

PLANNING THE USE AND MANAGEMENT OF THE PINELANDS:
AN HISTORICAL, CULTURAL, AND ECOLOGICAL PERSPECTIVE

Prepared for the
NEW JERSEY PINELANDS COMMISSION

by
JONATHAN BERGER

15 February 1980

ACKNOWLEDGEMENTS

I gratefully acknowledge the help and time given by well over three hundred residents and users of the Pinelands. Their combined perceptions are the basis of this report.

I gratefully acknowledge the work done by my field team. They are Kit Wallace, Fran Rudoff, Amy Wolfe, Jack Ahern, Ethan Seltzer, Brent Andrews, Jon Norstog, and Michael Batcher. They are all graduate students at the Department of Landscape Architecture and Regional Planning, University of Pennsylvania.

I gratefully acknowledge the help and encouragement I received from John Sinton.

TABLE OF CONTENTS

INTRODUCTION	p.1
The Interactive Nature of the Pinelands as a Basis for Understanding Regional Character	
THE VARIED PERCEPTIONS OF THE FUTURE	p.4
Development With Technology	
Development With Sensitivity	
Leave Us Alone	
Resource Harvest and Resource Extraction	
The National Interest	
THE REGIONS OF THE PINELANDS	p.8
Methods of Region Formation	
Types of Regions	
Western Crop Agriculture and Rural Suburban Areas	
The Upper Rancocas Region	
Rural Residential/Suburban - Marlton/Medford	
Analysis	
Effects of Pinelands Planning	
The Lakes - Medford/Evesham	
Analysis	
Effects of Pinelands Planning	
Primary Use Agriculture - Pemberton/Southampton Field Crops	
Analysis	
Effects of Pinelands Planning	
Primary Use Agriculture - Southampton Dairy Region	
Analysis	
Effects of Pinelands Planning	
Primary Use Agriculture - The Berry Region	
Analysis	
Effects of Pinelands Planning	
Agriculture Forest Transistion and - Medford-Shamond- Primary Use Agriculture Tabernacle	
The Vegetable Region	
Analysis	
Effects of Pinelands Planning	
Southern Camden and Gloucester Counties/Western and Central Atlantic County	
Primary Use Agriculture: Ethnic Agriculture - Town Center Focus - Hammonton	
Analysis	
Effects of Pinelands Planning	

TABLE OF CONTENTS (Continued)

Primary Use Agriculture: Ethnic Agriculture - Town Center Focus - Egg Harbor City	
Analysis	p.38
Effects of Pinelands Planning	p.40
Primary Use Agriculture - Buena/Franklin Field Crops	
Analysis	p.41
Effects of Pinelands Planning	p.44
Rural/Residential/Suburban - Winslow	
Analysis	p.44
Effects of Pinelands Planning	p.47
Rural Road Settlements - Monroe	
Analysis	p.47
Effects of Pinelands Planning	p.47
Agriculture Forest Transistion - Atco/Waterford	
Analysis	p.49
Effects of Pinelands Planning	p.52
The Pikes - Williamstown/Berlin	
Analysis	p.52
Effects of Pinelands Planning	p.54
Rural Residential	
Analysis	p.55
Effects of Pinelands Planning	p.55
The Lakes	
Analysis	p.57
Effects of Pinelands Planning	p.57
The Forest Regions	p.60
The Northern Forest Tegion - South of the Mullica, through- out Burlington and Ocean Counties	
Analysis	p.60
The Cranberry Watershed	
Analysis	p.61
The Plains	
Analysis	p.63
Effects of Pinelands Planning for the Northern Forest Region	p.69
Military - Fort Dix, McGuire, Lakehurst	
Analysis	p.72
Effects of Pinelands Planning	p.74
Retirement - Manchester, Liesuretowne	
Analysis	p.75
Effects of Pinelands Planning	p.77
Lakes - Pemberton/Hampton/Bamber	
Analysis	p.78
Effects of Pinelands Planning	p.78

TABLE OF CONTENTS (Continued)

The Southern Forest Region	p.80
Inhabited Forest Region - Atlantic County	
Analysis	p.80
Effects of Pinelands Planning	p.83
Inhabited Forest Region - Cumberland County - Leesburg State Prison	
Analysis	p.84
Effects of Pinelands Planning	p.84
Primary Use Agriculture - Belleplain	
Analysis	p.84
Effects of Pinelands Planning	p.88
Industrial/Commercial - Woodbine	
Analysis	p.88
Effects of Pinelands Planning	p.91
Uninhabited Forest Region - Atlantic County	
Analysis	p.92
Effects of Pinelands Planning	p.94
Uninhabited Forest Region - Cumberland County - Northern Maurice River Township	
Analysis	p.95
Effects of Pinelands Planning	p.97
Uninhabited Forest Region - Cumberland County - Sand and Gravel Region	
Analysis	p.98
Effects of Pinelands Planning	-
Uninhabited Forest Region - Cumberland County - Land Scam Development	
Analysis	p.101
Effects of Pinelands Planning	-
Uninhabited Forest Region - Cumberland County - Ex-Agricultural Woodland	
Analysis	p.103
Effects of Pinelands Planning	p.105
The Coast	p.106
The Northern Coast	
Bay and Land Oriented Traditional Communities - Cedar Run to New Gretna Barnegat	
Analysis	p.107
Effects of Pinelands Planning	p.111
Manahawkin Mixed Development - Manahawkin	
Analysis	p.112
Effects of Pinelands Planning	p.115
Mixed Traditional Suburban North - Forked River, Waretown Lonaka Harbor, Toms River	
Analysis	p.115
Effects of Pinelands Planning	p.117

TABLE OF CONTENTS (Continued)

The Marshes - Atlantic Coast Salt Marshes and Adjacent Wetlands	
Analysis	p.118
Effects of Pinelands Planning	p.120
The Bays - Barnegat Bay, Manahawkin Bay, Great Bay, Mouth of the Mullica	
Analysis	p.121
Effects of Pinelands Planning	p.123
The Barrier Island - Long Beach Island	
Analysis	p.123
Effects of Pinelands Planning	p.126
The Tidal Navigation Corridors - Great Egg Harbor River, Mullica River	
Analysis	p.128
Effects of Pinelands Planning	p.132
The Southern Coastal Corridors	
Remnant Agriculture/Suburban - Upper Township, Cape May County	
Analysis	p.133
Effects of Pinelands Planning	p.136
Lower Route 9 - Beesley's Point to Cape May	
Analysis	p.137
Effects of Pinelands Planning	p.141
Route 47 Corridor - Dennisville, Delmont, Eldora	
Analysis	p.142
Effects of Pinelands Planning	p.145
Route 49/50 Corridor - Head-of-River, Tuckahoe, Marshallville, Petersburg	
Analysis	p.145
Effects of Pinelands Planning	p.148
Delaware Bay	
Marsh/Salt Hay - Delaware Bay Marshes	
Analysis	p.149
Effects of Pinelands Planning	p.152
Maurice River Township Core - Port Elizabeth, Bricksboro, Dorchester, Leesburg, Heislerville	
Analysis	p.153
Effects of Pinelands Planning	p.157

TABLE OF CONTENTS (Continued)

GENERAL PINELANDS ISSUES	p. 158
Financial	p. 159
Preservation of a Culture	p. 162
Plan Goals	p. 165
Plan Flexibility	p. 166
Plan Administration	p. 168
BIBLIOGRAPHY	p. 171
APPENDIX I - Land Use Issues	p. 172
APPENDIX II - The Social Organization of Land Use	p. 188
APPENDIX III - Field Work Guide	p. 198

LIST OF TABLES

Table 1. THE REGIONS OF THE PINELANDS NATIONAL RESERVE	p.11
--	------

LIST OF FIGURES

Figure 1. Map. Cultural Subregions of the Pinelands National Reserve	p.14
Figure 2. Map. Pinelands National Reserve	p.15
Figure 3. Map. Marlton/Medford	p.18
Figure 4. Map. Medford/Evesham	p.23
Figure 5. Map. Pemberton/Southampton Field Crops	p.25
Figure 6. Map. Southampton Dairy Region	p.28
Figure 7. Map. The Berry Region	p.30
Figure 8. Map. Medford-Shamong-Tabernacle	p.32
Figure 9. Map. Hammonton	p.35
Figure 10. Map. Egg Harbor City	p.39
Figure 11. Map. Buena/Franklin Field Crops	p.42
Figure 12. Map. Winslow	p.45
Figure 13. Map. Rural Road Settlements	p.48
Figure 14. Map. Atco/Waterford	p.50
Figure 15. Map. Williamstown/Berlin	p.53
Figure 16. Map. Folsom	p.56
Figure 17. Map. Monroe/Buena	p.58
Figure 18. Map. The Northern Forest Region	p.61
Figure 19. Map. The Military Region	p.73
Figure 20. Map. Manchester/Liesuretowne	p.76
Figure 21. Map. Pemberton/Hampton/Bamber	p.79
Figure 22. Map. Inhabited Forest Region - Atlantic County	p.81
Figure 23. Map. Leesberg State Prison	p.85
Figure 24. Map. Belleplaine	p.87
Figure 25. Map. Woodbine	p.89
Figure 26. Map. Uninhabited Forest Region - Atlantic County	p.93
Figure 27. Map. Northern Maurice River Township	p.96
Figure 28. Map. Sand and Gravel Region	p.99
Figure 29. Map. Land Scam Development	p.102
Figure 30. Map. Ex-Agricultural Woodland	p.104
Figure 31. Map. Bay and Land Oriented Traditional Communities	p.108
Figure 32. Map. Manahawkin Mixed Development	p.113
Figure 33. Map. Mixed Traditional Suburban North	p.116
Figure 34. Map. The Marshes	p.119
Figure 35. Map. The Bays	p.122
Figure 36. Map. The Barrier Island	p.124
Figure 37. Map. The Tidal Navigation Corridors	p.129
Figure 38. Map. Remnant Agriculture/Suburban	p.134
Figure 39. Map. Lower Route 9	p.138
Figure 40. Map. Route 47 Corridor	p.143
Figure 41. Map. Route 49/50 Corridor	p.146
Figure 42. Map. Marsh/Salt Hay	p.150
Figure 43. Map. Maurice River Township Core	p.154

EXECUTIVE SUMMARY

Field work and the analysis of published and statistical data led to the delineation of a range of cultural sub-regions of the Pinelands. These differ to such a degree that the Commission must be prepared to consider and implement site-specific planning strategies for each sub-region. A composite of these regions creates the character of the Pinelands, which is established enough on its own that general policies can be described which pertain to planning in any region. These policies are described in the chapter entitled "General Pinelands Issues". The issues listed in that chapter were repeated time after time in interviews conducted throughout the varied regions of the Pinelands, and have been grouped for convenience into the following general categories: Financial; Distrust of Government; Preservation of a Culture; Land Management; Plan Goals; Plan Flexibility; and Plan Administration.

Financial issues deal with the tax burden generated by State purchase of once-private lands, the problems of equitable land value assessment, and the distribution of benefits from such State purchases. Distrust of Government relates to the need for developing confidence in the planning process, a confidence which can only be generated by willingness on the part of the Commission to listen to the problems of the local residents and act on their advice. Preservation of a Culture means that Pinelands planning must be sensitive to the many extensive land uses and users that occur in the region, as well as to informal and non-middle class aesthetic values of landscape use. Land Management issues deal with the pressing need to incorporate private ownership into the conservation process as well as to utilize a multiplicity of techniques suited to specific local situations. Issues relating to Plan Goals arise because there is disagreement about the mission of the Commission and the boundaries of the Reserve, a problem which can only be solved by engaging in a much more open communication process with users in local areas. Plan Flexibility refers to the need to incorporate local expertise into the management system, while Plan Administration covers the issues of standards, enforcement, and public participation. The chapter on General Issues presents specific recommendations for addressing each cluster of concerns.

The field study also revealed salient patterns of the Pinelands landscape, an understanding of which is critical to Pinelands planning. The first important feature to understand is that extensive land uses (including shellfishing, hunting, trapping, gathering, hiking, canoeing, biking, bird watching, forestry, motorcycle riding, camping, and intensive bog agriculture) cannot compete with urbanization for space. If urbanization occurs, these uses will vanish. Extensive uses and users are found primarily within the contiguous Northern and Southern Forest Regions, and they represent a symbolically and economically important aspect of the regional character. Should the Commission deem this aspect of nature and culture worthy of preservation, then only scattered or very low density urban development can occur in the forests. Performance requirements will not achieve this goal, which can only be attained by strict use zoning in conjunction with incentives for private landowners to withhold their land from development.

A second salient feature of the Pinelands landscape is the relationship of culture to land use. It is possible to identify groups of people that follow similar norms of behavior with respect to the environment and are linked by land use and often by family and association ties as well. They therefore represent discreet constituencies that the Commission must understand and deal with during the planning process. Cranberry growers, Baymen, cedar mill owners, hunters, salt hay farmers, and woodland village residents are examples of these culture and land use groups. Whenever possible, this report indicates the outlines of strategies for addressing these constituencies, examples of which are "the village planning strategy", "the cranberry strategy", and the "woodland village planning strategy". An attempt is made to link these strategies with other recommendations for the use and management of the Pinelands.

A third pattern worthy of note is the heavy traditional use of the coast. In earliest times, both aboriginal and white settlers used the coastal environment for a variety of extensive and intensive seasonal and year-round activities. Today, a return to such heavy use is again on the horizon. Does the Commission want to encourage this pattern? If the Commission protects the forests and the bog agriculture, must the coast be sacrificed to development? The coast has its own traditional use patterns which can be disrupted as easily as the forest use patterns. The very small amount of agriculture remaining today will quickly disappear from this region if development is widespread. The choice may be between village in-fill and loss of agriculture, each of which will entail disruption of local community life. The amount, type, and location of this growth will have a critical impact on the future landscape of the coast. This report reviews each coastal region and suggests options for its management.

The fourth and final salient feature of the Pinelands landscape discussed in this report is the current and future status of crop agriculture. The drawing of the Pinelands Reserve boundary to include sizeable amounts of cropland in Burlington, Camden, Gloucester, and Atlantic Counties has provided a different planning challenge to the Commission. The advocacy of urban growth in stable family farm areas rather than in the forests could be disastrous to the agricultural economy. Yet, the farm community has not decided on a collective basis that they wish to remain in business, or they

at least have not made clear the workable procedures for such a farm preservation program. There is considerable sentiment among farmers in these regions that they want some kind of help to keep the land productive. The Commission has an opportunity to make a real contribution to the controversial field of agricultural preservation; to do so, however, they must act in concert with the local farmers, the Farm Bureau, and the State. There is considerable potential for success if the Commission opts for a very local, meticulous procedure in areas where farmers are predisposed toward innovative planning. This report discusses in detail each agricultural area and suggests options for its future growth and management.

In summary, in planning for the Pinelands the Commission will be dealing with forest regions, suburban/rural regions, coastal regions, and primary agricultural regions. Each of these has a basic set of actors, concerns, and a distinct natural environment, and each will be responsive to different planning strategies. Forested regions would benefit from a specific forest strategy that would encourage extensive use and intensive economic activities other than urbanization. This should be combined with a forest management plan to increase forest yield, as well as with provisions for scattered new homes. In suburban/rural areas, well-known growth management planning techniques will be of use. Some individual citizens and local governments are already engaged in these pursuits. A plan for the coast will require a mix of growth management, forest planning, cultural resource preservation, and out-right protection, and as such this area presents perhaps the greatest challenge to the Commission. Primary agricultural regions will not benefit from conventional growth management, for this presumes some loss of farmland and thus a loss of a lifestyle. A mix of incentive and regulatory techniques that encourage younger farmers to remain in agriculture and that maintain contiguous farmlands have promise for these areas.

INTRODUCTION

The Interactive Nature of the Pinelands As a Basis For Understanding Regional Character

The Pinelands are not randomly organized. The landforms, the settlements, the land uses, the people and their social organization, their issues, and their ways of managing the landscape follow natural and cultural laws. Distinctive regions are derived from both historical and contemporary natural and social processes and patterns. This study has examined through fieldwork and historical data the current distinctive land and water regions of the Pine Barrens, and this report presents in synthetic form how these places work and what their distinctive regional characters mean to the on-going processes of landscape formation and transformation.

The natural environment determines the base capability of the landscape. The cultural environment - the users and their ways of converting natural and social processes into natural and social resources - provides ideas for the use of the landscape. The institutional, fiscal, administrative, and legal setting in concert with the cultural environment determine the system of control. Capability, ideas, and control interact over time to form land use/natural/cultural regions. There is feedback from the landscape to capability, control, and ideas. Changes in any one of these can cause reverberations in the others. Control, capability, and ideas change at different rates: ideas change faster than the institutional structure; capability can remain steady for long periods of time and then be drastically altered by pollution, catastrophic natural events, or resource depletion. The process of landscape formation is one of continuous adaptation, for no landscape is static. Americans continually reinterpret their surroundings. When they do this, they affect capability, control, and ideas. This continuous process of landscape creation through reinterpretation shows up in the strong local sense of place found throughout America. The Pine Barrens are no exception.

Pinelands planning will intervene in the landscape forming process via control mechanisms and changing ideas, and can also affect capability. The Commission must therefore anticipate the feedback process and be able to link policy with public involvement. The easiest way to set up an adequate communications process is to utilize the sub-regions presented herein as the basis for meetings and plan testing. If our process of region definition is accurate in that the regions correspond to how people view and use the place (field testing shows this to be so), then the concerns of the users will vary by region, and planning and design solutions should also vary by region. Furthermore, faced with a uniform policy, the people in the distinctive areas will suffer and benefit in varied ways.

When the Commission understands this local sense of place, the staff can utilize a decentralized program of public participation. They will not have to wait for people to come to them. If they understand how the regions work, they can anticipate local issues and ideas for the future. Such understanding will enable the Commission to use local issues as a focal point for comparison with other areas, and thus help people see their relationships with and their stake in the larger environment. Other benefits of this perspective include provision of a means of dealing with the hostility and distrust that can undermine any planning process; the inclusion of local people with innovative ideas in the process of dealing with plan objectives; the potential for restatement of objectives when the planner's overview does not include particular local perceptions; the identification of important publics not reached by conventional means; and the testing of policy alternatives. Testing is extremely important because it will force the Commission to synthesize and present their work in such a way that the people most affected by the project can see explicitly how they will suffer or benefit from any proposal.

The description of each sub-region of the Pine Barrens attempts to capture the adaptive processes and local sense of place as it has evolved over time. The descriptions should provide data and a conceptual framework to understand and work with the ever-changing landscape. Each analysis tells why the region is a region, what makes it distinctive, and some idea of how it works. The users and their uses are identified, the historical origins are traced, and the trends and issues are analyzed. At the conclusion an attempt is made to show how Pinelands planning can help people reach their goals or how Pinelands planning can best intervene in sub-regional life. Options and choices as well as potential strategies are made explicit.

In addition to the descriptions of the regions, this report presents a set of general issues defined by respondents as important for the planning of the Pinelands National Reserve. These issues represent many of the contemporary expressions of historical interactions between control, capability and ideas. These issues occur in every region, but where they are especially important the regional analyses provide depth and outline their site-specific significance.

Three appendices also accompany this report. The first (Appendix I) contains a list of all of the various land uses practiced in the Pinelands, and an outline of the issues specific to each use. Appendix II contains a

short description of the kinds of associations into which Pinelands residents organize themselves. Finally, Appendix III discusses the field method utilized in the interviewing process.

Analysis of land users and their self-defined problems and potentials has allowed characterization of varied ideas for the future of the Pinelands. A short section on these perceptions precedes the description of regions and general issues. These varied ideas provide an excellent background for an understanding of the distinctive sub-regions of the Pinelands National Reserve.

THE VARIED PERCEPTIONS OF THE FUTURE

Pine Barrens residents and users described several distinct and varied ideas for the future in the interviews. These generalizations can apply to every subregion, but they have more meaning for specific areas. The discussion of the specific regions will point out these differences. I have called these variations: Development with Technology; Development with Sensitivity; Leave Us Alone; the closely allied Resource Harvest and Extraction; and finally the National Interest. These are composite descriptions drawn from field observations and analysis of conversations and historical data. I am responsible for their present characterization, but I feel that residents and users will be able to identify those groups that advocate each scenario. Any one or a cluster of these could occur at the same time in any region.

Development With Technology

In those areas with pressing housing market demand, commercial and construction interests have long favored the maximum development allowed under the regulations. If the regulations have proven ineffective in protecting the people and the environment, then the merchant community and other concerned interests have successfully called on the State to provide a monetary and technological fix for the situation. As long as minimum standards pertaining to health and welfare are met, advocates of this scenario feel that development should be able to proceed into areas deemed accessible by the market. State and federal intervention is important because the same merchant community relies heavily on the quality of the environment to attract seasonal visitors and home buyers. Polluted bays, sewage in the streets, and sand-clogged inlets are not only unsafe but unprofitable. As long as technology can meet the problems and money exists to pay for the remedial work, this scenario represents a viable use pattern for the Pine Barrens in the minds of many.

Development With Sensitivity

Development with sensitivity represents a commonly held interpretation of the federal and state Pinelands legislation. Development will be allowed to take place, but the government will provide strict standards and guidelines for its location, construction, and performance. Science will provide the answers, for in the process of protecting unique, scarce, and rare areas from development, the guaranteed cleaner environment will attract both home buyers and more seasonal recreationalists. The state will make major purchases. There will be strict guidelines for the preservation of cultural, archeological, historical, and aesthetic resources. These measures will protect "the character of the area" and at the same time allow the economy to function at an acceptable level. There may be some compromises between "Development With Technology" and this scenario, and thus not everyone will be satisfied. This scenario involves utilization of the state of the art of environmental planning.

Leave Us Alone

Many long-time residents of the Pine Barrens express this "leave us alone" sentiment. They do not want development. They do not want sophisticated planning. They simply want nobody in the Pine Barrens except their families and their friends. A lot of this has to do with the North Jersey-South Jersey split. It also has to do with the desire on the part of many to live a rural lifestyle. Many of these people's relatives have moved out of the Barrens to the southern regions of America: They have gone to the hills of West Virginia, North Carolina, and the swamps of South Carolina. Although born and raised in the Pinelands, they left because they cannot set up a trailer without paving a driveway, or keep animals in an "urban setting". Many of these people are not from the mainstream of life in the region. They do not usually join in the debates over "growth or no growth", "conservation or preservation". They just do not like what is going on around them. "Other people have messed up their places; now they covet ours." These people are not for public interest and multiple use, nor are they for development. They do not want crowded roads. They resent the "greed" of the people who build houses without taking care of the streams. They do not want to be told not to pick flowers or informed about how clean the water is or should be. Their answer to the preservation of character question is: "Keep it empty, keep it open ... let everyone go to Atlantic City or the Shore ..." Like many other people they want clean streams, intact wetlands and wooded swamps, open vistas from the few but significant hills, unpolluted bays, and views and memories of old buildings, both public and private. They want to use the land. Closely allied to these feelings are the ideas of resource harvest and resource extraction, a discussion of which follows.

