Farmland Trust
F. Grove Miller, Agricultural Land Preservation Foundation Chairman

4:00 - 5:00 P.M.

HOUSING **Urban Housing and Residential Land - Prospects for the Future**
Allen Goodman, Research Scientist, Center for Metropolitan Planning and Research - Johns Hopkins University

Respondents: **Leon Weiner** - Leon Weiner and Associates
Lola Smith, Housing Assistance Corporation

5:30 - 6:30 P.M. **RECEPTION** - Cash Bar

6:30 P.M. **DINNER** - Blessing - **Rev. Wayne Moulder**

Hostess For Evening - **Constance Lieder**

Dr. Abel Wolman, First Chairman of the State Planning Commission

Neal Peirce, Syndicated Columnist and Author of
THE BOOK OF AMERICA: Inside Fifty States Today
Mr. Peirce will look at Maryland's future in a contemporary national context.

Closing Remarks - Margaret Kline

A-7
Conference Acknowledgments

The State Planning Commission and the Department of State Planning gratefully acknowledge the special guests, speakers, respondents, and all others who attended and participated in the Conference, or otherwise helped make it a success.

Robert Agee
Howard Alderman
John Alexander
George Allen

Barbara Bachur
Judith Baer
Harry L. Ballew
Ronald Barley
Ray Barnes
Mark H. Beck
Frank Bentz
Hinda Berson
Thomas B. Beyard
William Boucher
Danny Boyd
George M. Brady, Jr.
Dorothy Broadfoot
A. Freeborn Brown
Edwin Brown

Robert Caffrey
Steve Callahan
James Cannelli
Benjamin Cardin
Jane Chambliss
Cleveland Chandler
James Clark
Joseph Coates
B.L. Coffindoffer
James Collins
Robert Columbo
Sally Cornish
Kenneth Corey
Richard Criste
Newell Crolius
L. Eugene Cronin
Ned Cueman

Penny Davis
Drew Dedrick
Malcolm Dill
David Doss
Lawrence Downey
W.C. Dutton

Paul Farragut
Kathleen Feeley, SSND
Ilia Fehrer
Al Fitch
John Foerster
Frank Francois
Mark Friis

Mary Gardner
Kathleen Gastomski
Louis L. Goldstein
Allen Goodman
Mable Granke
C. Vernon Gray
Robert Gray
Sally Graff
George Grier

Sue-Ellen Hantman
Lamar Harris
Thomas Harris, Jr.
Barbara Hawk
Judith Heimann
Kalman Hettleman
Kristen Hughes

E.K. Jones
Brent Johnson

Jean Jung

Richard Kautz

Ruth Keeton
Robert Keller
Alan Kempske
Glen Kendall
Martha S. Klima
Margaret M. Kline
Fenwhey Koh
Charles Krautler
Barbara Kreamer
Arnold M. Kronstadt
Grace Kubofcik
Florence Kurdle

Charles Laidlaw
Julian L. Lapides
Paul Larkin
Carole Larson
William Lauterbach, Jr.
Jan Lawrence
Patricia Carr Layton
Dorothy Lehrman
Constance Lieder
Ethel Locks-Bynum
Daniel Lufkin
Robert Lynch

Timothy Madden
Geri Hansen Mann
Robert Marriott
Patricia Massey
M. Matthews
Diane Melish
Julia A. Metcalf
Dagmar Miller
F. Grove Miller
Frank Monius
Ian Morris
Elizabeth Moser
Wayne Moulder

John C. Murphy

Bucky Muth

Josef Nathanson
Harry Neff
L. Nespoli
Hugh Nichols

James J. O'Donnell
Thomas Osborne
Donald Outen

Neal Peirce
Pat Perluke
Edward Phillips
Deborah Phinney
William Pittman
Judy Plott
Richard Pollitt
Garrett Power

Robert Quilter

S. Radcliffe
Larry Reich
Tony Redman
George B. Reeves

Roy Ridenour
John Riley
Susan Robbins
Susan Roberts
Kathryn Rose
William Ross
Eugene Ruckle
Francis J. Russell

Lewis Sanford
Arthur L. Sargent
William Donald Schaefer
Ethel Sellman
Ren Serey
Jane Shaab
Praful Shah
James Shaw
John Sherwood, III
Ann Sloan
Hoke L. Smith
Lola Smith
Nancy Paige Smith
William M. Smith, Jr.
Alexander Speer
Charles Steiner
Madeline Steiner
Richard Steiner
Saul Stern

Thomas Stone

Art Tankersley
Thomas Trumble
Thomas Tyson
Richard Tustian

Jorge Valladares
Franz Vidor
Jeff Valentine

Leon Weiner
Abel Wolman
Vladimir Wahbe
David Wagner
Warren Wilson
Bert Winterbottom
Clark Wingate
Bill Wilkerson
Ellery Woodsworth

Larry Young

Millard Zeisburg

STAFF:
Department of State Planning

Susan Alderman
Nancy Ancel
Jack Anderson
Judy Armold
Jesse Ash

Kay Bienen
Ted Bishop
Jane Black
Al Boyle

Larry Duket

Roland English

Al Feldstein
Larry Fogelson

Lois Gilliam
Richard Gucker

Guy Hager
Pat Harper
Clarence Harris
Emory Harrison
Lucretia Holmes

Andy Johnston

Michel Lettre

Fran Marchlinus
Allen Miles

Tom Nasuta

Jim Noonan

Dave Plott
Alan Povey
Ray Puzio

Wendy Rose
Marion Ross
Pat Russell
Carol Ruth

Carol Shockney

Nancy Taylor
Edwin L. Thomas

Gil Wagner

Maryland Department of State Planning
1101 State Office Building
301 West Preston Street
Baltimore, Maryland 21201

Publication 84-4 | $10.00 | December 1984