Resource Harvest and Resource Extraction

Significant numbers of users do not like the ring of the words "preservation" and "conservation". To them the Pine Barrens represent harvestable crops and renewable resources. Many of these people are engaged in the traditional pursuits of bog or blueberry agriculture, forestry, trapping, hunting, gathering, crop agriculture, sand and gravel mining, and shell

fishing. Their idea of use is heavy use, with management programs that allow for the fastest and most sustained regrowth of the resource. Because of the emphasis on use rather than "wilderness" or aesthetics, and because many of these people do not want increased visitors, increased regulation, or increased urbanization, this scenario has many attributes of "Leave Us Alone". Resource harvesters look for state controls to curtail development and to put speculative land into production, but not to increase tourism, public multiple use, or real preserve areas. They feel that they know the place and how to take care of it. This point of view also includes allowance for small amounts of development that do not damage the environment or hinder the uses and users. It is significant that several bureaucrats in State Departments of Agriculture, Forestry, and Marine Resources have similar ideas and have worked on scientific schemes for ecosystem management. Extensive plans exist for increased forest management through fire that would significantly increase productivity and income. Ideas are extant for the lease of State-owned bogs to expand cranberry agriculture. Relay and seeding systems exist for augmenting shellfish production. Game management plans to increase individual and herd size without over-grazing are in the minds of hunters and in the files of game managers. Plans for the preservation of historical homes mesh with those of the people living in the houses. A surprisingly large number of people have a significant stake in this type of future. At one end of the spectrum are the woods people who rely wholly on the health and diversity of the ecosystem for their livelihood. Further along are the very sophisticated bog agriculturalists. At the other end stand a cluster of scientists and visionaries with their feet on the ground who like the feel of this idea because it entails a deep and interactive understanding of how the ecosystems work. These people all accept heavy use and assume that with an understanding of the ecosystem as central to the planning process, yield, income, and environmental quality can all benefit from implementation of this scenario.

The National Interest

"It is my view that Federal policy in this regard is at a turning point. It is obvious that another way must be found to meet the burgeoning demand for the preservation of outstanding landscapes that provide a humane living environment for an urban population. It is essential that all levels of government fully exercise their capabilities in a new kind of cooperative effort to the end that such landscapes can be protected with means other than outright purchase for inclusion in the National Park System. The alternative to national park designation ought to be something other than the relegation of outstanding landscapes to indiscriminate development."

Rep. James Florio, 20 April 1977
U.S. House of Representatives
In support of a Pinelands
National Reserve

The eyes of the Nation are upon New Jersey. The constant participation of federal administrators in meetings with consultants is a reminder of the national interest in the Pinelands planning process. What is going

to be the New Jersey style in this first federal-state-local cooperative effort to set up a reserve? This is the first chance to try out a new system. If the national interest means protection and management of areas of national, state and local significance and the promotion of multiple objective resource management, then it appears that the Commission must look beyond what appears to be a tacit housing program. In view of the national interest involved, such questions as "What about the people from Camden or Philadelphia that want housing?" may very well be of extremely low priority. Resource Harvest, Resource Extraction, and Leave Us Alone may be much more critical to the planning process. The constant worries of the planning staff about "what if a developer comes in with a proposal for x hundred units ..." may be a moot question. The U.S. Congress and the State of New Jersey have now designated the Pine Barrens as a special area. I believe that any court decision against a plan to so manage this special area for multiple use without an emphasis on housing development would be rapidly overturned. The national interest may be better served by land use zoning based on suitability analysis than by performance requirements for prospective urban development. It is significant that the only economic analysis contracted for by the Commission deals with housing development; this is precisely the use that most threatens the Pine Barrens. Where is the economic analysis of recreation, forestry, or agriculture?

This is an important viewpoint for the Commission to understand. Performance requirements for developers are essentially a source of financial aid and technical assistance to those developers. These are certainly necessary for proper plan administration, but there must be an equal commitment on the part of the Commission to provide technical assistance to other aspects of the Pine Barrens economy. If, in light of the National Interest, home development will play a small or modest role in the economy of the region, then there must be other kinds of economic planning to help maintain a viable and secure regional economy.

These four perceptions of the future represent a generalization from a myriad of such ideas that were expressed again and again in the interview data. They will prove useful as tools for anticipating general reactions to any prospective intervention in the environment of the Pine-lands. More specific information central to this kind of suffer-benefit analysis is presented in the subregion descriptions which follow.

THE REGIONS OF THE PINELANDS

Methods of Region Formation

The regions of the Pinelands represent a synthesis of capability, control, and ideas. These are not strictly land use regions, nor are they vegetation and physiographic regions. If users of the subregion map compare the map with a detailed vegetation analysis, they will find that some areas defined as agricultural also contain extensive woodland: The Northern Forest Region includes segments of crop land, and some of the coastal regions have forests. This is not contradictory. The subregion map shows concurrences of social structure, control, and natural and social environments. An agricultural region containing extensive forest land within its bounds is classified agricultural because the dominant use and thus the dominant political and cultural forces are agriculture and its institutions. Similarly, although climate may very well define an inland coastal strip, the coastal area boundary represents those areas where the people involved in the management of the seasonal economy live and work, and is not a line defined by coastal climate influence. (The two boundaries may be close, but land use and social structure were the primary determinants of the subregional boundaries.)

To delineate the regions of the Pinelands, my colleagues and I began with the hypothesis that the Pinelands are not uniform with respect to land use, settlements, land users, institutions, and natural and social environments. I further hypothesized that if such distinctive subregions did exist, then these regions could be used as the basis for varied management plans and strategies. My field team tested the first hypothesis and found it to hold true: Distinctive subregions do exist. It is up to the Commission to test the second hypothesis. This report suggests some of these options for site-specific plans and programs.

A theory of applied human ecology informed the "distinctive region hypothesis". Steward in A Theory of Culture Change (1955) and later Geertz in Agricultural Involution (1963) discuss a "cultural core" and a "relevant

environment". The cultural core is that series of economic, social, political, cultural, and religious relationships most closely connected to the exploitation of a relevant environment. The relevant environment consists of those interactive natural and built processes and phenomena upon which the users depend for their survival. Distinctive subregions should vary through either the relevant environment, the cultural core, or both. My readings and work have shown that land use is an indicator of both the cultural core and the relevant environment. Several geographers (Zelinsky, 1973 and Duncan, 1973) have demonstrated that changes in land use and settlement patterns indicate changes in social structure. A knowledge of the dynamics of land use and its relationships to both the economic environment and the natural environment reinforces these observations. When land use patterns change, one can also assume that there will be distinct changes in the natural, economic and cultural environments of those land uses. Thus the field study was designed with an eye towards seeing diversity rather than homogeneity. Field workers collected data on settlement patterns, land use and users, the social organization of land use, and land tenure. A separate field team collected data on ethnicity and historical land use. Both studies confirmed that land use changes are occurring today even as they have occurred in the past, and that the varied patterns have distinctive users, social organization, and problems.

To utilize the "distinctive region" hypothesis for the purposes of the Pinelands study, a model of the area was developed which was based on a series of mapped historical land use regions. John Sinton - an historian at Stockton State College and a scholar, resident, and user of the Pine Barrens - provided a set of regional designations and initial observations as to who used and occupied these areas. I also independently outlined my own set of regions based on historical and physiographic patterns developed from literature and field observation. These two derivations of regions turned out to be strikingly similar, and were easily synthesized into one initial subregion map. Field teams lived in each region and interviewed key informants knowledgeable about the land use and settlement patterns of these areas. At the end of the field study each team re-drew their region lines based on the replies of the respondents and interpretation of USGS 7-1/2 minute quadrangles, air photos from county planning commissions and the Pinelands Commission, tax records, and ground reconnaissance. Thus the field teams constructed the current list of regions shown on the Cultural Subregion Map. Interviews with knowledgeable long-time users and residents toward the end of the field stay confirmed several of the regional distinctions.

The theory and practice of ecological planning informed the second, or "separate strategies for separate areas," hypothesis. The diversity of land use, natural environment, social organization, and issues has great import for land use planning. The orthodoxy of ecological land use planning (McHarg, 1969) requires that planners recognize the diversity of landscapes as a basis for land use decision-making. Thus it is necessary to tailor policies to people and place and to synthesize them in such a way as to meet the needs of the federal and state legislation.

Types of Regions

Synthesis of extensive data on each of the mapped subregions led to formulation of three general sets of regions based upon capability, ideas, and control. These include Western Crop Agriculture and Rural Suburban Areas; the Forest Regions; and the Coast. Each of these contains significant subregional areas which are defined by local sense of place and regional relationships. Table 1 lists the major regions and their significant sub-areas.

Table 1

THE REGIONS OF THE PINELANDS NATIONAL RESERVE

MAJOR REGION: WESTERN CROP AGRICULTURE AND RURAL SUBURBAN AREASMajor Subregion: The Upper Rancocas Region

<u>Map Symbol</u>	<u>Settlement and Land Use Type</u>	<u>Area</u>
RRS 2	Rural Residential/Suburban	Marlton/Medford
LS 2	The Lakes	Medford/Evesham
AG 4	Primary Use Agriculture	Pemberton/Southampton Field Crops
AG 7	Primary Use Agriculture	Southampton Dairy Region
AG 5	Primary Use Agriculture	The Berry Region
AF	Agriculture-Forest Transition	Medford-Shamong-Tabernacle;
AG 6	and Primary Use Agriculture	The Vegetable Region

Major Subregion: Southern Camden and Gloucester Counties
Western and Central Atlantic County

	<u>Settlement and Land Use Type</u>	<u>Area</u>
EIAG 1	Primary Use Agriculture: Ethnic Agriculture-Town Center Focus	Hammonton
EIAG 2	Primary Use Agriculture: Ethnic Agriculture-Town Center Focus	Egg Harbor City
AG 1	Primary Use Agriculture	Buena-Franklin Field Crops
RRS 1	Rural Residential/Suburban	Winslow
AF	Agriculture-Forest Transition	Atco-Waterford
LS 1	The Lakes	Monroe - Buena
RR 1	Rural Residential	Folsom
RR 2	Rural Road Settlements	
PK	The Pikes	Williamstown - Berlin

Continued.

MAJOR REGION: THE FOREST REGIONS

Major Subregion: The Northern Forest Region

<u>Map Symbol</u>	<u>Settlement and Land Use Type</u>	<u>Area</u>
NF	The Northern Forest Region	From slightly south of the Mullica and north throughout Burlington and Ocean Counties.
NF	The Cranberry Watershed	Rancocas and Mullica/Wading Drainages in Burlington County
NF	The Plains	Pygmy Pine Regions
M	Military	Fort Dix, McGuire, Lakehurst
LS3	Lakes	Pemberton - Hampton - Bamber
R	Retirement	Manchester

Major Subregion: The Southern Forest Region

	<u>Settlement and Land Use Type</u>	<u>Area</u>
OF 1	Uninhabited Forest	Central Atlantic County Northern Cape May County
OF 2	Inhabited Forest	Central Atlantic County Northern Cape May County Northern Maurice River Township Peaslee Fish and Game Leesburg State Prison Sand and Gravel Landscam Development
AG 2	Primary Use Agriculture	Belleplain
W	Agricultural / Industrial Center	Woodbine

Continued.

MAJOR REGION: THE COAST

Major Subregion: The Northern Coast

<u>Map Symbol</u>	<u>Settlement and Land Use Type</u>	<u>Area</u>
CS 2	Bay and Land Oriented Traditional Communities	Cedar Run to New Gretna, Barnegat
CS 5	Manahawkin Mixed Development	Manahawkin
CS 3	Mixed Traditional/Suburban North	Forked River, Waretown, Lanoka Harbor, Toms River
M	The Marshes	Atlantic Coast Salt Marshes
B	The Bays	Barnegat Bay Manahawkin Bay Great Bay Mouth of Mullica
BI	The Barrier Island	Long Beach Island Island Beach State Park

Major Subregion: The Tidal Navigation Corridors

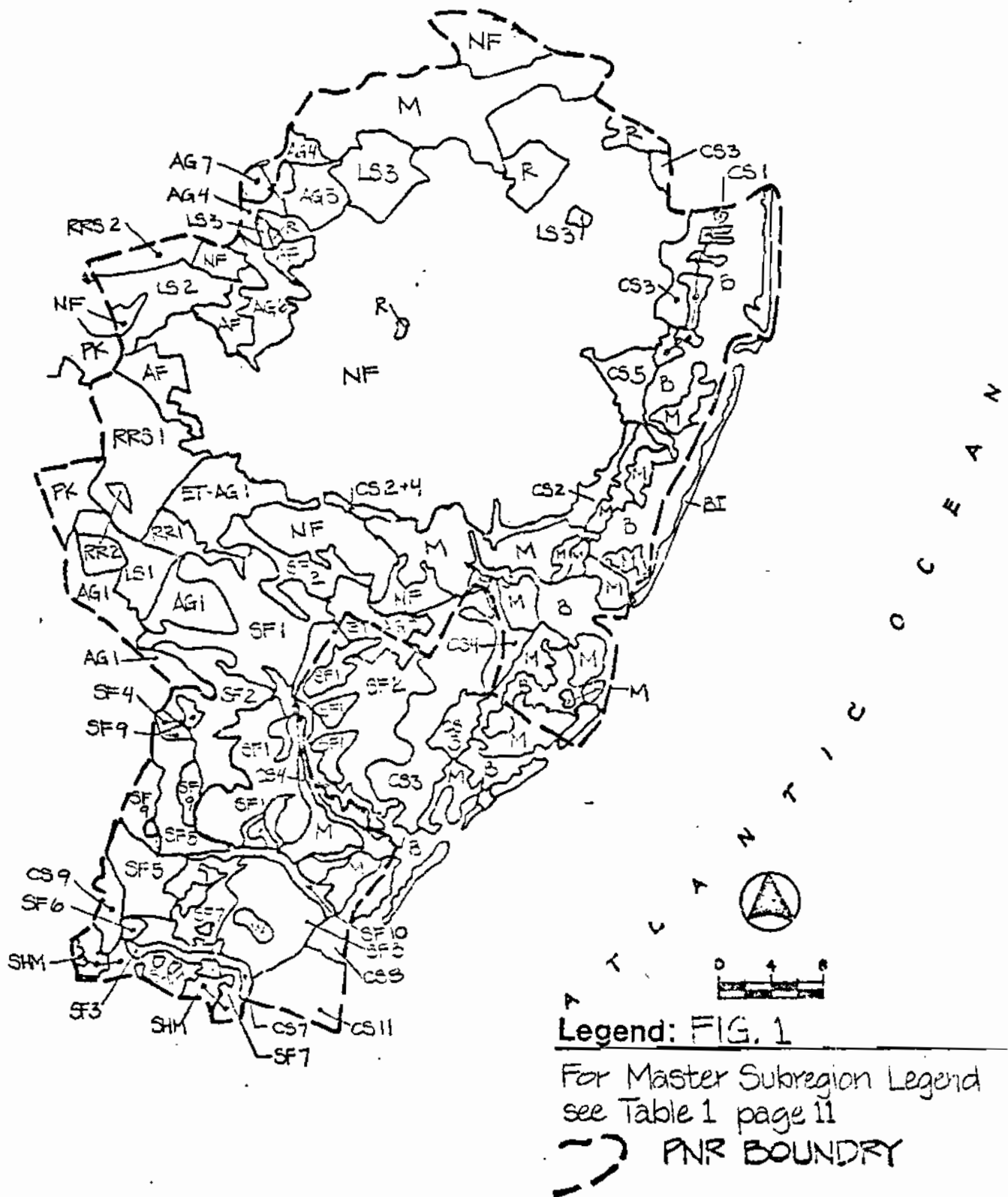
	<u>Settlement and Land Use Type</u>	<u>Area</u>
CS 4	The Tidal Navigation Corridors	Great Egg Harbor Mullica Rivers

Major Subregion: The Southern Coastal Corridors

	<u>Settlement and Land Use Type</u>	<u>Area</u>
CS 8	Remnant Agriculture/Suburban	Upper Township, Cape May County
CS 11	Lower Route 9	Beesley's Point to Cape May
CS 7	Route 47 Corridor	Dennisville, Delmont, Eldora
SF 10	Route 49/50 Corridor	Head-of-River, Tuckahoe, Marshallville, Petersburg

Major Subregion: Delaware Bay

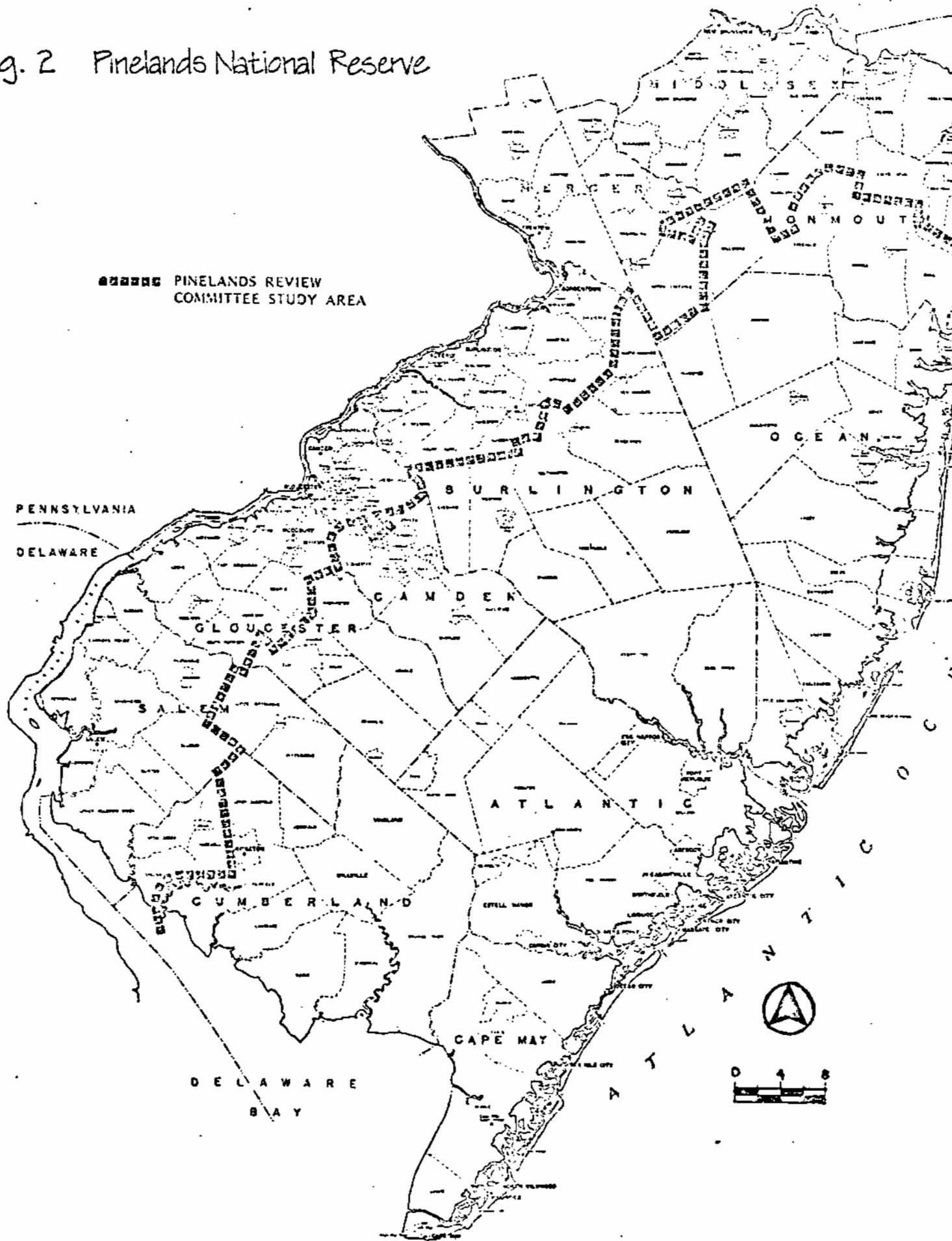
	<u>Settlement and Land Use Type</u>	<u>Area</u>
SHM	Marsh/Salt Hay	Delaware Bay Marsh
CS 9	Maurice River Township Core	Port Elizabeth, Brickboro, Dorchester, Leesburg Heislerville



Cultural Subregions of the Pinelands

A Human Ecological Study by Jonathan Berger, et al. 1980

Fig. 2 Pinelands National Reserve



Western Crop Agriculture and Rural Suburban Areas

The western agricultural and rural suburban regions represent two distinct major regions within which are found recurring types of subregions. Southern Burlington County and its constituent and contiguous townships of Evesham, Medford, Shamong, Tabernacle, Southampton, and Pemberton are a physiographic, hydrologic, and historical cultural region. Together they form the Upper Rancocas Basin and the area of early Quaker settlement. This region has had a long agricultural history, but has witnessed rapid suburbanization since the late 1950's. Outward orientation is toward Philadelphia, Moorestown, Mt. Holly, Trenton, and New York. Within the larger region are varied settlement types and land use subregions. These include Rural Residential/Suburban areas, Lake Settlements, Primary Use Agricultural areas, and Agricultural-Forest Transition Zones at the boundaries of the forest regions.

Southern Camden and Gloucester Counties and western Atlantic County form a contiguous area of crop agriculture mixed with forests. Agricultural land use and the struggle to keep the family farms alive and prosperous in the face of suburban encroachment is the linking process and theme. This region is a triangle with Berlin, Hammonton, and Williamstown as the three points. These stable town centers are connected by three major east-west roads (the White Horse Pike - Rt. 30; the Black Horse Pike - Rt. 322; and the Atlantic City Expressway). There are numerous north-south roads which also tie this region together (Rts. 536, 555 and 561). In addition, Vineland and Glassboro, while out of the Pinelands study area, serve as important town centers for the southern portion of the region. Between the three major town centers and scattered throughout the farm areas are small crossroads towns; subdivisions and rural residences dot the roads which connect these towns. Old-time residents are farmers, local merchants, or are employed by local industries (some of the smaller industries are owned by local residents). New residents tend to be commuters who work in the Camden/Philadelphia area or in Atlantic City. Settlement types and land use subregions include Rural Residential/Suburban areas, Lake Settlements, Primary Use Agricultural areas, Ethnic Agriculture with a Town Center Focus, Rural Residential areas, Rural Road settlements, and the Agriculture-Forest Transition Zone.

Within the western crop agriculture and rural suburban areas, there are three main types of cultural subregions. They vary by population, land use, and number and type of voluntary associations. Rural suburban areas have a higher population than more rural, adjoining locales. They have a large number of community social service organizations, a suburban land use pattern, and few associations that represent primary resource users. Strong agricultural areas have a farmstead-field-crossroads town settlement and land use pattern, and a low number of community-wide social service and leisure interest associations. These areas are dominated by farm families, the State, and associations dealing with primary resource use. Finally, there are the transition areas within which population is rising and which have just begun to form the cluster of rural suburban community service and leisure associations. These areas were once a part of the forest region, but their extensive resource use associations are beginning to fade out because of loss of land to the forest development.

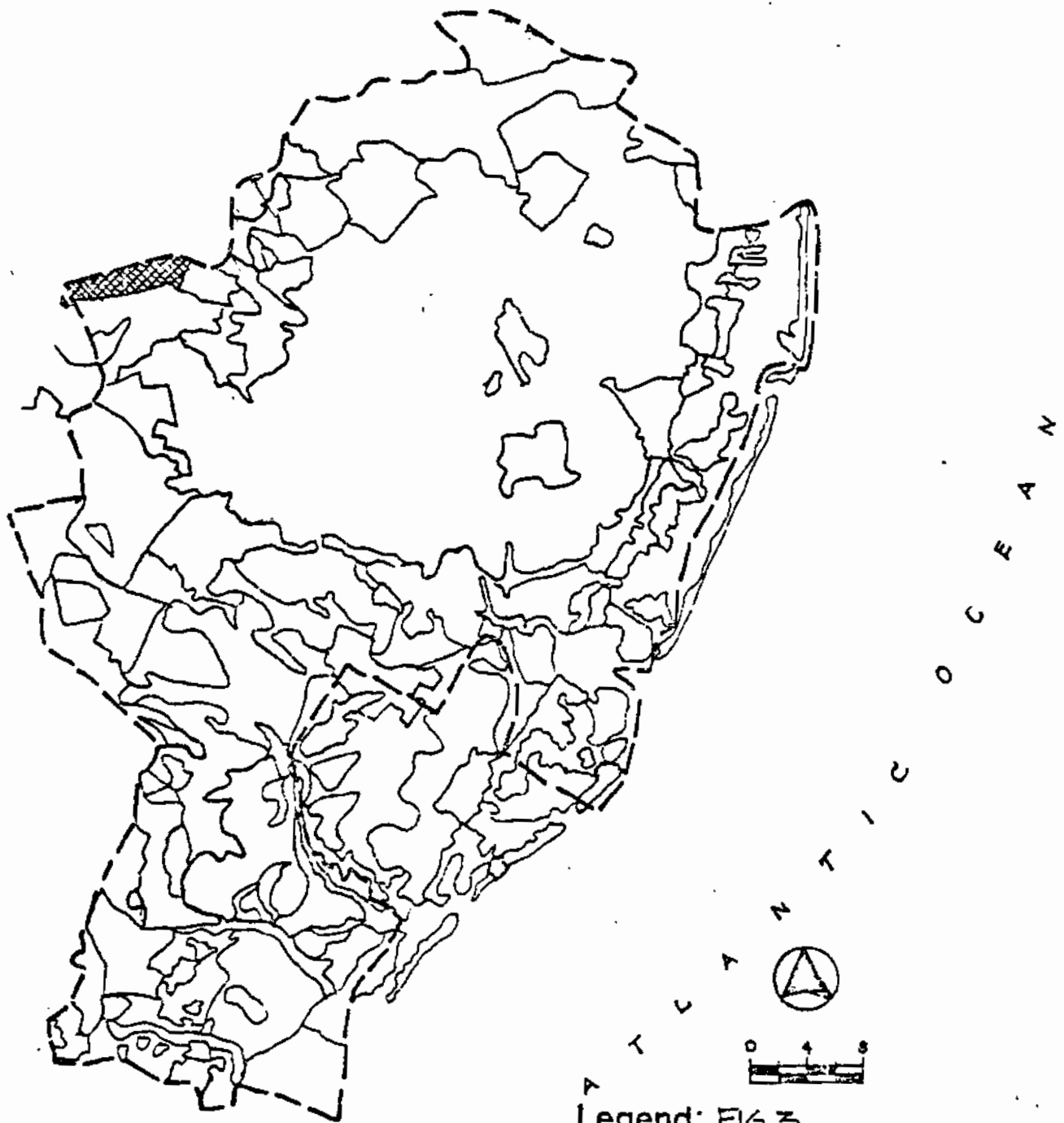
Southern Burlington County: The Upper Rancocas Basin

Rural Residential/Suburban - Marlton/Medford. Straddling a major New Jersey east-west transportation route, the Marlton/Medford region provides an example of classic suburban encroachment onto an historical eastern farming landscape. Thirty years ago agriculture was the dominant use. The settlement pattern reflected family agribusiness in dispersed farmsteads and crossroads villages in which agricultural and commercial services were provided. Scattered suburban settlement had occurred, but the population of the townships was not much higher than the pre-World War II figure, two thousand for each. People did not think of townships but of small localized areas dominated by families. The local rotaries adjusted meeting schedules to the work hours of the farmers. The "court house gang" controlled politics, representing long-time entrenched interests and allowing little or no access by others into the political process.

Today, agriculture is a minor use in the Marlton/Medford region. Although extensive open crop land remains, the silos are broken down and the dairy barns shelter old coke bottles rather than cows. Speculators own the remaining fields and rent them to tenants. Land turnover and development have resulted in residential settlement being the major land use. The people of the region embody all of the skills and services essential to maintenance of this conversion process: realty offices, contracting firms, engineering firms, law offices, insurance brokers, branch bank offices, home maintenance and nursery centers, and landscaping firms abound. Small industries for both blue and white collar workers are found along major roads and at Medford Village. Closely allied to these are all the services required for keeping the residents well-fed, healthy, educated, and well-dressed as well as amused during periods of leisure. The goal of the merchant, builder, contractor, and banker is to build, invest, and grow.


It is incorrect to think of only upper middle class suburbanites as the inhabitants and users of this region. Significant numbers of blue collar workers and their families live in smaller homes along the roads and in the village centers. The Medford Mills and the cannery on Route 70 draw workers from Vincentown, Mt. Holly, and places further east. There are still long-time farming families on isolated farmsteads, retired couples and one-parent families live in small apartment complexes, a retirement community houses a sizeable population, and long-time merchant families own the large homes in the village centers. The Quaker meetings draw many old families from all over the larger region.

Although this area covers two townships, it forms a true region because of a similarity in settlements, control, people and issues. Homes may be a bit grander, lots a bit bigger, and the reputation a bit better in Medford, but these differences do not obscure a common banking system and set of realtors, developers, and contractors who are represented by regional and State groups as well as local merchant societies. Environmentalists are civic officials in two townships which are linked by stream patterns and similar fights with similar developers. The regional high school provides cohesion to the area, as do the Quaker meetings at Marlton and Medford. Teams from local recreation associations and bowling leagues play one another. Social service networks in both areas work together on teenage problems and issues



Legend: FIG. 3

 Marlton/Medford

 PNR BOUNDARY

Cultural Subregions of the Pinelands

A Human Ecological Study by Jonathan Berger et al 1980

faced by the seniors. Finally, the subdivision settlement pattern with its civic associations forms another common bond, as these settlements are linked by the commercial strips and the two old village centers of Marlton and Medford which are facing similar problems of continued viability due to strip competition. The issues of declining commerce in old village centers, open space, housing turnover and construction, and recreation offer examples as to how people manipulate this landscape.

On a suburban agricultural landscape, there is no greater question than "What new use will go where?" Fortunes are made or lost over this decision, and people's images of their newly chosen homes rise or fall over the choice. Of all the controversial choices, the location of new commercial facilities perhaps leads the field. Profit, convenience, and aesthetics become issues of debate. Mall-type centers offer excellent investment opportunities in fields along major roads. Even when environmental regulations are strict there is profit to be made. Thus many of the older merchant fraternity have left the traditional villages to younger merchants who want to rent or invest in the former stores of the old guard. A difficult business climate in these villages due to lack of parking, distrust of clientele, and lack of major road access is made more difficult by competition from strips and red-lining by the traditional banking community. The predictable responses have included store closings, formation of merchants' associations, exertion of political pressure, and evolution of alliances aimed at obtaining street lighting, parking, favorable zoning, and liquor licenses. Specialization into products not offered at malls has also occurred.

Thus some merchants hang on while other close and leave. The settlement pattern of the village is highly unstable. Many officials and merchants talk of emulating the "Haddonfield example", in which an in-town historic pedestrian mall was created by cooperation between investors and merchants. In the Marlton/Medford region, however, investors are looking to the strips and roads rather than along the main street of the traditional village center.

Closely allied to the issue of investment in new and old commercial areas is that of open space planning. Once again, fortunes can be made or lost over the decision as to which lands should be kept forever open. Predictably, the debate intensifies when remaining woodlots associated with wet soils and hydric vegetation adjoin or cross major road corridors. Road frontage generates highway commercial expectations in the minds of regional speculators and local landowners. With newer residents or older "conservation-oriented" residents serving on volunteer township open space committees, such areas will most likely be designated as "potential open space" for the future. If these lands are actually recorded as open space on the official map, the "taking issue" arises along with the lost expectations. Green Acres money is often directed to such areas as people quickly learn that they can be linked along stream corridors to form contiguous patterns of open space. People's images of the region - "Green Evesham" and "an old Quaker farming community developing gracefully ..." (Medford) - correspond to open space planning and add controversy to the important question of what to do with the rest of the land. The split between "new" residents and the "older investment community" can be clearly seen in the fact that almost no developers or long-time landowners and merchants serve on open space committees; members almost always come from people who have recently arrived.

Recent arrivals (within the past five to ten years) add a dynamism to the area. Many only stay for a short while, as the husbands are transferred from one branch office to another or from one military post to the next. Homes change hands rapidly in the subdivisions, and many realty offices get most of their business from such turnovers. The turnover rate varies with the economy, but always means that people arrive, contribute or disrupt, and then either leave or decide to stay. To ease their integration into the new place, people bring with them their associations. Many belong to nationally federated societies with year-round seasonal calendars of events, including garden clubs for men and women, women's clubs, Jaycees, and others. Home and school associations also fulfill an important integrating role if the families have children. All of these people can be a powerful voice in the open space debate. They are, as one long-time resident stated, "good at spending your money and then moving on .."

There are several drawbacks associated with life in a suburban agricultural village or subdivision in a society which provides for extensive leisure time. People are frequently not well integrated into the community, and although they have invested in the area they find a lack of cultural and recreational facilities to serve their needs and those of their children. Each old family farm area has become a subdivision and itself forms a small, self-contained village or place. Politicians recognize these separate areas and try to collect votes in them, as do recreation associations. Some recreation associations raise in excess of \$60,000 per year to support a year-round, coeducational program, with only a small portion of this sum coming from public funds. Each local area must contribute money and personnel to run activities and raise funds. The yearly drive to organize sponsors, contributors, and leaders is thankless and irritating. Yet the children must be served, and so must everyone else. There are Women's Clubs, Bottle Digging Clubs, Antique Car Clubs, Marriage Encounter Groups, Morning Ballet, Slimnastics, Garden Clubs, 4H, and Historical Societies. All pursue specific interests in the built and natural environment. Schools, churches, a community center at Medford, and similar facilities at Marlton provide space for the variety of activities. Both public and private groups work hard to meet this recreation demand which stems from boredom, dislocation, and genuine interest in the environment. Individual civic associations and village merchant groups will sponsor programs, fairs, and outings to promote business and provide supervision and leadership for both children and adults.

the effects of Pinelands planning

The old and new residents of this region participate daily in the process of landscape transformation. Some try to stem or direct development, while others push for rapid approval of new projects. Pinelands planning can affect all of the groups involved to a very great degree.

If the moratorium continues, what will happen? The developers will continue to lose money, but the voluntary and public service network will have a longer respite before have to deal with the increased demand for

services that accompanies new development. Many citizens would welcome the extra time during which they might obtain more and better information with which to address their concerns. Tenant farmers will have a few more months on their land before it is sold out from under them.

If the moratorium is lifted and there are no controls, what will happen? This would be a return to the pre-moratorium state, characterized by distinct competing interests. Open space and conservation-oriented groups will look to the Pinelands Commission to give them ammunition and regional sanction to complete their open space systems and to back up their new attempts at growth management. Developers will look eagerly to a new set of common guidelines and procedures.

This area clearly contains both those who want to accept more growth and those who do not. The trade-off would involve strict control of relatively extensive tracts of environmentally sensitive land in return for higher regional densities in other areas. The village merchants could benefit from in-fill housing and higher densities near their villages since this would bring business to the doorstep. The area has a potential for light industry that favors blue collar workers - for example, expanded textiles and assembly plants. It could also support research and development facilities and office space that would benefit resident and non-resident professionals. Land is available in currently-zoned areas of PUD's and single-use zoning.

Aesthetics rather than extensive use may very well dominate the debate in this region. How much growth can be accommodated in ecologically suitable areas without destroying the "open and green" image? Medford has tried to hold back the entry of fast food restaurants into the township. In this region strip speculators have been loathe to comply with set-back, common entrances, and sign ordinances as well as tree planting guidelines. A regional plan which mandated these design procedures would be of benefit to both developers and open space interests. Those who advocate "Green Evesham" are trying to avoid becoming "another Cherry Hill...." Open agricultural fields along major routes may have site drainage and recharge characteristics sufficient to meet regional surface and ground water standards, but will leave new development in plain view of the roads. How can these developments be integrated into the landscape? Is tree planting and detailed site visual analysis an answer?

Agriculture could have a place on the future landscape of the Marlton/Medford region, but this would require significant intervention. To the east of Medford Village, Southampton farmers rent land and face a highly unstable future. A "right to farm" local ordinance or a regional land use performance standard that provided those same guarantees would be necessary to help maintain farming in this area. (The section on Southampton will deal with the economic question of farming versus speculation.)

Historical preservation in this area has a bright future. There are active historical societies with both long-time and newer resident support that is well tied into local government. The increased interest on the part of new residents is largely due to their landscape images. The many

volunteer associations would support an aggressive program, and would welcome more information about what to preserve. There is no conflict between current lifestyle and preservation: The two are mutually reinforcing.

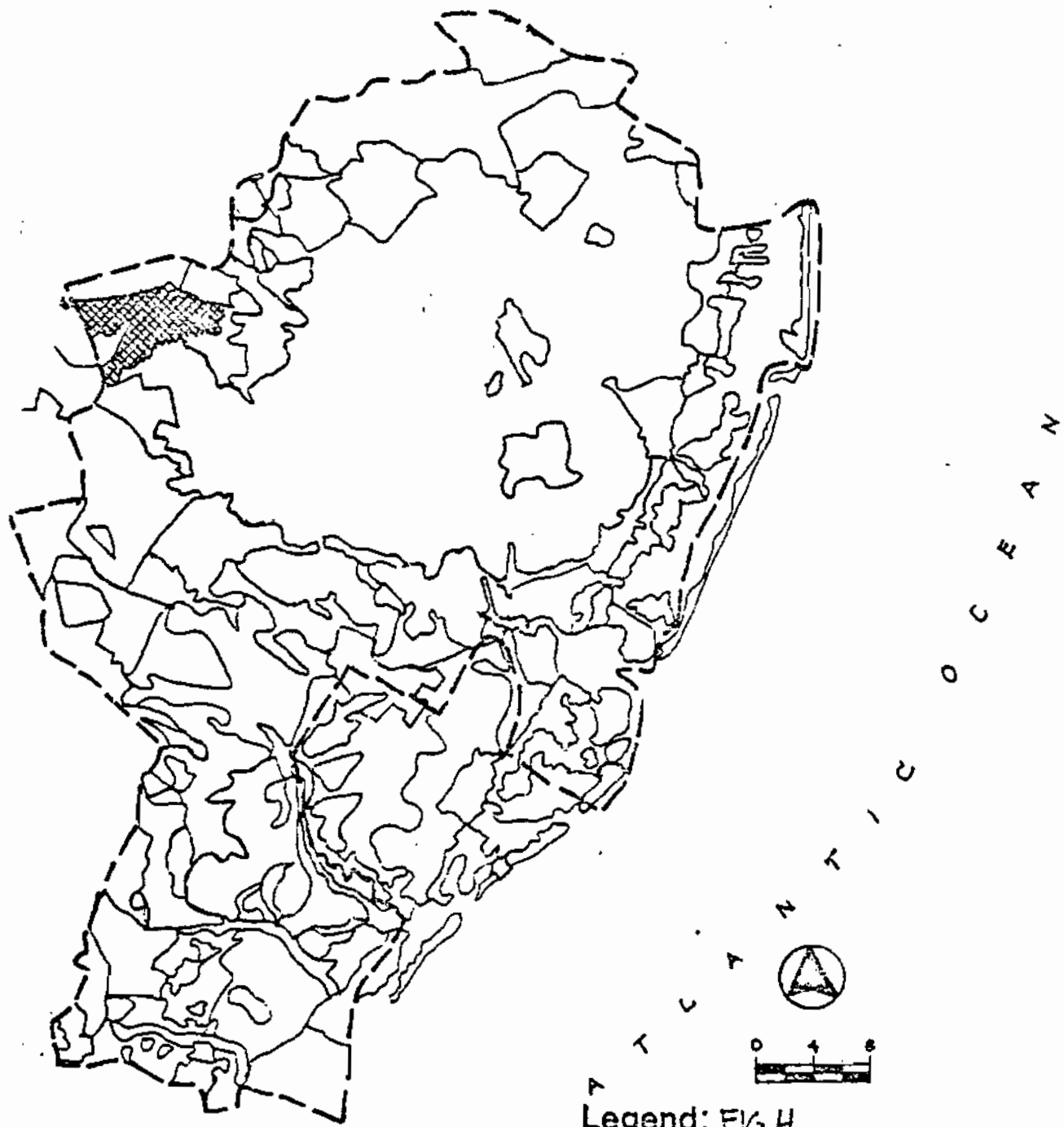
Marlton/Medford is a complex region with a large amount of open land at stake in the Pinelands planning process. This land can provide development space and thus relieve pressure on many other parts of the Pinelands. It can also be sensitively planned in such a way that both housing opportunities and open space will increase, thus maintaining the "green and graceful" images. Industry and agriculture have a place on the new landscape, but will require more than simple design adaptations to realize their full potential.

Regional Contacts: Judy Palumbi
Eph Tomlinson
Pat Haughey
Harry Wooden
Lee Braddock


The Lakes - Medford/Evesham. The tributaries of the Upper Rancocas Creek form the backbone of this region. Originally settled in the late 1600's and early 1700's by Quakers from Burlington and Moorestown interested in the area's iron forges and wood exploitation potential and later in the cranberries, the region now contains a series of hydrologically-linked lakes and lake communities. The conversion of old cranberry bogs to lakes brought in recreational settlement, which was later replaced by year-round settlement with an emphasis on "four seasons recreation" and exclusivity. Some older Quaker families live in the lake colonies, as do many wealthy professionals. The further one goes upstream from Lake Pine to Braddocks Mill Pond in Medford township, the higher the price and the lower the density. Some residents call this area the "Main Line of New Jersey".


Each lake community has its own association. Members pay dues and voluntarily subscribe to land use covenants. If individual families so desire, they may participate in a seasonal round of social and recreational activities sponsored by the "colony club". Some of these clubs are more formal than others. Lake Pine seems to be the most highly organized: "Lake Pine Day" requires weeks of work and preparation. Township leaders respond to complaints from the elected club leaders, whose issues revolve around the quality of the lake environments and surrounding land uses. No stronger constituency could be found for the conservation-preservation program of the Commission than the residents and associations of this region. They have everything to gain and nothing to lose from any program of land use regulation and control that will help keep the surrounding land open.

The local developers, however, also covet this region. Individual homes built and sold in this area bring fantastic prices because of its exclusivity, the lakes, and the private wildlife refuge in the area. The old merchant community (or more broadly, the old landed and economic interests in the region) created the lakes, built the homes, and sold the lots. They continue to have interests in the forest region. Many are long-time resident families who now have sons and daughters in the realty business. The first subdivisions in Medford and Evesham townships occurred in this region as recreational second homes.



Legend: FIG. 4

 Medford Evesham

 PNR BOUNDARY

Cultural Subregions of the Pine Islands

A Human Ecological Study by Jonathan Berger, et al, 1980

This lakes region is very distinct because of the pine dominated forest, the local control of the lake associations, the interlocking hydrologic system, and the current interest of the developers. The lake associations will go to great lengths to keep development out or to slow the pace of conversion. Lawsuits accompanied by expert testimony are not uncommon.

the effects of Pinelands planning

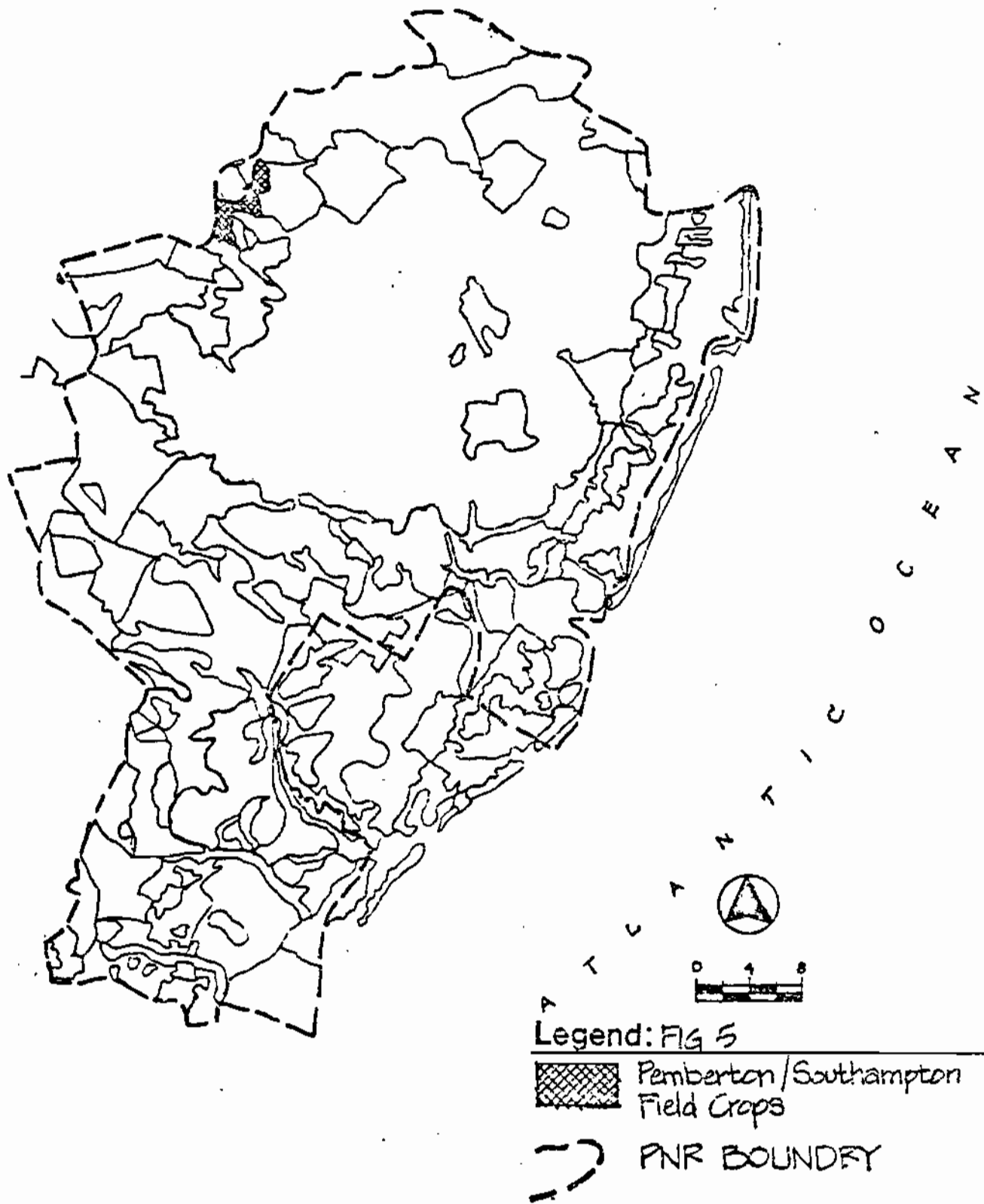
The moratorium is a boon to the residents and users of this area, for it has brought development to a stop. Residents would like nothing more than to see the Pinelands Plan say that this area cannot sustain any more growth. Any attempt to put other types of development in the area (commercial, for example) will be met with great resistance. The associations attempt to manage their lakes, but are often not very successful in this pursuit. They have turned down professional advice from limnologist Ruth Patrick in the past. There may be conflict over water quality recommendations, but these people have a real interest in the quality of the environment. Thus educational programs, public meetings, and the dissemination of information would all be relatively easy to organize in the Lakes region. A good impression made on these people will have a large impact throughout the state and the greater Philadelphia-Camden-Moorestown area.

Regional Contacts: Sam DeCou
Jack Mutch
Presidents of Lake Associations:

Taunton
Lake Pine
Centennial
Mimosa
Braddocks Mill

Primary Use Agriculture: Pemberton/Southampton field crops. Active field crop agriculture and farming families in Southampton and Pemberton are endangered species due to their proximity to the Marlton/Medford housing construction-land turnover complex. Southampton has just begun to witness the overt beginning of the end of active field crop agriculture. There is a sense of impermanence even among the life-long farming families. A businessmen's association has formed and clearly represents development interests. Banks and speculators own large chunks of land. A branch office of the Bank of Burlington County has just opened, and a long-time realtor and "wheeler-dealer" in the land economy recently established a branch of his realty business in Southampton. In actual numbers there are very few new homes, but the "handwriting is on the wall". The farmers cannot compete for land which has a speculative value. Added to all this is the fact that these farmers grow grain and not vegetables; grain farmers need many fields and thus are forced to lease land to stay in business.

Social organization in the area is limited to a very active historical society, volunteer fire companies, a recreation association, and scattered civic associations. Pinelands planning in this area may or may not affect the future of agriculture.



Cultural Subregions of the Pine Islands

A Human Ecological Study by Jonathan Berger, et al, 1980

the effects of Pinelands planning

To the businessmen of Southampton, the moratorium is an anathema. They use Medford as a model of what their future landscape should become. They want the profits and the prestige that came to the older Medford business community when that area was developed. They belong to the same rotary, and thus see the opulent results of businesses growing fifteen times since the 1950's. They want the same profits.

The active farming families want another landscape. The current moratorium has been of great benefit to the long-time, active farming families, for the land which they lease from banks and speculators has been safe from development. They want to farm and they want their children to farm. They want no interference from suburban development and people on township committees that do not understand farmers or farming. They see their way of life vanishing. The State Farm Bureau has had both successes and failures in working with the State Department of Agriculture to develop farmland preservation programs and legislation. One of the failures occurred right in Southampton, in the form of the conservation easement purchase pilot project. Offers were to be made to farmers for the development value of their land. Should they accept the offers, then they could still farm and still sell their land for agricultural purposes. Success hinged, locally, on two factors: (1) Would younger farmers buy the land after the development potential had been removed from it? and (2) Would the assessment process produce values which corresponded to the local farmers' views of reality? Neither of these occurred. The assessment process was too general and too vague: assessors "lumped the good ground with the bad". In the bogs, the cranberry assessments were way out of line with what the current market indicated. Younger farmers who owned limited acreage and leased extensively could not afford to buy land even with the development rights removed, for in their eyes they could not make a profit from agricultural use of that land. Were they older and more established landowners, they could absorb the loss from the newly purchased land by increased production from their other holdings. Instead, the process with its assessed values only favored older people who were more apt to want to get out and farmers who already had very extensive holdings. It did not favor the newest generation, for it focused on the land resource and not the key land users.

The lesson is clear for future planning in stressed agricultural areas. For a local system to work it must be meticulously designed and coordinated with the local farmers' needs, aspirations, and images. The assessment process cannot be vague and general. The decision must be made about the intent of the program: Save land or save land and users. If the users are not included, then another system has to be devised to bring people in to maintain the land in agriculture. This will not be easy.

Southampton and the connected fields in Pemberton could change in a number of ways. The two townships could combine to form a rural farming district, with other areas set aside for new development. Growth management tactics could be used in the growth districts to bring in more tax money to offset the costs of new development. The growth districts could have a "transferrable right" procedure built in. The situation is tenuous.

What can the Pinelands Commission do in these areas? It is certain that not much money will be available for purchase of fertile farmland unless it is decided that such land is a unique, scarce, and rare resource in the National Reserve. This might be possible if land capability throughout the area is considered. Cranberry agriculture might come under this resource category, but the growers do not want state interference. As far as the crop lands are concerned, can the Commission propose agricultural zones? To do so will require real intelligence work on the local level. Will the current farmers be in favor of such zones or will they sue based on the taking issue? There are indications that younger farmers would welcome such a proposal. Would they work with their neighbors?

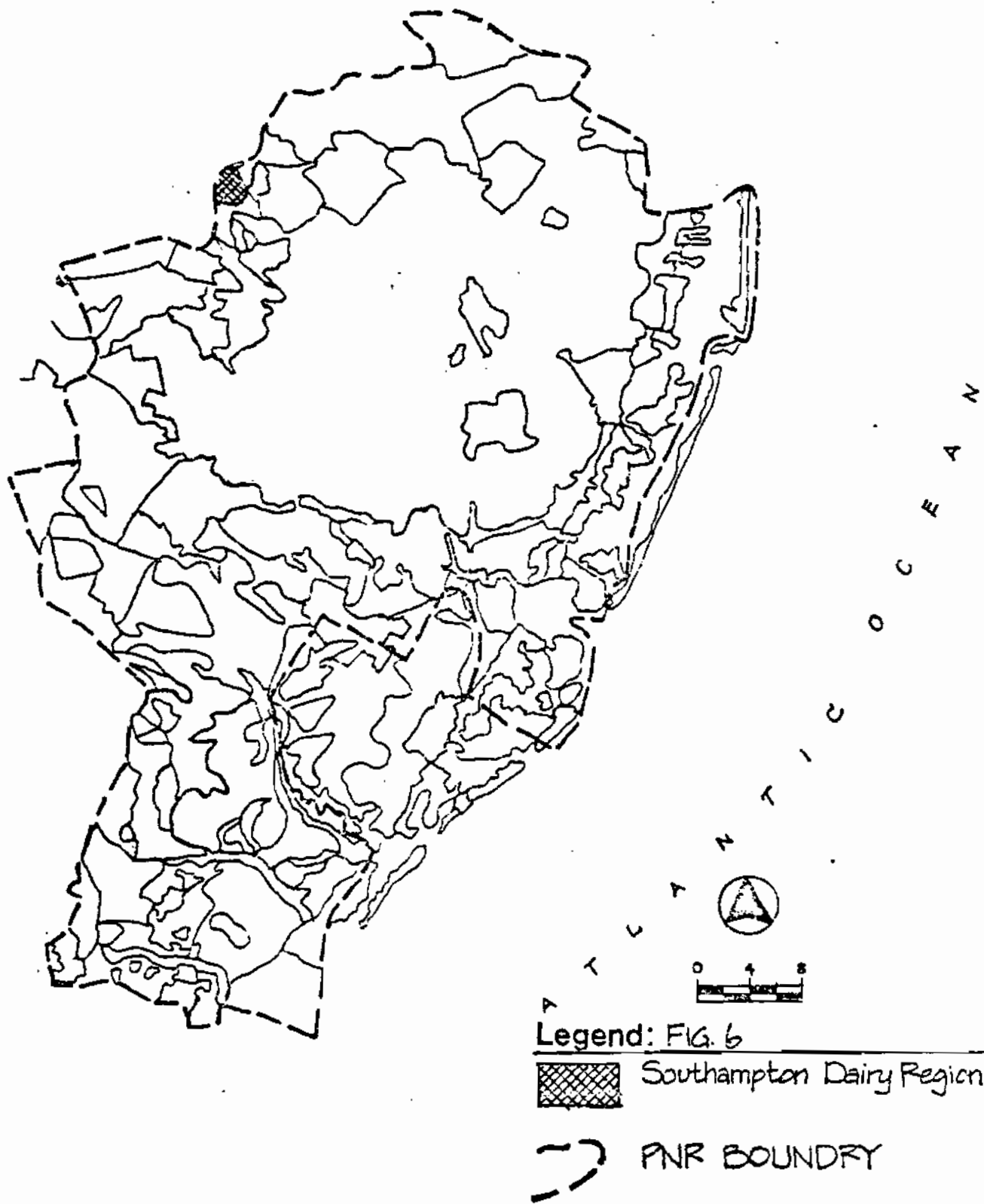
Another possibility exists for these crop lands. Are they not very valuable from an archeological standpoint? Could growth be inhibited in certain areas because of Indian sites? Could this be linked with historical zoning? Again, all of these tactics would need the support of the farmers who are there to stay. These ideas border on a performance standard approach, which means that levels of suburban encroachment will be tolerated.

Apart from allowing the sale of fields with the provision that 80 or 90 percent be kept open or allowing for voluntary agricultural district formation, only standard growth management tactics can apply in these areas. The questions presented above must be addressed by the Commission. The drawing of the boundary to include these areas has presented a very different planning challenge than that presented by the forested or coastal regions. Water quality, unique species, and extensive land use are not at issue, but farming as a way of life is. If the Commission decides to address this problem, they must be certain to obtain the advice and consent of the local farmers.

Regional Contacts: Farmers

Mary Ann Thompson	Rodger Kumpel
Gibersons	Coles Roberts
Bud Kirkbride	Budds
J. Thomas	Holtz
Perry Doyle	
Wen Shontz	Business Association
Ted Simons	
Dick Goode	Charles Wells
Al Engle	Bert Roth
Charlie David	
Sam Greenberg	
Joe Allen	

Primary Use Agriculture: The Dairy Region. The Greenberg dairy and cattle farms form this small contiguous Southampton land use region. The family made millions in the cattle business. They supplied all of the former Burlington County dairy region with cattle. Now they supply some cattle but also produce milk. The family and the land are stable. They have bought several farms to keep development out. They rent out some of these farms. Greenberg cattle are a fixture in this part of south Jersey.



Cultural Subregions of the Pinelands

A Human Ecological Study by Jonathan Berger, et al, 1980

Primary Use Agriculture: The Berry Region. New Lisbon and the Tru Blu Coop are the focus of a compact and readily identifiable blueberry farming region. This region is bounded on the west by the fields of Southampton, and on the east by larger cranberry bogs and the Northern forest. The area has a distinctive settlement pattern of small clusters of three or four wood-frame buildings separated by woods and blueberry fields. The operations are small and family-run. Some of the families first arrived on the Delaware in the 1600's and have migrated up the Rancocas Valley over the years to end up in this region. Their forebearers worked on the railroad, and at the turn of the century began blueberry cultivation. The original cultivated blueberry plantings were made within ten miles of the coop at Whites Bog, and the early experimenters were the incorporators of the coop.

In recent years the small farmers have generally met with financial success. Unlike large growers, they cannot get their labor from urban areas and from the labor service association because many do not have the money to comply with the labor regulations. They rely heavily on family and local workers to fill their labor needs, and with the general economic downturn of the past few years they have been able to find an ample supply of willing workers within the local area. This is important, because a fifty-acre farm requires a tremendous amount of hand labor. Money spent on research for the development of mechanical pickers and pluckers has produced negligible results, with most innovations being made by people working in their own garages. These small operators are very astute growers, but they cannot expand. As is typical of many other forms of agriculture, larger growers have begun to buy out the smaller growers.

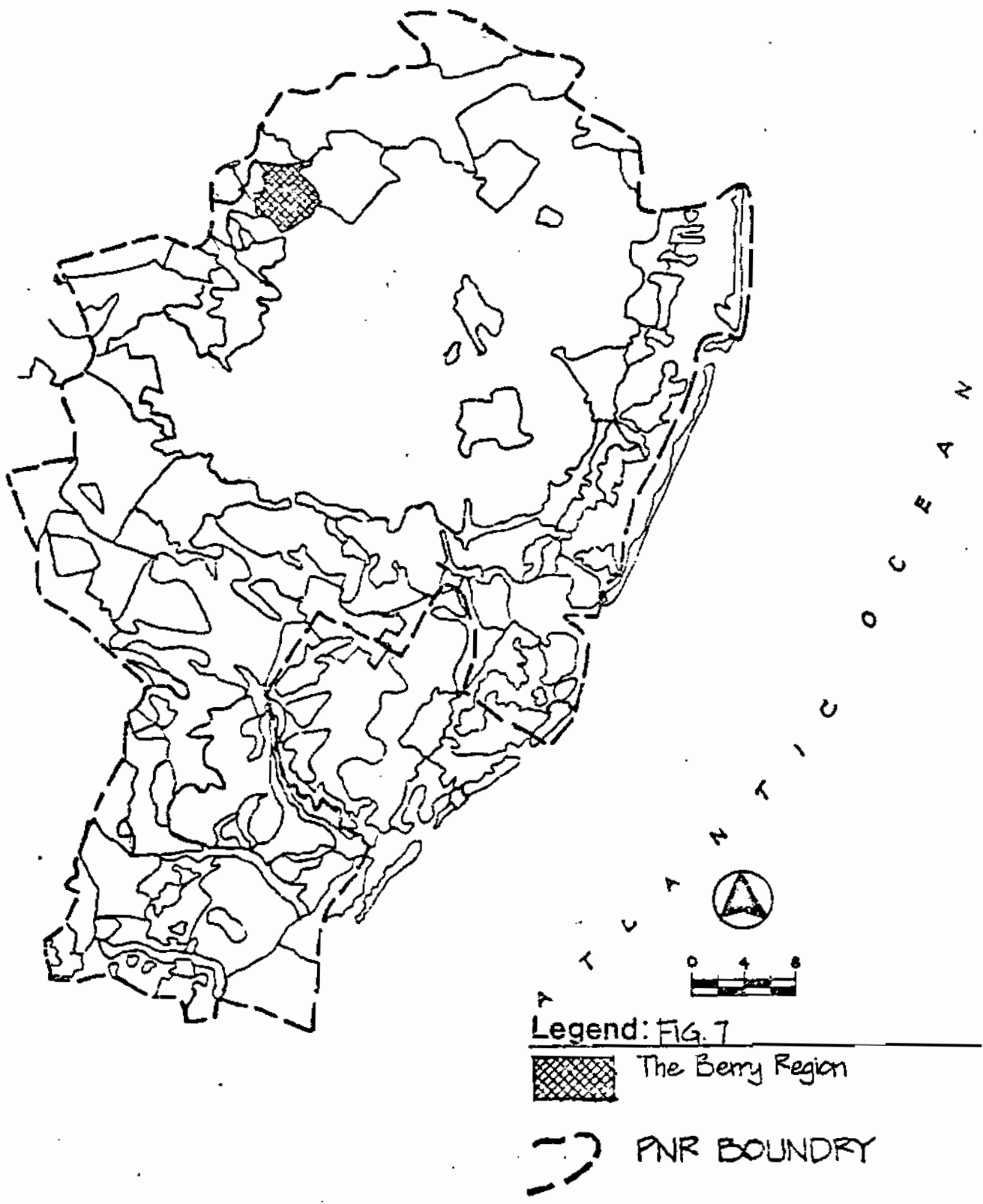
The small size of most blueberry operations means that growers must have other work to supplement their income. Many drive buses for the Pemberton School District or work at Fort Dix. Friends work together driving buses and helping with the blueberry cultivation: Each will trim one side of a bush as they work down the rows.

The Coop ships its products to places as far away as Milwaukee and Detroit. Twenty percent of the State production comes from this region, as does the highest volume of blueberries produced in Burlington County. There is a pick-up station in Chatsworth to service the larger growers of that region.


the effects of Pinelands planning


Blueberry people "don't know that the Pinelands Commission has a blueberry program". They refer to the Commission as "the environmental people", and state very firmly that small, family-type operations have never benefited from any type of federal or state program. Feelings about planning focus on their interest "in a better place to live and the maintenance of the area like it is today". They would like to see a strict building code with a good master plan, carried out by the locals who pay for it.

If the Pinelands Commission can help the larger area retain the schools and some light industry, then small growers will continue to have adequate income and be able to continue their blueberry operations. Other seasonal



Legend: FIG. 7

 The Berry Region

 PNR BOUNDARY

Cultural Subregions of the Pinelands

A Human Ecological Study by Jonathan Berger, et al, 1980

forms of employment could also be investigated or encouraged. This blueberry region is an example of a place where growth in the region itself would cause serious disruption, but if development occurred in other areas then the people would benefit.

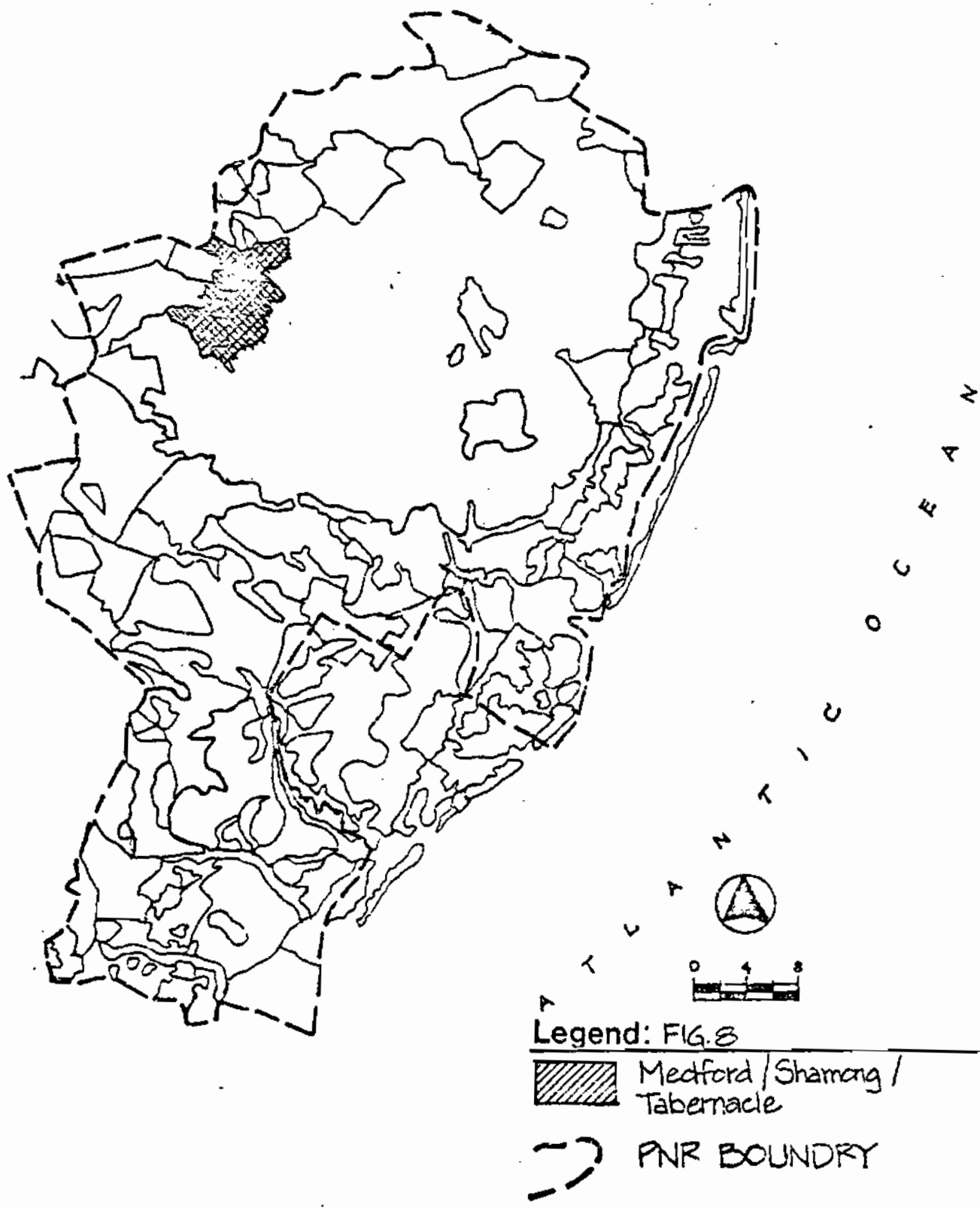
The Coop would serve as an excellent vehicle through which to contact blueberry farmers. Should the economy of the entire region maintain at least its current level, then these operators will continue to keep their small farms in production. Would these people benefit from a greenhouse program by which they produced cut flowers in the winter and blueberries in the spring and summer? The existing small plots correspond to the low land requirements of greenhouses. This suggestion is only meant to be a thought-provoking example of what someone who knew the people and their ways could suggest for the area. The planning challenge is to bolster the small, seasonal operations by helping to maintain the contiguous tracts and stabilizing other forms of employment. Can the Commission in cooperation with the Extension Service develop ways to help small operations throughout the Pinelands? If they can, this region is certainly one which would reap extensive benefits.

Regional Contacts: Harry Bush, TRU BLU - can contact all the members
Coop in New Lisbon
Reeves Family, New
Lisbon
Francis Clevenger,
Magnolia Road
Gladys Cramer,
Vincentown

Agriculture-Forest Transition and Primary Use Agriculture: Medford-Shamong Tabernacle and the Vegetable Region. Areas within the agriculture-forest transition zone have extensive woodlands adjacent to fertile agricultural lands. Unlike Southampton, the woodlands in these areas have been utilized by farmers who want to sell their lands and yet remain in agriculture. As a result, many homes have been built in Shamong and Tabernacle, but only open flat fields with some homes for farm laborers and a few scattered trailer parks are visible from the roads. Resident farmers have become real estate agents, dealing directly in the land transfer process as brokers for elderly farmers who want to sell out. The same people also sit on planning boards and zoning boards that approve requests for construction. This landscape changes from within.

The people who live in the wooded subdivisions have begun to form civic associations, and some of them already hold public office. With this influx of new residents, recreation associations appear, the school budget enlarges, and new schools and township offices are built. Most of these people support the moratorium and the planning effort.

Farmers who are also in the development business do not like the moratorium. Those on the township boards recently went through the State land use law compliance procedures and believe they already have a plan that



Cultural Subregions of the Pinelands

A Human Ecological Study by Jonathan Berger et al 1980

protects the environment. Most farmers do not want to see agricultural policy set by the Commission. They want the Farm Bureau to work with their legislators at the state level to come up with 'right-to-farm' legislation and farm preservation programs. They believe that "we must be compensated for any rights taken from us". Those heavily involved in the Farm Bureau fear that the Commission with its zoning powers will limit their ability to make money from State purchase or from future sale for development. Many of these people have no intention of selling out, but they do not trust people other than farmers (especially planners) to make agricultural policy.

It appears that vegetable farming in Tabernacle is stable for the next generation. The heads of families are in their forties and fifties. Of the thirty or so general and vegetable farmers in the area, most have grown children involved in the agricultural operations. Vegetable farming is very land intensive, so ownership of only one or two hundred acres is generally sufficient to make a profit. There is no need to rent lands far from the farmstead. Land tenure is quite stable in Tabernacle; the town is characterized by a higher percentage of in-town ownership than is found in most other towns in the Pinelands. Off the fields and into the woods, however, the land tenure picture changes. Speculators, the State, some hunt clubs, and the many small lots and homes of the newer residents are found extensively in the wooded fringes.

If there had been no development in this forest, this area would have been included in the forest region. However, the development sited and controlled by farmers and its relationship to the continuing vegetable farming pattern and to the problems of forest management make this a true transition region.

the effects of Pinelands planning

Agricultural planning options for this region are similar to those for Southampton. One difference in the Tabernacle area is that the vegetable farming pattern is more stable, and may not require immediate action to conserve a community, a land resource, and a way of life. In Shamong, on the other hand, there is less consensus on the stability of agriculture and some informants felt that there are few farmers who want to stay in agriculture. In any case, for any option to succeed the Commission will need the consent of the farmers. Because certain vegetable farmers hold elected positions in the Farm Bureau, there will be considerable opposition to agricultural zoning in Tabernacle. The overall stability of the vegetable farmers' situation suggests a "waiting strategy".

The "waiting strategy" would concentrate on the woods where development threatens cranberry watersheds and historical and archeological sites. In these areas, development regulations would be tightened to protect the vulnerable resources, an action which would generally be supported by members of the wooded subdivision civic associations. The vegetable farmers would be left on their own, but would also be subject to development guidelines designed to protect water resources should their land begin to undergo conversion to housing. Limitations on the extension of sewer and water

lines would relieve some of the development pressure, as will the rising price of gasoline. Halting the extension of the Lindenwald line into the Pines will also aid in lessening development pressures on vegetable farming land. If the hard-line, Farm Bureau-associated farmers have a plan for the State's agricultural land - let them work it out. If they cannot do this, and pressure increases, then the powers of the Commission may very well be useful to the vegetable farmers. In any case, all municipal zoning laws must be amended to include 'right-to-farm' ordinances. This procedure alone will help slow down the conversion process.

A general sentiment often expressed by residents and merchants in these transition areas is "We are in favor of preserving the Pinelands, but not here!" Also prevalent is "Save the core, but let the fringes go." As general statements these are valuable, but they break down on the specifics. If the "fringe area" is also a headwater area (and because of the strange shape of the Rancocas and Mullica River Basins as they cut through the cuesta, many of the fringe areas are headwater areas), then provisions must be made to protect or purchase these areas. Areas particularly vulnerable are the forested regions of southern Medford township and northern Shamong, which are also growth pressure areas.

Regional Contacts: Tabernacle - Harrowgate Civic Association 268-0072
- Historical Society 268-0535

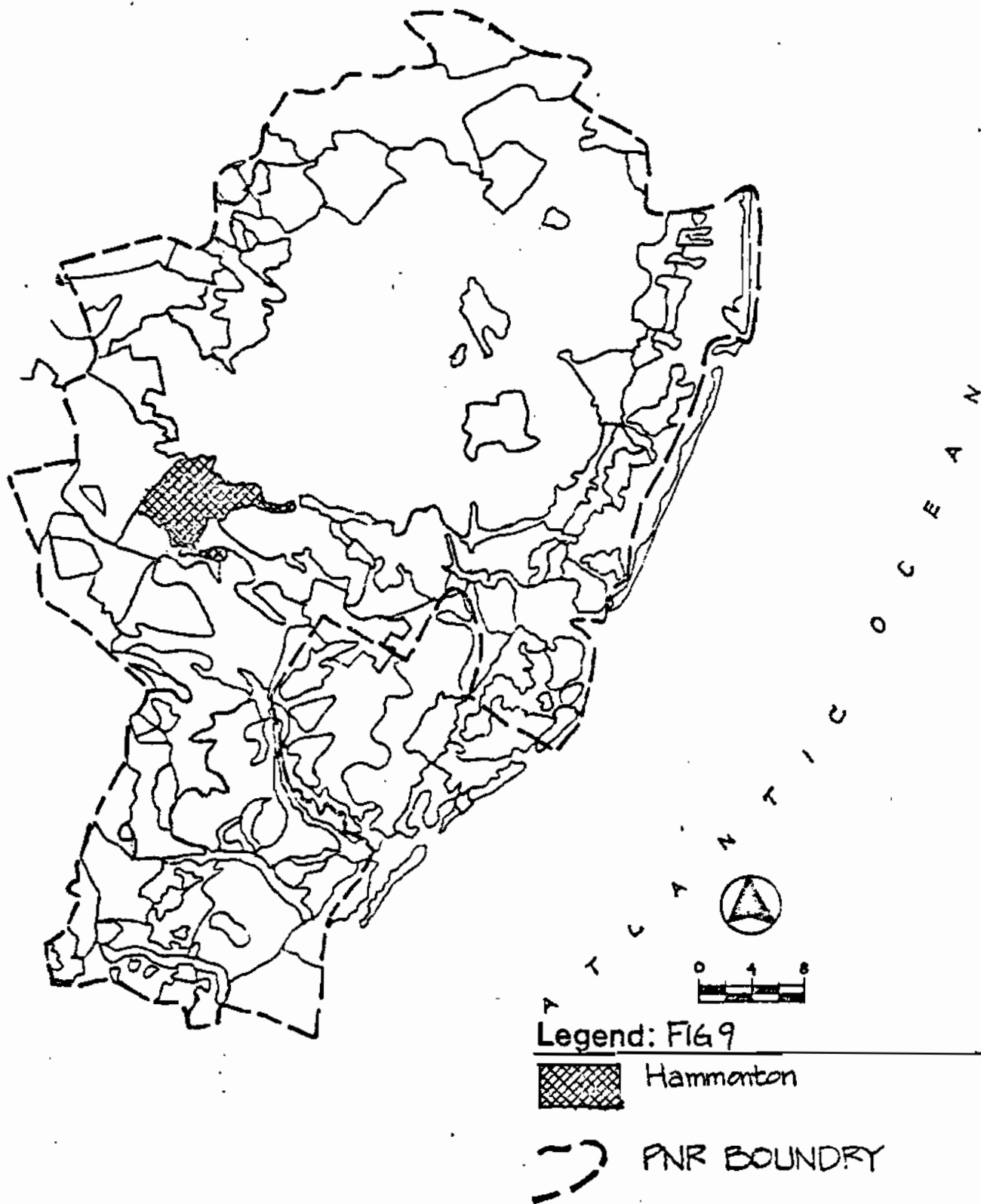
Tabernacle Farmers - Howard Grovat, Clarence Grovat, Lewis Gerber, Joe Zimmerman, Anthony Russo, Joe Conte, Carmen Capollo, Ed Gerber, Smith, Len Worrell, Cramer, Rogers Brick, Cadoro, Paul Shawn, Tom Horner, Cutts Bros., O'Neil, Haines Bros., Abrams, Elmer Abrams.

Shamong - Hobart Gardner, Abrams, Wright, Jennings, La Munyon, Schrider, Gately.

Southern Camden and Gloucester Counties, Western and Central Atlantic County

This area is very much like the Upper Rancocas Region in that it has a west to east gradient of suburbanization and family farm stability. The further east, the more stable the farming community...until the pressure from Atlantic City becomes apparent. Stable agricultural regions include the rural areas around Hammonton and Egg Harbor City, the eastern portion of Franklin township, Buena Borough, and Buena Vista township. Farmers are selling out in Winslow and the Atco-Waterford-Berlin area, and as such these areas are beginning to take on the structure of a rural suburban region. Loss of agricultural land to development is also occurring in the Agriculture-Forest Transition Zone.

Ethnic Agriculture - Town Center Focus: Hammonton. This subregion is characterized by large, close-knit Italian families, and consists of the town of Hammonton and the surrounding agricultural and wooded land. Many of the commercial, industrial, and professional establishments in town are owned or operated by the children or relatives of the local farmers. Hammonton is a relatively wealthy community; large expensive homes can be found along the main tree-lined streets. Farms (apple and peach orchards, berries, and vegetables) and businesses prosper in this subregion, and quite a few of our key informants pointed out that Hammonton is home to some 12 millionaires.



Cultural Subregions of the Pinelands

A Human Ecological Study by Jonathan Berger, et al, 1980

The full range of voluntary associations are found here, with the exception of civic associations since there is not much new development in the Hammonton area. Farmers are not selling their land. New homes are built for children or relatives; occasionally, several acres may be sold to an "outsider" - most likely a professional who is setting up a practice in the area. (Kessler Memorial Hospital was recently built in Hammonton and new doctors and their families have been moving to Hammonton.) As one key informant said, "If I (as an outsider) were to marry the daughter of an old Hammonton family and was subsequently divorced, I would have to leave town." St. Josephs church and school is a very important institution; most people seem to belong to one of the Church's many associations. The local government is almost exclusively Italian, with a mix of farmers and local businessmen. Everyone knows and trusts the Mayor, Russ Clark, an Italian farmer who has also been on the Pinelands Commission. Mr. Clark recently resigned from the Commission because he was losing all his friends (they have not been able to build homes for their children due to the Pinelands building restrictions).

There is also a sizeable permanent Puerto Rican population in Hammonton. Puerto Rican residents live in town or in subdivisions south of Hammonton such as Collings Lakes. They now work for local industries, but initially came to Hammonton as farmworkers. There is a Puerto Rican Civic Association which attempts to bring the Puerto Rican population closer to other residents through activities such as a Puerto Rican Day Celebration. (St. Josephs now conducts one mass on Sunday in Spanish.)

Most farmers have stands or markets and many have their own packing houses. They sell to brokers, auctions, and directly to food chains. Farmers have a mix of workers: some are migrant workers who live on the farms seasonally, while others are day workers from Camden and Philadelphia.

Hunting is also an important land use in this subregion. There are quite a few gun clubs, some of which are organized by family and family friends. They hunt their own farmland but also hunt public land such as the Wharton Tract.

Hammonton is clearly a region because of the family structure, the stability of the land use pattern, the contiguity of the farms, the membership in the same church, and the town center focus. Settlements are the familiar clustered extended family farmsteads. There are some migrant camps on the farms, and a town center which quickly merges with the fields. The field patterns show vestigial remnants of the first Anglo settlers, upon which has been laid the Italian influence. The first Angles settled and surveyed large quadrilinear or many-sided fields; the plots followed no regular geometry, but were always large. The Italians came, bought the fields, and broke the large Anglo fields into narrow strips running back from the cluster of family buildings.

Glossy Fruit Farms on Route 206 in Hammontcn is an excellent example of the operations in the area. It is run by two brothers and was started by their great-grandfather, a Sicilian immigrant, in 1887. The farm has grown in size over the years to its present 300 acres. The family grows

peaches, apples, tomatoes, strawberries, and sweet potatoes. A broker handles most of their marketing, selling to terminal markets in New York and Philadelphia, food chains, and exporters. The family seasonally employs and houses 25 Puerto Rican farm workers who are hired through the Glassboro Service Association. Day haul labor also comes from Philadelphia.

The family did their best business during the 1940's and 1950's when profits were higher and production costs much lower. During this period they acquired most of their land, equipment, and buildings. Strawberries were \$8/crate in 1949, and are now \$11.50/crate at auction. The brothers have, therefore, reduced strawberry planting from 30 to 3 acres, and will utilize a "pick your own" marketing system.

The brothers' cluster of association memberships is typical for a successful farming family. They involve the entire range of family, fraternal, and professional groups necessary for the survival of the farm, and include:

- Atlantic County Board of Agriculture
- State Farm Bureau
- NJ Peach Promotion Council (elected member)
- Atlantic County Farmland Preservation Commission (appointed member)
- State Clean Water Council (appointed member)
- Hammonton Kiwanis (director for three-year term)
- St. Josephs High School Improvement Assoc. (his alma mater)
- United Fresh Fruit and Vegetable Assoc. (National lobby group)
- National Federation of Independent Businessmen
- Eastern Apple Council
- National Right-to-Work Council (anti-labor group)

Most of the farmers in the area belong to one of the three Catholic Churches: St. Josephs, St. Anthonys, or St. Martins. They hang out at Augie's Country House on the Pike for breakfast, and at various farm supply stores during the day. Most of their functions are held at local establishments such as Zaberer's, Frog Rock, or Rudolpho's. Farmers' wives do not participate in farm organizations, although they help out with the farm operations and tend the vegetable stands during the summer. Many farmers like to hunt and, therefore, belong to several clubs organized along family lines.

Classic farm issues in this region are labor problems, over-regulation of pesticides, the need for right-to-farm legislation, opposition to agricultural zoning, and possible interest in transferable rights coupled with a need for education on the matter.

the effects of Pinelands planning

At the moment, the moratorium has disrupted marriage plans all over the region since the farmers cannot build homes for their children. These homes are the common road-side, field-in-the-back, modest homes so extensive in agricultural, Southern New Jersey. Where marriage plans or other family matters are at stake, I recommend speedy permit approval.

For the future, the Commission should not view this area as a potential growth region. This is a stable family agricultural area, the people are prosperous, and it is a resource for the entire state as well as in the National Reserve. I recommend extended meetings with the families involved to work out plans for continued viable agriculture, meetings in which the State of New Jersey may play a larger role than the Commission. If the State gets a viable agricultural policy together, obviously Hammonton farmers will benefit. The outline is clear: there must be some compensation, growth management, the ability to supply children with land, long-range flexibility, and the farmers must control the process. The policy must also be fiscally responsible.

Ethnic Agriculture - Town Center Focus: Egg Harbor City. Egg Harbor City is quite different from Hammonton. Settled by Germans, the original land partition involved smaller, rectangular, twenty-acre plots. The settlement pattern is somewhat more regular than the Hammonton patchwork pattern which was laid down upon the old Anglo system. This means that should farms be sold, development will be in smaller, more regular, clusters and will not cut through larger areas.

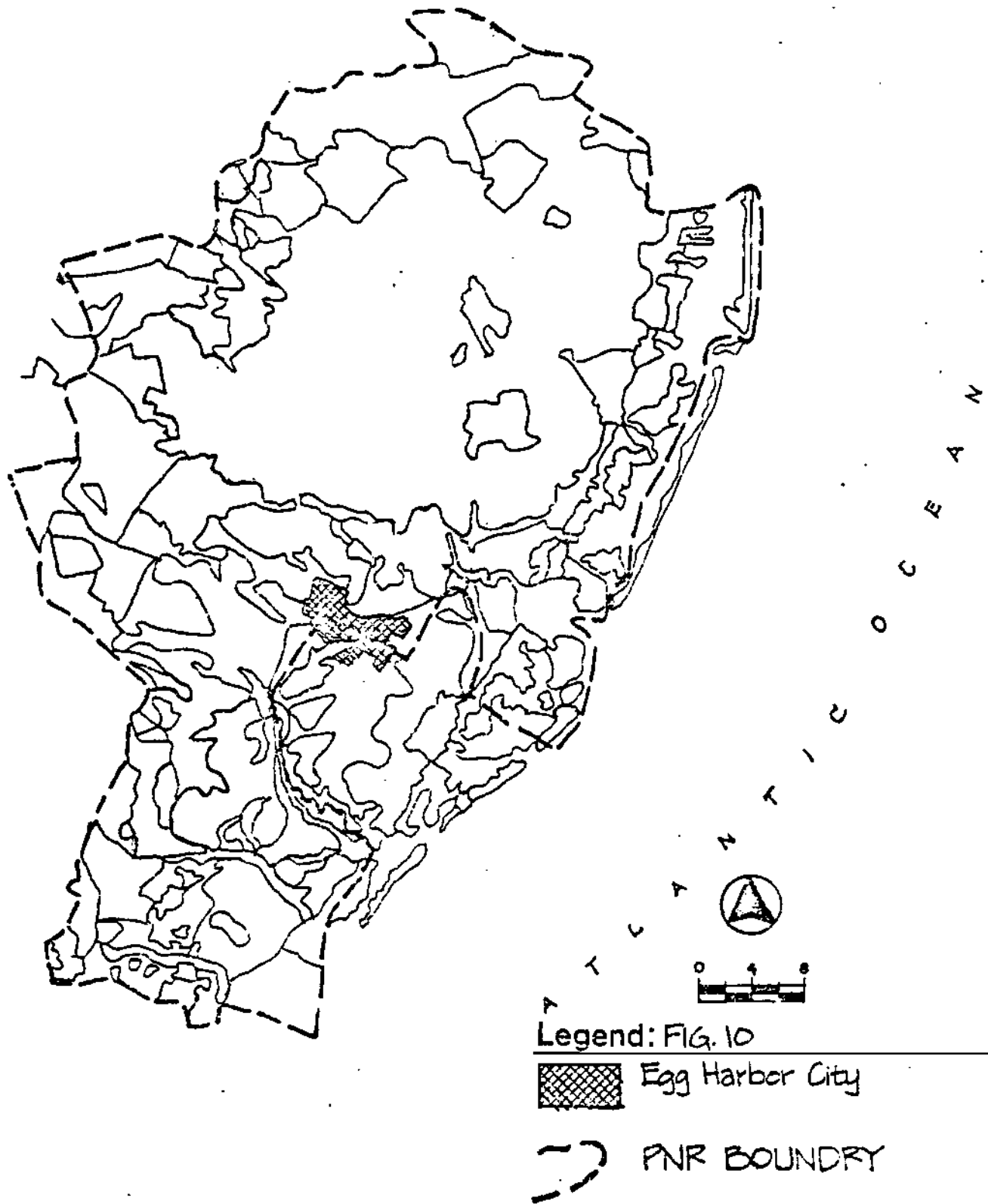
The main agricultural areas around Egg Harbor City are east of town and north of U.S. 30. Crops raised are white potatoes, cabbage, peppers, squash, sweet corn, and field flowers. There is also a large conifer nursery and the Renault Winery vineyards. Interspersed with the fields are blocks of pine-oak forest and reaches of hardwood swamp. This contrasts with the pattern further west, where almost every square foot of land is in production. South of Egg Harbor City is an unsewered area of run-down homes, house trailers, and salvage yards serving as home to a black community and quite a few older whites. Neighboring the older farm homes are newer houses occupied by descendants of the old families and by newcomers. These houses are strung out along the roads and are spaced at a distance from each other. Moderate-priced subdivisions are being built at places along the northern and eastern edges of this subregion because of easy highway access and the perception of developers that Galloway Township is a little easier to work with than the others.

Hunting and hunters are organized through the hunt clubs. Land owned by one club member is open to all; club territories are respected by other clubs and individuals. One joins a club as a boy and grows up with it, and outsiders are generally not allowed membership.

Trappers take fox and raccoon by agreement with landowners.

Industrial users, located mostly in Egg Harbor City, include a sawmill, garment factories, steel cutlery manufacturers, a large boat-builder, a potato chip mill, and manufacturers of marine supplies, fiberglass products, cemetery vaults, and yard ornaments. There are also several small sand and gravel pits.

What distinguishes this subregion from the surrounding territory is the use pattern of intensive, irrigated agriculture combined with industry, most of it low-wage garment manufacture. The patterns differ between Egg Harbor City and Hammonton partly because of soil suitability, but more because of the ethnic predisposition of the Italian farmers toward vegetable and orchard crops. Produce markets also had a hand in



Cultural Subregions of the Pinelands

A Human Ecological Study by Jonathan Berger, et al, 1980

this development. as the Hammonton area is closer to the Vineland produce market and the markets of the metropolitan areas.

The social organization is also quite different. In the Egg Harbor City subregion, the basic church-hunt club- volunteer fire company complex is supplemented by two Granges for the rural residents. In Hammonton social organization is through the Church and the family, with two growers associations for blueberry growers. In both cities commercial interests are represented by chambers of commerce, and there is a thriving group of lodges, fraternal organizations, and social clubs. Trade and professional associations, and the organization of markets for local products, provide networks stretching out of the subregion and out of the Pinelands area.

the effects of Pinelands planning

The moratorium is seriously affecting this subregion. Farmers find that the reduction of their equity value in their farmland has resulted in a drying up of their customary sources of money. While there are federal programs that could replace private banks, many farmers are reluctant to deal with the government, or are unaware of these sources of capital. The moratorium has put a temporary halt to sales of agricultural land for development, although our informants indicated that this was not a real problem in the subregion as yet.

The continuance of the moratorium could hinder agriculture in several ways. Farm families are unable to build homes for married children on their property, placing a strain on the family structure that holds the farms together. Selling off road frontage is no longer possible as a strategy for getting emergency capital. Farmers fear that stricter controls on groundwater withdrawal will result in the loss of essential irrigation supplies. Laws against clearing and burning hamper normal agricultural activities, and make it impossible to develop new agricultural land. The possibility of strict controls on the use of pesticides and fertilizers also worry the farmers.

Industrial development is not greatly affected by the moratorium since there is considerable land available in the towns of Hammonton and Egg Harbor City. An informant suggested that warehouse space would become critical in Atlantic City, and that there would be considerable demand for facilities in this subregion. The moratorium has had an effect on builders and construction workers here, since there has been a drastic cutback in building.

Without the moratorium, it seems likely that there would be some loss of farmland in Hammonton, and that most of the land in the Egg Harbor City subregion would be sold and developed. Most informants mentioned county highway 50 as the line east of which development pressure would be very strong, and west of which it would be much less. Our prediction is for the gradual disappearance of farming in Galloway Township, and for the continuation of strip development in Hammonton as farmers continue to sell off road frontage. There is a possibility that land in the Amatol Tract northeast of Hammonton could be cleared for agriculture, to make up for the loss of farmland further east.

A possible scheme for this subregion would be an end to the moratorium combined with a strong, voluntary agricultural preservation district. Easing the burning regulations would help farmers in this subregion, and a guarantee of existing water rights, somewhat like that existing in the western states, would help keep agriculture viable. Too-stringent regulations of nitrate runoff should be relaxed where compatible with water quality goals.

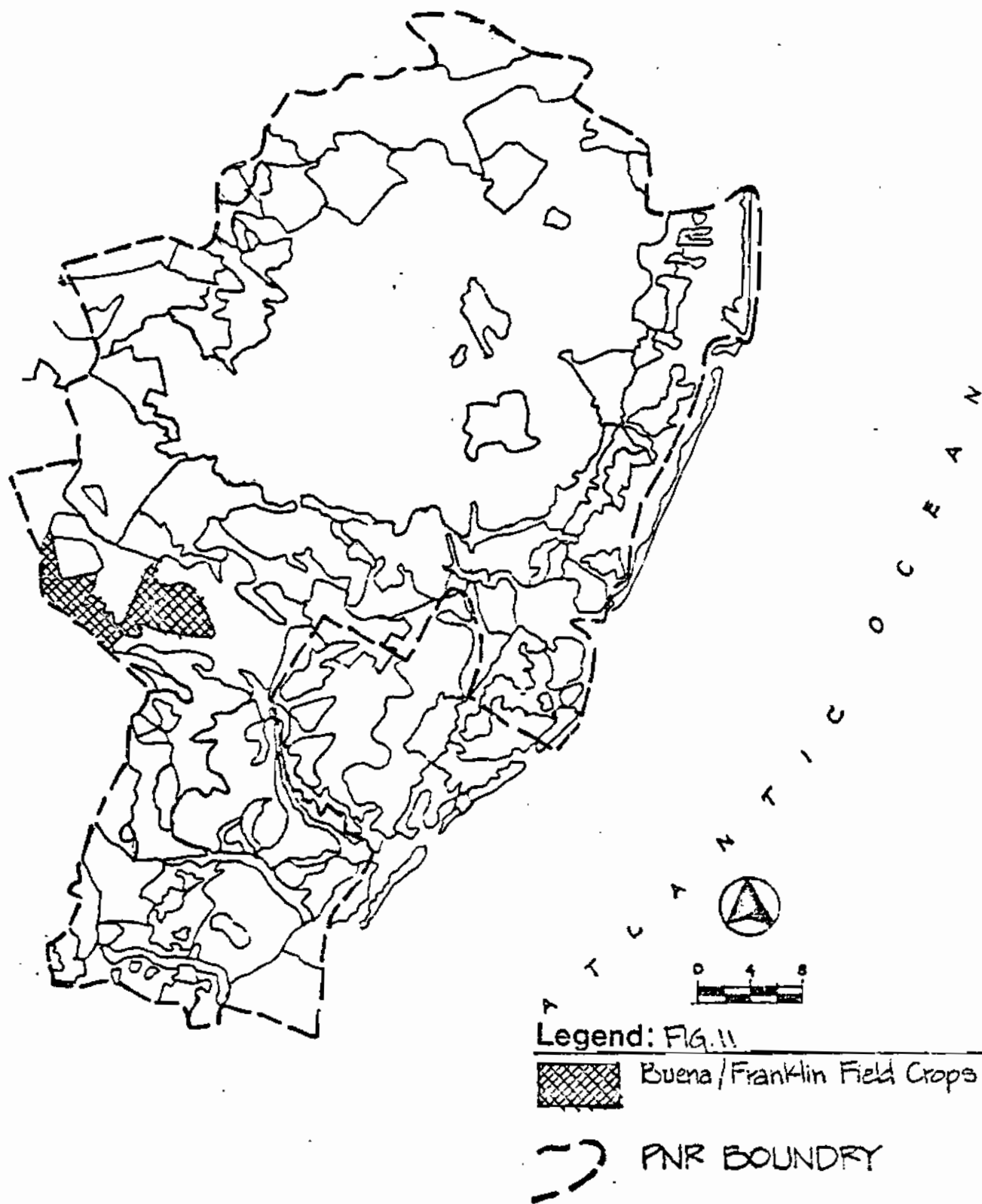
Development activity should be coordinated between Galloway township and the surrounding jurisdictions. The area provides opportunities for both large and small developers, so relaxation of the moratorium could provide a healthy mix of development types and ensure that at least some of the profits of development stay in the area.

Regional Contacts:

- | | |
|----------------|--|
| farmers | - <u>Hammonton</u> : Atlantic Co. Blueberry Growers Assn.
Hammonton Blueberry Growers Assn.
Members of St. Josephs Roman Catholic Church
Russ Clark (561-4688)
Dave Rizzote, Glossy Fruit Farms
Paul Pullia, merchants (561-1200)
Fred Fernandez, Puerto Rican Civic Assn. (club - 567-2231) |
| developers | - <u>Egg Harbor City</u> : Germania Volunteer Fire Company
- James J. Angello, Angello Realty, Hammonton
- David Satinover, Homebuilders Assn., Blue Eagle Homes, Northfield |
| industry | - Atlantic County Division of Economic Development |
| low-income | - Joe Gaynor, Atlantic County Human Resources |
| small business | - Mainland Chamber of Commerce, Northfield
- Egg Harbor City Chamber of Commerce (contact Joseph Privitera, JLP Vending, Egg Harbor City)
- Hammonton Chamber of Commerce
- fraternal and civic associations |

Primary Use Agriculture: Buena-Franklin Field Crops. Buena and Franklin are important farm and wooded areas of the National Reserve, which are characterized by a lack of a town center orientation, some scattered development, and a preponderance of both Italian and Anglo agriculturalists. The people of these areas have a strong Vineland orientation, and the local landscape looks different from Hammonton due to more woodland and somewhat smaller farms. The settlement pattern of Franklin is distinctive throughout the entire Western Agricultural Region.

Portions of Buena Vista Township lie within the Pinelands study area. The town of Buena was originally a stage coach stop, while other smaller crossroads towns in the Township were the sites of sawmills or grist mills or early farms and homesteads. Today this subregion still maintains a rural character, with agriculture and forested rural-residential areas as the main land uses. Green vegetables are the principal crops grown on small and medium-sized farms in this area (to be contrasted with the larger orchard and berry farms of Hammonton to the north). Farmers require skilled labor to cut the greens and use a



Cultural Subregions of the Pinelands

A Human Ecological Study by Jonathan Berger, et al. 1980

combination of day labor from Camden and Philadelphia as well as migrant workers.

The area has not experienced much growth - farmers (mostly Italian) are still farming and residential development has been scattered along the roads as farmers and other long-time residents sell frontage. As in Hammonton, new homes are built for children of farmers. In addition, the region is experiencing some growth pressures from developed areas to the south, and new homes are also being built by young families from the Vineland area. There is limited commercial development in this region and most residents travel to Vineland or Hammonton to shop. Local industries include several glass factories and a plastics factory (the labor force is local).

There are a few gun clubs, and local farm and wooded land is hunted. Men from this subregion also trap areas to the south near East Point and Thompson Beach. Some gathering occurs in the wooded areas. One local resident has stands of Scotch and Austrian Pines on his property and the cones are gathered by local florists.

In terms of local associations, volunteer fire companies, ambulance squads, and churches are most important. Local government officials are for the most part farmers. In contrast to surrounding regions, Buena Vista does not even have a police force.

Like Buena Vista, Franklin still maintains a rural character, although there seems to be more scattered development here than in Buena. Agriculture is the dominant land use and farmers grow grains, soybeans and vegetables. There are also several nurseries and a few scattered horse farms. Wood-related industries are also located in this subregion. The area is dotted with old small crossroads towns, each being associated with old Anglo families. (For example: Malaga - the Miller family; Porchtown - the Porch family; Iona - the Chew family; and Forest Grove - the Wilson and Parvin families.)

Also as in Buena Vista, there are new individual houses being built along the roads; some of these homes are for the children of long-time residents; other homes are being built by people from the more urbanized areas to the West. Some new homes are being financed through the Farmers Home Loan programs (the low and moderate income persons).

There is little commercial development in this region; most occurs along Delsea Drive (Rt. 47), a major shore route. Vineland and Glassboro serve as commercial centers. Local industries include a sand and gravel operation, a poultry processing plant, a wood processor, a glass factory, and a pill factory (the labor force is local.).

Local government officials are farmers and other long-time residents; however, younger and more recent arrivals to the area are beginning to participate in groups such as the Environmental Commission. The most active local associations are the volunteer fire companies, ambulance squads, and churches. There is also a fairly active Senior Citizen group.

the effects of Pinelands planning

In Buena and Franklin the moratorium has stopped the construction of homes for farmers' children. Small contractors building FHA homes have lost work, while hunting and gathering still continue. If there were no moratorium, there would be continued small home building along the roads and some subdivisions. Most development would probably occur in the west, near Franklin ville, in those areas of the township not in the Pinelands. Local residents continue to buy land and tie it up for purposes of protection of farm operations and additions to the nearby wildlife reserve.

With the recently completed Master Plan, Franklin and Buena are areas that have begun to develop a sense for planning. They also have strong farm communities. These areas are better left along and not slated for regional growth. In Franklin each crossroads town could have a plan to match the natural environment with the surrounding land use and users. The small centers could accommodate small or modest development and would lend a focus for planning in the area. The family orientation of each town makes communication easy and people can plan for their own areas. The volunteer fire companies as well as the Anglo families will prove to be excellent forums for planning discussions.

Regional Contacts:

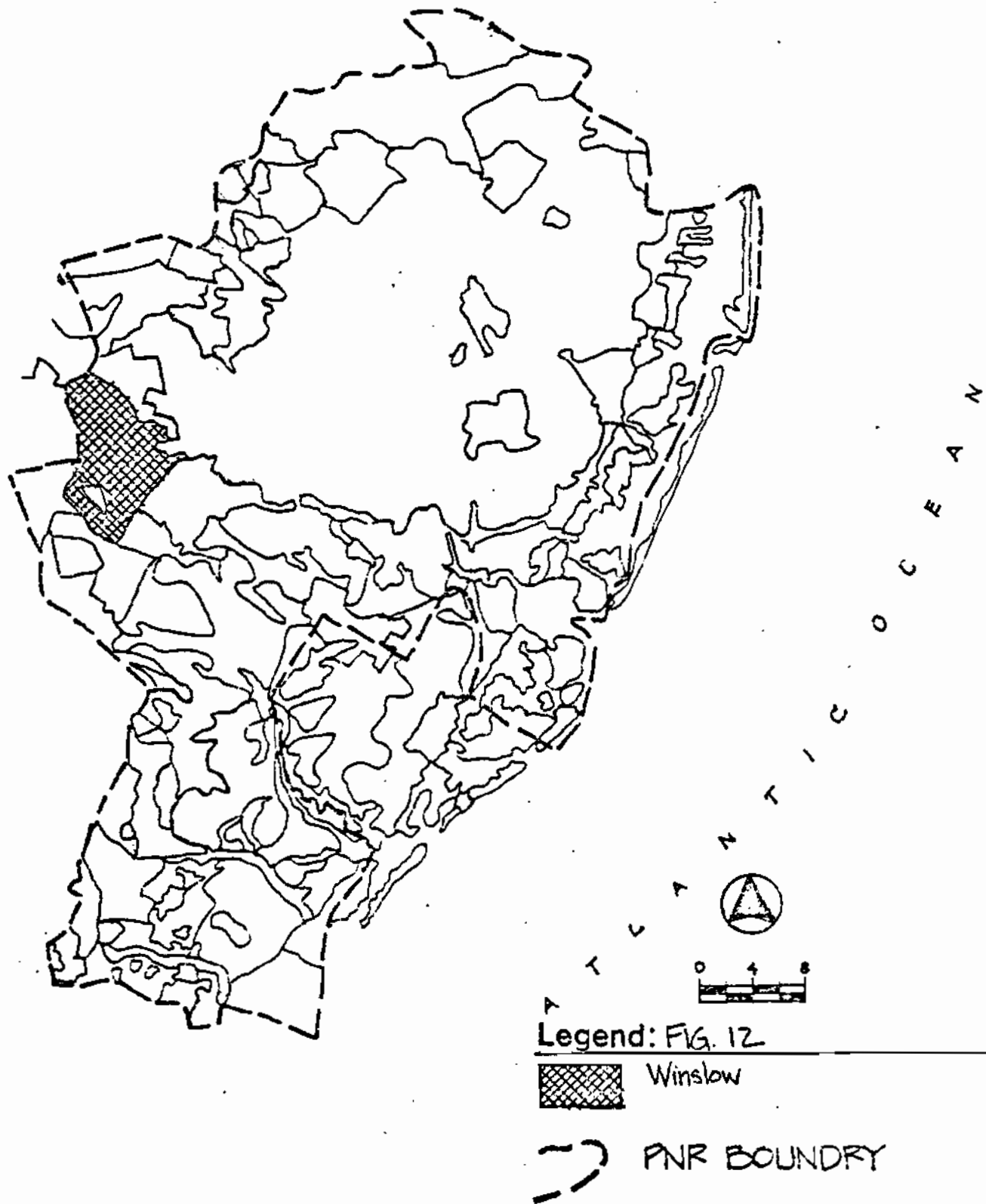
Buena: Charles Bylone
Charles Krokes, Mayor

Franklin: Ted Kiefer, environmental commission
Ferrucci family, nursery owners and farmers
Harriet Andrews, Holly Shores Girl Scouts Council
Hope Sawyer Buykimichi, owner of a 300-acre wildlife refuge
Tom Vandergrift (knows the old Anglo families)

Rural Residential/Suburban: Winslow. Winslow is the name of a township and also the designated name of a contiguous region that contains a mix of farms, subdivisions, old crossroads towns, family-owned farmland, leased farmland, speculative farmland, and new scattered rural residential strips and clusters. It, like the Marlton/Medford area, is an agricultural area becoming a suburban area. Unlike Marlton/Medford, however, there is still extensive agriculture and no reputation as an exclusive place to live. Strip commercial development and crossroads mini malls connect the remaining farms with the old crossroads towns.

Because this sub-region has good transportation corridors (Route 30, Route 73, and the Atlantic City Expressway), it contains more industry than neighboring regions, and these rateables help keep taxes low. There are food processing plants, metal-related businesses, concrete and sand operations, and a fiberglass manufacturing plant. The labor force for these industries are local residents (long-time residents who are not farmers).

The crossroads towns - Winslow, New Freedom, Blue Anchor, Florence, Ancora - were originally sites of sawmills, grist mills, glassworks, stage stops, and railroad stops. Each town is associated with a gravel pit (used for roads) and, in most cases, one or several Anglo families (some



Cultural Subregions of the Pinelands

A Human Ecological Study by Jonathan Berger, et al, 1980

of those descendants are still living in the area) can be traced as the original settlers. Today, the settlements contain a few houses, a church, and a general store (gas station) - all remnants of the past.

The farms in this sub-region are smaller than those to the east and south; vegetable crops (including asparagus), grains, soybeans, apples, peaches, and flowers are grown on these farms. Farmers and other long-time residents belong to local gun clubs and they hunt "all over South Jersey" on public and private lands. Farmers are mostly Italian and Anglo and it seems as though continuation of these family farms is shaky - children are not interested in or cannot afford to continue the operations. A higher percentage of land in this sub-region (as compared to neighboring regions) is owned by off-site investors; much of the land which is farmed is leased. Farmers use day labor from Camden and Philadelphia, since their operations are not large enough to support a migrant labor force.

The Winslow Region has three distinctive sub-areas or complexes within its borders. One is tempted to call them separate regions except that the suburbanization of agriculture has brought new ties between all of the settlements. These include the Ancora State Hospital Complex, Winslow Crossing, and Chesilhurst - West Atco.

Ancora State Hospital is a state mental hospital which occupies several hundred acres of wooded land in the center of the subregion. The hospital owns a rather large subdivision of small homes (with its own sewer system) which is used for employee housing. These homes are tax exempt, but residents use township services.

Winslow Crossing near Sicklerville (just off the Atlantic City Expressway), is a large, relatively inexpensive Levitt development containing single-family and townhouse units. Each area of the development is represented by a homeowners association. These people do not participate in any other local associations; they commute to the Philadelphia/Camden area or Atlantic City for employment and are mostly blue collar workers. The area also contains commercial establishments catering to the needs of the residents. The turnover rate in this development is quite high (50 out of 318 units/year). The residents of Winslow Crossing have mixed feelings toward the Pinelands moratorium. Some feel that increased local development will raise their resale values; others feel that new development will generate sales competition. Most residents feel that the increasing housing demand in Atlantic City will help raise the value of their homes.

Chesilhurst/West Atco is comprised of two small and completely subdivided black communities situated between two large townships (Waterford and Winslow) along the White Horse Pike (Rt. 30). Residents are blue collar workers and they commute to the Camden/Philadelphia area for employment. Berlin serves as the commercial center since they have no stores except for local restaurants and taverns. Local associations include volunteer fire companies, scouts, and church groups.

In the early 1900's Chesilhurst was a resort area due to the popularity of boating on a stream that connected the town with Atco Lake. In the 1930's, the W.P.A. built the White Horse Pike, severing the navigable stream and permanently destroying the town's resort status.

According to town folklore, W. C. Fields (whose home burned down on Cleveland Ave.) and Al Capone both lived in town during this period. Due to the town's small size (1.8 sq. mi.), agriculture was never a significant land use. Chesilhurst was serviced by the Atlantic City Railroad until the late 1940's, when the public transport bus lines were started.

Mrs. H. is a Chesilhurst resident. In 1963 she left Philadelphia and took up residence in Chesilhurst. She had bought a large block of property (at a Sheriff's auction in 1952) that once belonged to the Talmadge family, most of which has been sold to the township. In 1952 the population of Chesilhurst was 200; it is now 1,500. Presently, she lives in a ranch house she built herself with a backyard large enough to allow her to grow two respectable crops of vegetables, herbs, and spices. She practices many folk arts, including spinning, dyeing, and weaving with native plants, and herbal medicine. She also collects everything from antique musical instruments to rocks, which she claims are petrified human organs. She is knowledgeable of Black folklore and history and gives periodic lectures on these subjects to local colleges and schools. She has been recognized by many institutions, including Radcliff College, which includes her in their listing of America's outstanding Black women. She is an active member of the Grant Avenue Church (A.M.E), and favors the moratorium as a means of preservation.

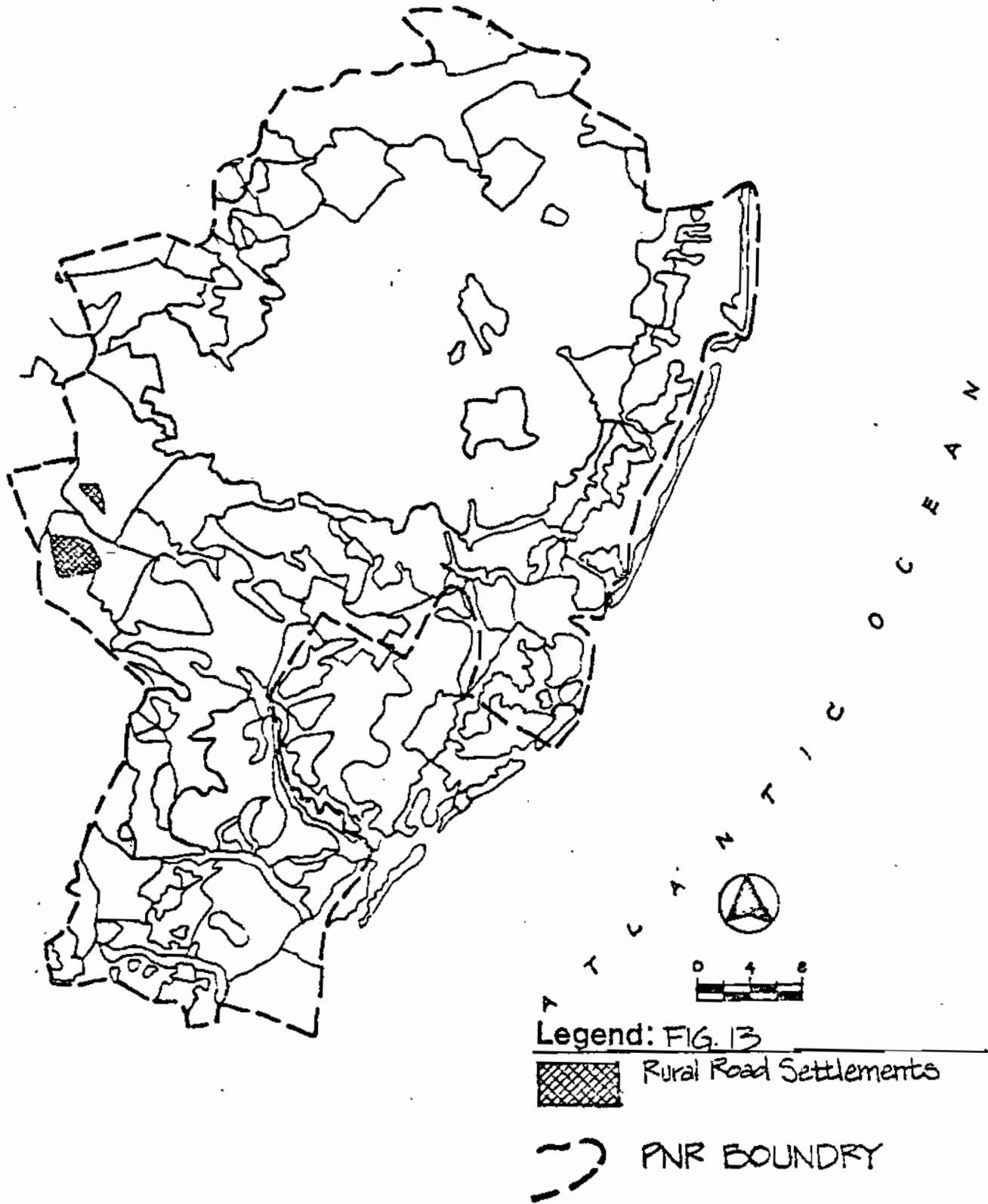
the effects of Pinelands planning

In Winslow, agricultural preservation would require major intervention, although water and woodland can be protected by performance requirements. The township has already laid down the infrastructure for new development: they have made major investments for new schools, a hospital, new roads, and sewer and water systems. Growth can, however, be controlled to retain a "rural character". The area would benefit from an ecologically-sound planning and design guideline study as the basis for a zoning ordinance.

Regional Contacts: Ronald Nunnenkamp - township clerk
Dominic Maiese - mayor and farmer (561-3774)
Ancora Hospital (561-1700)
Mike Dempsey - Winslow Crossing Home Owners
Association (728-1162)
Alwan - Mayor of Chesilhurst - (767-5015).

Rural Road Settlements. Obscured from major development areas and transportation routes by stream corridors and forest land are black rural road settlements. In these sparsely settled areas live a mixture of low to moderate income people who commute out of the local area for employment. The settlement pattern is one of hand-built homes, highly variable in style, located at intervals along secondary roads, often at the woods' edge. In Monroe Township such settlements are found on Broad Lane and Malaga Road and along Jackson Road and Coles Mill Road.

The people own their own land, and at the moment have no interest in selling. Adjacent speculative land could develop and have an impact on the homogeneous character of the settlements, which presently exhibit no commercial or industrial uses. Baptist and AME churches dot the settlements.



Cultural Subregions of the Pinelands

A Human Ecological Study by Jonathan Berger et al 1980

Regional Contacts

Contacts with people in these areas are best made through the local churches, which date back to the early 1900's:

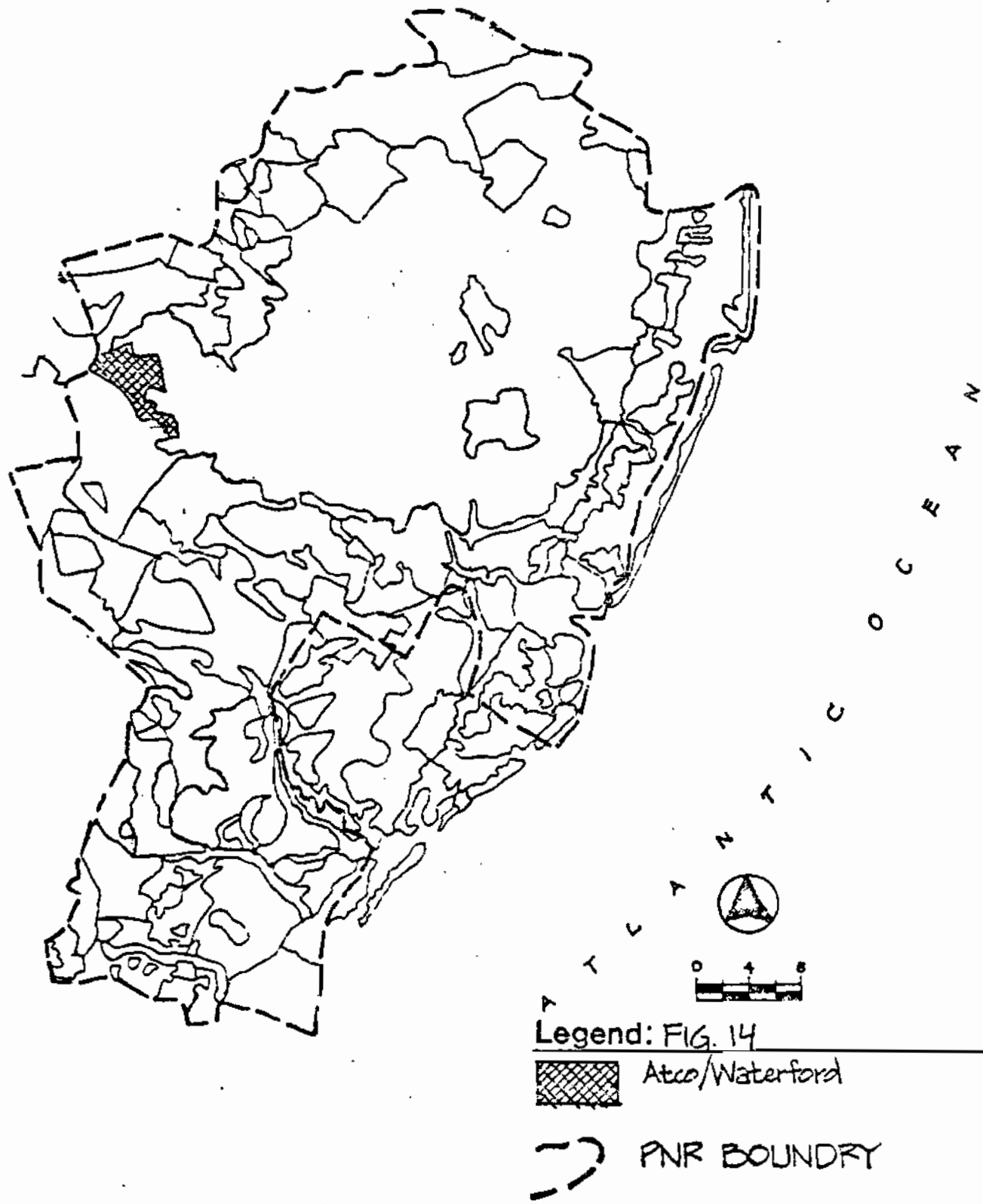
Reverend Beckworth J. Vorkers, Allen A.M.E. Church, Williamstown
Reverend R. V. Nichols, St. Matthews Baptist Church, Williamstown

Agricultural - Forest Transition: Atco - Waterford. This region lies between Berlin and Hammonton, just north of the White Horse Pike; it borders the Wharton Tract. Waterford Works, a crossroads town, was named after the Irish glass-producing town in the 1820's. Jonathan Haines built a glass factory in Waterford Works which was known for high quality flasks. The factory closed later in the 19th century and the town now contains a few houses and a general store. The surrounding area is a mix of wooded and farmland (vegetables and orchards) and the traditional land uses have been agriculture and wood-related businesses.

Atco is a relatively small town and serves as the municipal center for Waterford Township (which includes Waterford Works). The town itself consists of a few businesses (hardware, food, services), a bank, a library, Waterford Township municipal hall, and residences. There are other commercial establishments along the White Horse Pike. Railroad tracks run through the town, with abandoned warehouses and factories nearby - all remnants of the past. Historically, Atco has experienced a series of economic "ups and downs". It was originally a German woodcutters settlement. In the 1800's, it housed an Iron Works and a Glass Factory as well as a railroad stop. When these industries closed, the town declined. During the 1920's however, development increased when Philadelphians began moving to Atco as they were able to commute by train to the City. Railroad service was decreased after World War II and development slowed down once again. The PATCO High Speed Line (which now runs to Lindenwald and is approximately a 15-minute drive from Atco) was completed about 10 years ago, and has attracted a considerable amount of residential development into this area. The township population increased from 3,000 residents in 1970 to approximately 8,000 residents at the present time.

Most of the new developments are small subdivisions on wooded tracts close to the town of Atco, although some subdivisions are being built on farm and wooded land farther from Atco - towards the Wharton Tract. However, local officials are anticipating the extension of the high speed line into this area with associated residential and commercial growth. Farmers (mostly Italian) and other long-time residents (Italian, German, Eastern European, Anglo) are selling off both wooded and cleared land to developers.

Prior to the new suburban developments, volunteer fire companies, ambulance squads, hunt clubs, and church organizations were the primary centers for social interactions. New residents are forming civic associations, scout troops and other youth associations, and women's clubs. The Atco Rotary Club was just formed last year by local merchants in town and along the White Horse Pike. As suburban settlement patterns and social organization begin to develop, they mix with agricultural and forest users.



Cultural Subregions of the Pinelands
 A Human Ecological Study by Jonathan Berger, et al, 1980

Like the Shamong-Tabernacle transition area to the north, this complex of activities creates an ideal environment for timber brokers and processors. The Rusnak Brothers, located on Chew Road at Waterford Works, operate one of the largest wood brokerage businesses in the Pinelands.

The Rusnak Brothers are wood brokers who supply wood for fireplace and for pulp. Their father immigrated to Jersey City in 1919 (where he became a butcher) from Czechoslovakia (where he had been a farmer). He later moved to Waterford Works and purchased approximately 100 acres, which his sons have increased to nearly 500 acres. One major purchase which increased their holdings was of forested land in the Wading River watershed. They do not cut the trees on this land; the timber will only be cut in the event of a shortage of wood from their suppliers.

Wood-cutters for the Rusnaks include Black men from Camden and other local areas who organize themselves into crews of two to four. The Rusnaks have no formal contracts with these crews, who just show up and are sent out on jobs. All the wood is handcut, leaving 15 to 20 seed trees per acre. The Rusnak crews cut approximately 1,500 acres each year. They cut private land owned by developers (land cleared for houses and streets) but would not identify the developers due to competition from other wood-cutters/brokers. They also harvest from land owned by American Cyanamide of Bound Brook near Browns Mills, property which must be cut in order to qualify for lower tax assessment under the New Jersey Farmland Assessment Act. Land owned by ASARCO, Inc. of Lakehurst, New Jersey is also cleared by Rusnak crews. They used to cut the Wharton Tract before it was purchased by the State. Another source of wood is derived from the salvaging of burned trees, although this wood must be cut within the first year after the fire.

The Rusnak Brothers sell their wood to two major groups. Oak is purchased for fireplace use by lawn and garden markets. One of their major oak buyers is McNaughtons Landscaping in Cherry Hill. Pine is used for pulp and is sold to mills (GAI Mill in Gloucester) as well as other industries. Their largest client is Johns Manville in Manville, New Jersey, a company which produces asbestos and organic felt. Wood is cut and sold throughout the year, although most of their sales for firewood occur during the latter part of the summer.

The Rusnak Brothers belong to the New Jersey Forestry Association, but that group is not very active. They do not participate in other local associations, for they are a close family and they keep to themselves. (All of the brothers and their families live on Chew Road within sight of each other.)

Competition for the Rusnak Brothers include: Bergholtz Brothers - Mullica Hill; Warren Sawmill - Franklinville; Alex Sosik - Franklinville; Jones - Elwood. Unlike the Rusnaks, these businesses cut and haul their own wood.

The Rusnak Brothers infrequently cut cedar trees as well. The cedar is used for fences (small trees), boats, furniture, feather edge (used to back aluminum siding), etc. One acre of standing cedar is worth \$1,000. The age of the cedar is more important than its size. Cedar swamps must

be completely clear-cut, for new cedars need sunlight in order to grow, and any cedars left standing will be blown down anyway. Deer will eat the tops of young cedar trees and can be harmful to young stands of cedar.

The Rusnaks are concerned about future conditions, and feel that the State poorly manages its forests. In spite of the fact that cutting is not prohibited, they have very strong feelings about the Pinelands moratorium, attesting that the State has overstepped its bounds. Their land in Wading River has decreased in value by two-thirds since the moratorium was instituted.

the effect of Pinelands planning

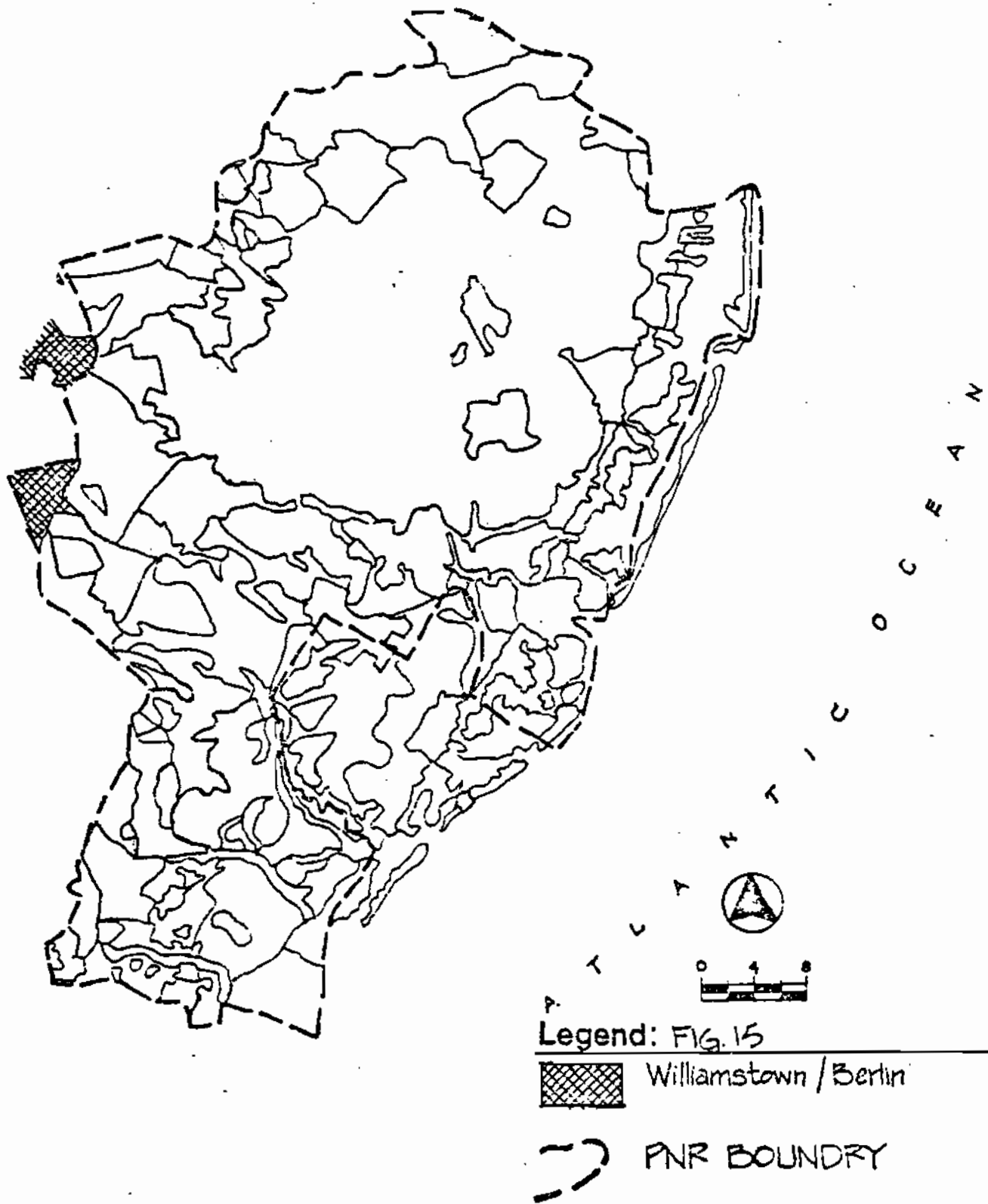
One informant stated, "We can live with controlled growth, but we can't live with no growth." In this transition area, unlike Tabernacle, there is no viable agricultural community. Speculative ownership is high. The area is connected to major population centers by the PATCO line. As in Winslow, a planning strategy based on performance requirements and capacity planning, as well as on aesthetic and historic areas, would be beneficial to developers, new residents, and older long-time landowners alike. Such established landowners frequently hold land that borders the Wharton Tract, and could thus benefit from some sort of covenant arrangement which would reduce their taxes and provide a buffer for the State land. Most have no intention of selling and would welcome the tax break. Limited development potential could be attached to the covenant if the owners wanted to sell in the future. In almost every sub-region of the Pinelands one finds these people, and they could play an important role in the management plan. The Commission needs a "long-time" resident landowner-who-won't-sell" strategy to bring these people into the land use control scheme.

Regional Contacts:

Harold Ewan, merchant and 4-H informant, Atco National Bank
Former Mayor Lalli, American Heritage Realty
Rusnak Brothers, forestry, Chew Road
Dominic Rocco, zoning officer, Municipal Building

If the Hamonton and Egg Harbor City regions were to become suburban areas, their town centers would resemble Williamstown and Berlin in form and function. Williamstown, Berlin and their contiguous lands and road networks are designated The Pikes.

The Pikes: Williamstown - Berlin. These regions are developed; they are stable commercial and industrial centers for surrounding townships. There is a town center containing one or two main streets with a library, municipal building, fire house, local businesses (including taverns and restaurants), meeting halls, old (often historic) homes, schools, and churches. Industries are located at the fringes of the town center near the railroad tracks or major roads. The regions lie on major transportation corridors which are characterized by belts of typical suburban strip development near the town centers. New sub-divisions and individual homes are being built along the roads which intersect the major



Cultural Subregions of the Pinelands

A Human Ecological Study by Jonathan Berger, et al, 1980

transportation routes as farmers sell wooded and cleared land to developers. The regions are also oriented towards suburbanized areas to the west.

The residents and users of the region represent a mix of ethnic and religious groups. Long-time residents are employed locally; many are merchants with businesses in town whose family histories can be traced back to the original settlers. New residents tend to work in the Philadelphia/Camden area, but there is a sprinkling of Atlantic City commuters. Interviews indicate that most residents are blue collar or white collar (teachers, bank employees) workers. In local government there is a mix of old and new, but new residents are becoming the majority. These areas have zoning ordinances and master plans which encourage development. New residents are probably best represented, however, through their civic associations, in which the big issues are maintenance of services (schools, garbage collection, police) and keeping taxes down. The full range of voluntary associations are found in the Pikes region: civic associations, volunteer fire companies and ambulance squads, fraternal organizations, churches, land use interest groups, sportsmens clubs, women's clubs, ethnic organizations, recreation and youth associations, historical societies, political clubs, hospital auxiliaries, and senior citizen clubs.

Williamstown is located on the Black Horse Pike (Route 322) and serves as a commercial and industrial center for Monroe Township and northern Franklin Township. Historically, it was a Lenni Lenape settlement and was called Squankum, even by the early white settlers. It boomed after the civil war when the Williamstown Glassworks and Factory Store were at their peak. Farmers in the surrounding areas grew tomatoes and other vegetables for canning plants, cucumbers for pickling plants, and they also raised chickens. Food processing and lumber-related businesses are still important in Williamstown. More recently, clothing manufacturers have moved into the area and factory outlet stores can be found along Black Horse Pike.

Berlin is located on the White Horse Pike (Route 30) and serves as a commercial center for Waterford and Winslow Townships. Berlin was called "Long-A-Comin" as it was a long-awaited stop on the stage road from Coopers Ferry to the shore. Early industries included farming and logging and, as in Williamstown, food and lumber-related industry is still fairly important. Berlin was also a stop on the Camden and Atlantic Railroad, thus making it accessible to Philadelphia. More recently, the PATCO High Speed Line has made Berlin an easy commute for people employed in Camden and Philadelphia.

Many users of the adjacent forest regions live in these towns. There are numerous outdoor clubs, hunt clubs, scouts, churches, and schools that use the forest for recreation, hunting, and educational/scientific purposes. Williamstown and Berlin are linked by roads and water to the forest region.

the effect of Pinelands planning

Development will undoubtedly occur in this area for the entire area is already sewered. The amount of available land is quite limited,

and speculators own most of the remaining open land. Existing heavy suburbanization means that the area will not suffer the loss of "rural character". Major contributions of Pinelands planning would be historical preservation and conservation of woodlands, streams, and adjacent riparian lands. People here will be more affected by conservation measures in adjacent areas, and would probably support the Reserve concept to conserve contiguous woodland for recreational purposes.

Regional Contacts: Berlin - Charles Shaw - Lions Club
John Gordon - Berlin Recreation Commission
Millard Wilkinson - Mayor

Williamstown
John Lub - Mayor

Rural Residential: Folsom. Folsom is a small township which began as a German settlement. Today it is inhabited by long-time residents who own or work at local businesses and industries (canning, guardrail manufacturers, galvanizing, and light industry) and new residents who commute to employment centers (Hammonton, Williamstown, Camden/Philadelphia, Atlantic City). The older residents still live in what could be called a dispersed agricultural settlement pattern. There is no real town center. Industries are located along Route 561 and new sub-divisions are scattered throughout the town, but these are usually close to a major road.

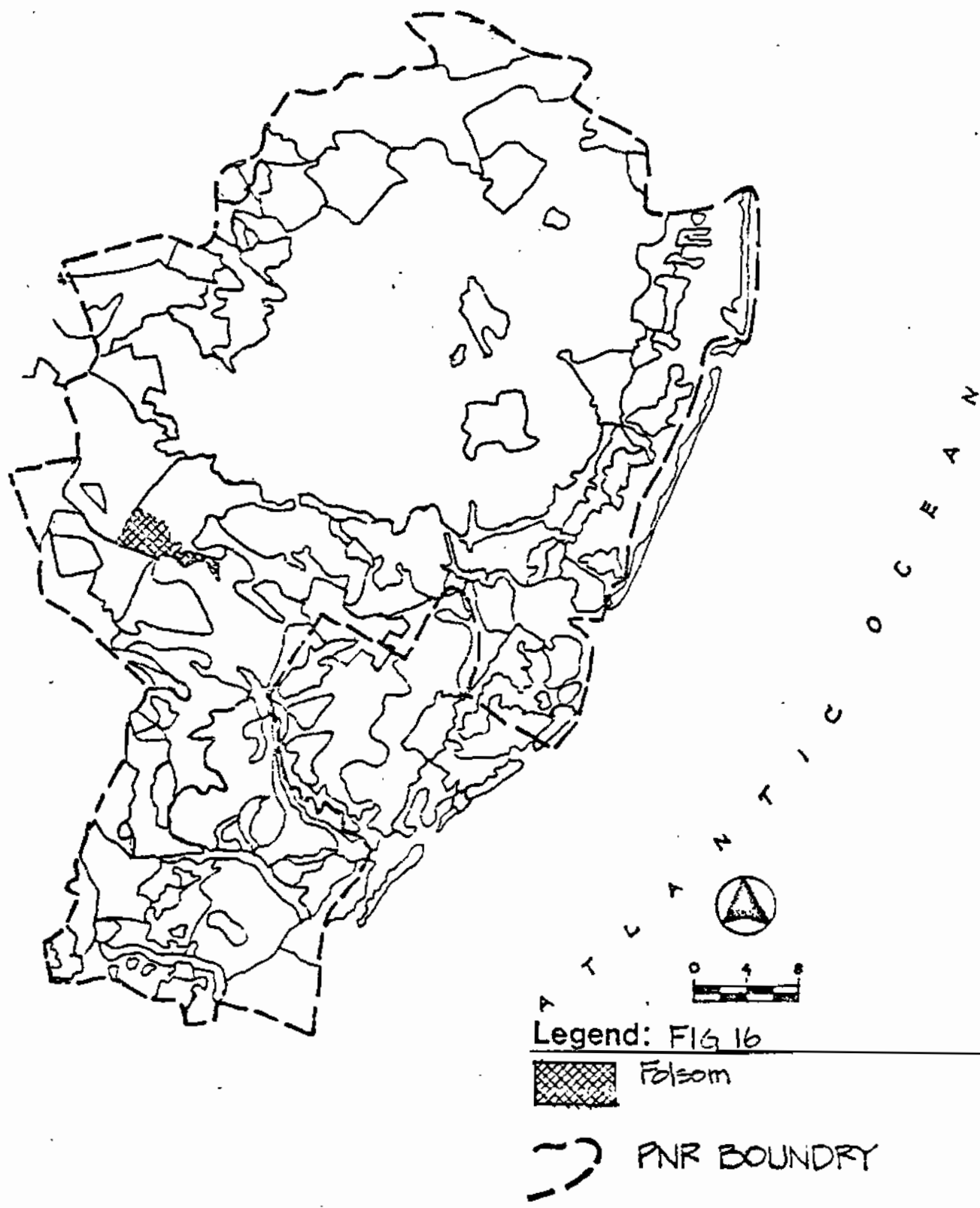
Local voluntary associations are mostly service oriented (volunteer fire companies, senior citizens, scouts). For other associations, Folsom residents commute to Hammonton. Hammonton also serves as a commercial center for Folsom, as the small town cannot support much commercial activity of its own.

This area forms a region because of the lack of agriculture due to poorly drained soils. It is also a separate governmental unit found between two larger units, is bordered by a stream corridor, and has a relatively large industrial base that dates from the nineteenth century. Issues of concern to residents include poor drainage that generates septic tank and runoff problems from old and new developments, total lack of public transportation which makes shopping difficult because there are no commercial facilities within the town itself, increased breaking and entering by both outsiders and natives, and the increased cost of public services.

the effect of Pinelands planning


If the Commission can help with water quality problems, the users and residents of this area will benefit. The industry of the township is a resource for forest users who undertake shift work and thereby supplement their forest income. A continuation of a healthy industrial climate will help those who work in the woods.

Regional Contacts: William Weber - Environmental Council (561-1510)
Eckharts Gertrude - contacts to older residents.



Legend: FIG 16

 Folsom

 PNR BOUNDARY

Cultural Subregions of the Pinelands

A Human Ecological Study by Jonathan Berger, et al, 1980

The Lakes: Monroe-Buena. This lake region is quite unlike the Medford/Evesham Lakes Region, for it decidedly lacks their exclusive ambiance and reputation. Although very different people live here, many of the problems are the same due to the recurring issue of lake management. Higher densities in this region cause regional concerns for water quality and questions as to how to protect the surface waters in the future without adversely affecting existing and surrounding land use patterns.

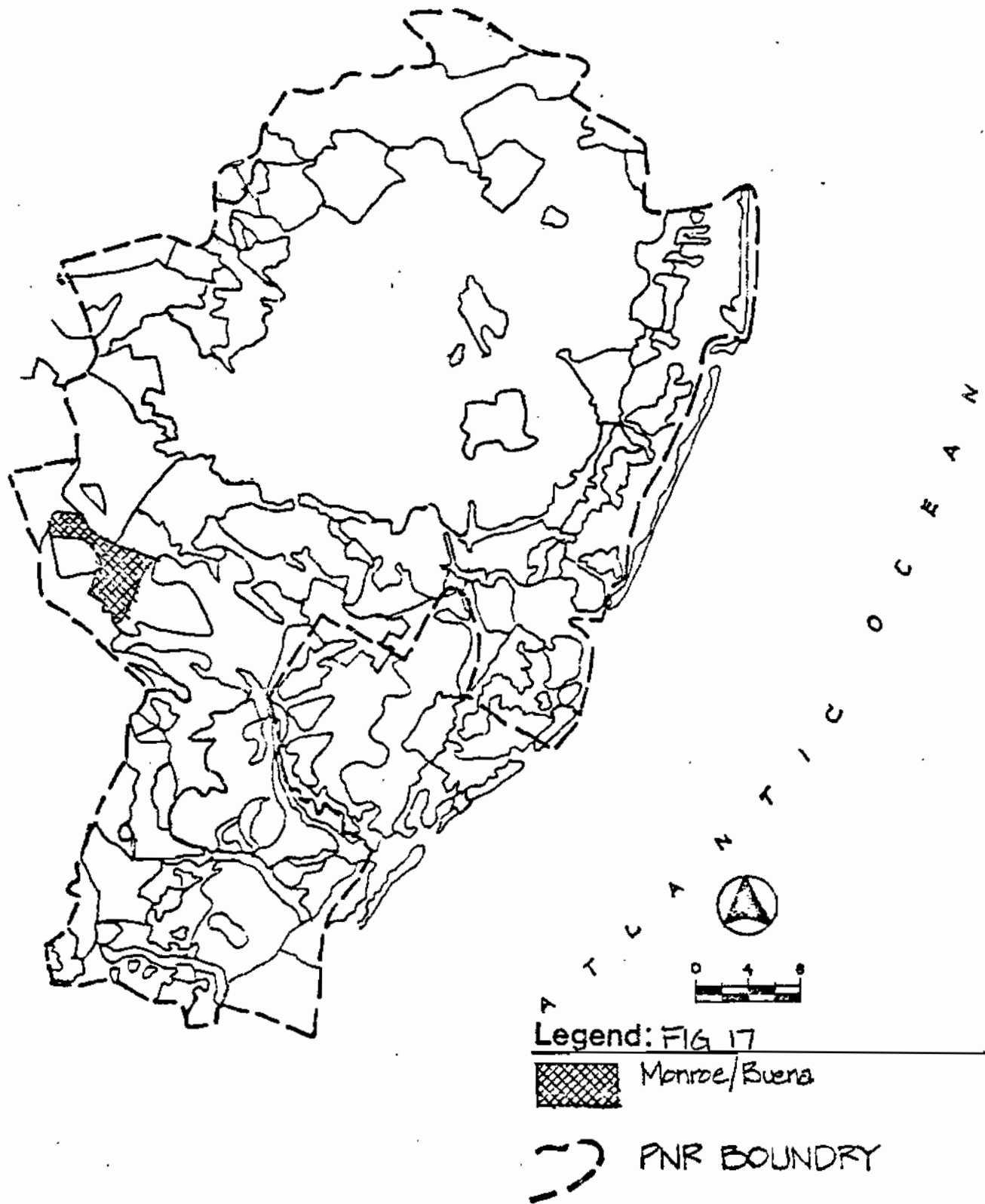
These residential lake communities have developed historically from cranberry bogs to summer resort communities, and presently contain mostly year-round residents. Timber Lakes was originally settled by South Philadelphia Italians whose children are now moving back in. Collings Lakes contains a mix of white professionals and blue collar workers and Black and Puerto Rican blue collar residents. Lake Ann and Pine Lake are more recent unsuccessful developments in which there are still many unsold lots; development corporations attempted to lure black homebuyers here from North Jersey and New York City. Cedar Lake is used strictly for recreational purposes, and there is no settlement directly associated with the lake. Some of the residents of these lake settlements work in local industries, but most commute to the Camden/Philadelphia area.

Most of these lake settlements have associations to represent their interests. As the developers of these areas lost interest, the lakes fell into a state of neglect. When the associations took over, they faced major problems with dams, beaches, and water quality. The water quality problem exists because at the time the older settlements were built, small lots were permitted and septic tank technology was crude. In seeking help in this matter, the Timber Lakes Association has achieved better results by bypassing local government officials and working directly with State and County departments. (Local officials have been considering a plan to sewer these settlements - especially in Monroe township - but local residents do not want to be faced with hook-up charges.) Residents of these settlements also belong to volunteer fire companies, ambulance squads, churches in Williamstown, Hammonton, and Buena, and youth associations. Hammonton, Vineland, and Williamstown also serve as commercial centers.

These communities feel they are in a different class from contemporary subdivisions since they are more stable and foster a true sense of community pride. Newsletters are typically used to disseminate information and announce upcoming meetings and social events. Issues in addition to water quality include concern about extended travel times to commercial facilities and juvenile drinking problems on the beaches.

the effect of Pinelands planning

The major land use question in this region is whether or not the communities can get a sewer line installed and yet maintain the existing density. Even with a sewer line, more homes on the very small remaining lots would only exacerbate the lake problems due to runoff. Any technical or planning assistance which the Pinelands Commission can supply to these lake communities will be greatly appreciated and can thus help build a constituency for preservation in other areas.



Cultural Subregions of the Pinelands

A Human Ecological Study by Jonathan Berger, et al, 1980

Regional Contacts: Wayne Johnson, Timber Lakes Civic Association
Walt Knitweis, Collings Lake Association

The Forest Regions

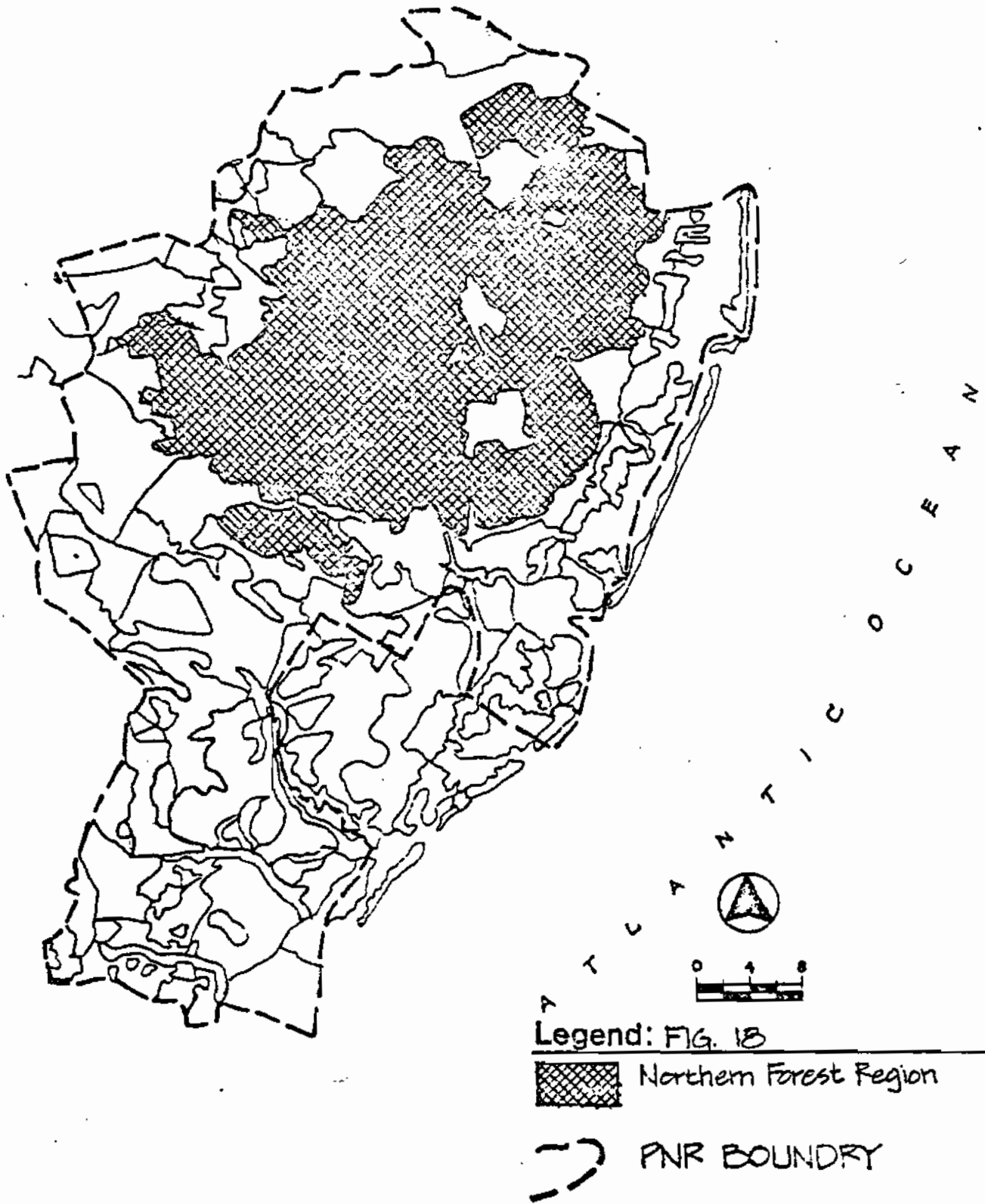
The Northern and Southern Forest Regions form an almost uninterrupted wooded belt down the center of the Pinelands National Reserve. Bordered on the west by crop agricultural and rural suburban areas and on the east by the coast and its varied sub-regions, these forest regions provide both continuity and contrast for the Pinelands. Although very different, the two are areas of extremely heavy extensive land use. Their boundaries have changed over time and will continue to change, yet it is their contiguity that provides a major feature of Pinelands character. All of the separate geological, hydrological, ecological, historical, and cultural entities within the forest regions have their own significance and character, but these pale in significance when compared to the value and unique nature of the relatively uninterrupted contiguous tracts.

Social organization of land use within the Forest Region has its own character. Community associations are limited to churches, schools, hunt clubs, and volunteer fire companies. Interest groups represent the primary agricultural and forestry users as well as the extensive land users. The state and federal governments play a major role. This cluster of associations and the related pattern of land tenure change rapidly at the forest edges. Like the forest, the social structure ceases to exist when overcome by competition from urbanization.

The Northern Forest Region

This is the region most frequently identified by residents and outsiders as "the Pine Barrens". It is the subject of John McPhee's book entitled The Pine Barrens. It is one of the Pinelands sub-regions most intensively used by people from outside the region as well as by those from within. Its regional character is defined by extensive tracts of contiguous forest land crossed by many streams, bogs, swamps, and dry uplands. Small woodland villages, hundreds of sand roads, low population density, scattered isolated settlement clusters, distinctive hunt club buildings, and all the structures and artifacts of cranberry agriculture characterize the settlement pattern. Historically the area has been used for iron forges, forestry, bog agriculture, hunting, fishing, trapping, gathering, recreation, speculation, State ownership and control, institutional retreats, and military purposes. Today the same mix of users occurs, accompanied by some change in the users and their issues.

Perhaps the most striking aspect of the processes of landscape formation and transformation in this Northern Forest Region has been the continued historical trend of outside intervention in the control of the land use pattern. In colonial times, absentee proprietors divided New Jersey into north and south. Philadelphia Quaker speculators followed this partition with investments in forests and bog iron. (These same people turned their attention to the anthracite region of northeastern Pennsylvania when depletion of the forest resources destroyed the bog iron industry.) Outside speculation continued with



Cultural Subregions of the Pinelands

A Human Ecological Study by Jonathan Berger, et al, 1980

Philadelphia's Wharton and his water transportation schemes as well as many other "land scams". State and federal governmental bodies became involved with the establishment of State parks, forests, and military bases and operations areas. In contemporary times many of these same actors retain their interest in the land, joined by others such as the New Jersey Conservation Foundation, Leisure Technology, Inc., and the Pinelands Planning Commission.

Due to low population density and a well-integrated native population, there are few voluntary associations on the local level in this forest region. In the woodland villages such as Chatsworth and Warren Grove, churches, schools, and volunteer fire companies are the major forms of voluntary organization. Individuals may belong to Bottle Digging Clubs or other leisure-oriented associations, but major community-wide organizations are limited. Social organization revolves around the exploitation of the land. Hunt clubs draw their members from non-resident hunters for the most part, while Sportsmen's Federations represent these interests at the regional and state levels. Fox hunters run their sections in small informal groups. The Southern Jersey Fur Takers Association runs trapping schools and lobbies for trappers' interests in Trenton. Four-wheel drive, all-terrain vehicle clubs use both snowmobiles and jeeps on the intricate web of sand roads and along the shoulders of larger routes. Regional campground and canoe livery lobbies monitor State actions in the interests of their members. Formal and informal groups canoe the rivers and hike or ride upon the trails. County and State agricultural marketing and political groups handle the agricultural issues. The State provides forest management for those who want it, and organizes timber sales from its extensive holdings. The Pinelands Coalition lobbies for the preservation of the ecological, cultural, aesthetic, and historical archeological resources of the region. Local member organizations include historical societies, watershed associations, and town-wide groups such as the Concerned Citizens for Woodland Township and the Bass River Environmental Commission. Often more important than voluntary associations are the families which run most of the land use operations. Before looking in more detail at the individual uses and users, it is important to understand the complementary and interlocking nature of the Northern Forest Region land use pattern.

All of the land uses requiring extensive tracts of land - "extensive uses" - (hunting, trapping, fishing, hiking, canoeing, forestry, gathering, educational and scientific activities, touring, cross-country skiing, cranberry agriculture, etc.) utilize the same set of landscape factors. This complementary use enhances both stability and vulnerability. All of these users utilize the streams, the bogs and swamps, the mesic transition zone, the dry upland, the sand roads, the shoulders of the major and minor paved roads, the woodland villages, and the scattered homes, lodges, cabins, and camps. Cranberry growers, for example, need an extensive water system to provide cultural means of insect control and to prevent frost damage. They protect their reservoirs and bogs by purchasing "headland" areas in the headwaters of streams. Hunters and loggers use the forest resources of that headland and canoeists

paddle the streams. Canoe rental agencies haul canoes and people over the same paved and sand roads which are used to bring in cranberry workers. Trappers get permission to trap private lands or they purchase leases. This whole system revolves around a clean, plentiful supply of water; open roads; and contiguous upland, mesic, and wet forests. The system is stable because the users rely on the same landscapes, and mutual care means mutual benefit. The system is fragile and vulnerable because interruption of one use could mean disruption of all the uses. Preemption of ground for urban uses may eliminate an entire cluster of extensive uses.

Among the users and owners there is a complex and often paradoxical view of the land. They want to be able to do with it as they please, and they accord the same privilege to others. As such, with the exception of Bass River township, planning boards have been loathe to reject development proposals. Thus there are developments like Leisure Towne and Hampton Lakes along the major roads. Since the majority of land is owned by outside speculators except for the massive cranberry and State holdings, there remains a latent threat of turnover, development, and disruption.

An understanding of the users and their interactions with the environment provides a sense of the dynamics of the region. Large successful cranberry growers in New Jersey are unique to the Northern Forest Region of the Pinelands. Within this region lie the lands of the only surviving, highly viable, and capital-intensive cranberry operations remaining in the State. With the demise of the family farm in the eastern United States, these growers and their families have managed to consolidate and expand their holdings. Their situation is stable, so much so that more people want to get in than get out. Most of the families are long-time residents whose families have been involved in cranberry agriculture for generations, and the next generation also intends to continue the tradition. It is accurate to say that these families started and have maintained over time this profitable and environmentally sound New Jersey land use. Issues of import to the cranberry families, all of which are related to processes of landscape formation and transformation, include the protection of water quality and quantity, labor problems, pest control, and relations with the State. These issues are addressed individually by cranberry growers as well as collectively through such organizations as The Ocean Spray Coop, The New Jersey Cranberry Growers Association, and the American Cranberry Growers Association as well as the Farm Bureau.

To protect water supply, the bogs, and reservoirs from fire, cranberry growers purchase headland buffer areas. Many therefore own thousands of acres. One large farmer said, "There is never too much water...I am always on the lookout for water supply lands, and there is not too much more available." Fears of water transportation from the region are real to the growers. They have seen the plans for canals, dams, and reservoirs that would rob them of their precious resource. Behind the Pinelands planning effort, some see a conspiracy to keep the water clean and then ship it out of State or to North Jersey. This fear

is fed by the exclusion from the Merlino bill of a "non-transportation of water" clause.

Labor presents another problem common to all forms of agriculture not only in the Pinelands but throughout Megalopolis. Large growers own their own buses to transport day labor from the cities at the height of the season. They have dormitories for migrant workers who stay for extended periods of time, and they have provided land for workers who wish to remain year-round rather than return to the city or to Puerto Rico. The recruitment of labor is a massive problem that has engaged both the State as a regulatory body, the Farm Bureau which has a service association that sends recruiters to Puerto Rico to find labor for all New Jersey farms, and labor crew chiefs who are hired by growers as sub-contractors to recruit workers from nearby cities.

Relations with the State dominate discussions about the future and about Pinelands planning. Of prime concern is what some call "indiscriminate regulation" of pesticides, labor housing conditions, and land use. This is coupled with "incompetence and a don't care attitude". Decreasing State support for the agricultural experiment station adds to the strained relationship. The growers have their own berry experiment station near Chatsworth, and look to the staff for continued advances in cultural methods of pest control. Pests adapt rapidly to pesticides, so new advances are always needed. State and local controls on burning also make operations difficult. Fire wardens can no longer issue permits, having been replaced by a more complicated and centralized fire permit hierarchy. The end result of this new system is that the same permit is issued; it simply takes much more time and trouble. These strains on the State-grower relationship cause considerable doubt in the growers' minds about whether the State really has agriculture in mind for the future. Perhaps the stock policy statement of "pay me for my land if you want to keep farming alive" represents something more than the desire to cash in on equity. It might also represent the doubt and distrust many hold for non-farmer proponents of agriculture. These strains, however, are only secondary to the major issues raised by Pinelands planning, which include State preemption of viable agricultural lands, compensation for rights, compensation for municipalities, and the bailout of speculators.

Growers do not want to see the State buy farms and bogs and then take them out of production. Clearly there are families who would willingly work bogs which are bought by the state, and most cranberry growers advocate long-term leasing of State-owned bogs. This, however, might come into conflict with some multiple use strategies for public lands.

The issue of land use regulation without compensation for loss of rights is of concern to most landowners of the Pinelands. "If the project is in the public welfare, then the public should pay for any land which is taken..." This is a double-edged issue for cranberry growers, who want and need all of their lands and fear that a Pinelands Plan might mean that they will have to relinquish some of their control. Protection

of the water resource is a goal of the planning process. Since cranberry agriculture acts to protect both water quality and quantity, then should not some form of incentive or compensation be available for that continued service? Most of these people want to stay in cranberry agriculture, and as such they represent a nucleus of private landowners that might happily take advantage of State incentives not to develop in the form of a covenant or trust. If the Commission could formulate such an option, they would find many acres of land available. The possibility bears investigation, because it might lead to a way to decrease State purchases in areas where large berry growers are tax vulnerable due to the township's reliance for their tax base on the growers' large holdings. Such an increase in land protection without a measurable increase in State purchases would benefit many people.

Closely tied to the land regulation issue is compensation for municipalities where State purchase will remove land from the local taxrolls. Some claim that acquisition without compensation is already taking place under the auspices of the New Jersey Conservation Foundation. Growers feel that in Woodland, Bass River, and Washington townships, full taxes should be paid by the State. This is an extreme point of view, but does suggest that some form of tax relief must be a part of any incentives package.

To people who work the land, speculators are highly unpopular because they tie up land and keep it out of timber or agricultural production. Many of the speculative corporations have undergone bad times, and have come close to selling out at lower prices or losing their land at tax sales. Suddenly the potential Pinelands bailout appeared. Many feel that with programs for public purchase the speculators will get the money and the people who make their living off the land will be left to suffer the increased tax burden. There is thus widespread suspicion about the means and the ends of the Pinelands planning process. Intervention will alter the forces that shape the built and natural landscape, and those who use the land are sensitively keyed into those forces. Their survival depends upon how well they can monitor and anticipate the on-going process of landscape change.

Unlike cranberry growers, the gatherers own very little land. Before World War II, many of the people of the Northern Forest Region made their living exclusively from seasonal gathering of herbs, shrubs, trees, moss, pine cones, dried flowers, and berries. With the war came the defense industries, and people left to go outside the region and work. Only a few remained behind and continued on as cedar cutters or moss gatherers. It is said among the people that "styrofoam was invented because the men from Warren Grove, Chatsworth, Green Bank, etc. stopped gathering moss, so they needed a new packing material". Today in this region there are perhaps 30 or 40 full-time gatherers. They live on the outskirts of the woodland villages, in isolated gun clubs, or on small strips near Brown Mills and the coastal villages. Field workers met one person who made a large annual income by hiring over eight people to collect materials from which he made grave blankets and wreaths.

Many others gather to supplement their income. Current items for collection include pine cones, moss, laurel plants, wild huckleberries, birch, and other items that are desired by wholesalers of florists' material. One wholesaler, Allyn's Manufactory, is located in Whiting and there is another dealer in Mt. Holly. Allyn's buys materials year-round, and then stores them until the appropriate marketing season arrives. They get 20% of their materials from the Pinelands and the rest from all over the world.

The economic benefit to the Pinelands area from this gathering must not be underestimated. It is also important to realize that the people engaged in gathering will never come forward and participate in a planning process, for they are reticent and not politically active. Yet their interests are clear: if the land is kept open, they can continue to gather; should areas like the Plains be bought and then closed to use, gatherers would be hurt. (Actually, due to enforcement difficulties, such a prohibition on use would probably decrease gathering activities only slightly, if at all.)

Cranberry growers and gatherers live in the Northern Forest Region, but a majority of the users live outside. Hunters are an excellent example. Native residents do hunt, but the "twenty thousand trespassers during deer week..." come from outside. Most hunters belong to clubs, of which there are several different kinds: (the following discussion of hunting is condensed from the preliminary report by John Sinton and Dick Regensberg entitled "Hunting and Hunting Clubs of the Pinelands").

*They range in size from 20 to 125. Most have 40-50 members.

*The oldest club (Atlantic County Game Preserve) was founded in 1905 and the newest ones began 2 to 3 years ago. Most clubs were founded in the 1930's. There is a slow process of attrition and birth as some clubs die from lack of or the old age of members, while others are begun by younger men or those dissatisfied with other clubs.

*Membership in clubs is passed from father to son. Some new members are admitted on recommendation of old members, but in general membership is remarkably stable.

*A minority of clubs, probably no more than 20%, derive their membership from local people. Examples are Unalachtigo in Woodbine and Cologne in Atlantic County. These clubs are long-lasting and stable, and their members began as hunting partners when they were teenagers. Members of these clubs are likely to be active in their communities as volunteer firemen, grange members, or members of township boards.

*Most clubs were founded by people living outside the Pine Barrens. Such clubs are also enduring and stable, and most members are farmers or blue collar workers, although a significant number are in the professions. In general, members of clubs in Cape May and

Cumberland counties come from Cumberland and Salem; those in Atlantic county tend to be local (often from Mainland or offshore communities) or from Camden and Gloucester counties; those in Burlington county clubs are from Salem, Gloucester, Camden and western Burlington counties; and those in Ocean county clubs are from Western Burlington, Monmouth and Middlesex counties.

Each club has their own hunting territory. The majority of hunting territories consist of state lands and private lands not owned by gun clubs. A few clubs, however, own as much as 3,000 acres which they hunt not only for deer, but upland game and waterfowl.

The size of territories which gun clubs use varies widely depending on weather and game conditions, the amount of cover and number of hunters in a drive and the care which hunters beat the bush. The customary number for a drive is between 20 and 30.

There are no recorded conflicts among gun clubs over hunting territories. If one club is working an area, another club will go to a different place. It is incumbent on the gun captains (leaders of the hunt) to scout areas beforehand and have their members in the field early if they expect to get good results. Conflicts do, however, occur between gun club members and single hunters, usually "sitters" who wait in tree stands for deer to pass under them. Working alone, a hunter may jump into the middle of a drive to shoot a deer which might rightly belong to the club driving the deer. These tactics are unforgiveable, and if the loner gets a deer, either the deer is taken from him or revenge is taken on him. Such incidents are rare.

A number of clubs in Ocean and Burlington counties are experiencing increasing trouble with suburbanization in their traditional hunting territories. Houses spring up in hitherto backwoods areas, thus cutting out chunks of territory at least one-half acre in size (law forbids hunting within 450 feet of a dwelling). "Philadelphia Pineys," new residents from the Delaware Valley, often move in and post all their land against hunters, thus taking even more land out of hunting use. One club in Jackson Township has Great Adventure as a neighbor, and a club member felt uncomfortable hunting deer with giraffes staring at him over a fence.

Most hunting is done by people who do not belong to gunning clubs, although we do not have studies of the exact number of hunters in the field at any one time nor of illegally taken game. Our information comes from field work, discussions and hunting the authors have done over the past decade in the Pinelands. Most men who grew up in the Pinelands have hunted game or still do. Some make a living at it in fall and winter. A few sell illegally killed deer to markets. The vast majority hunt for sport and pleasure. Because residents of the area live in the Pines, they know the area and its game on a more regular basis than outsiders and have more opportunity to hunt. Clearly they kill more small game than outsiders and probably more deer as well. Hunting techniques do not differ among residents and non-residents, although

residents are more apt to hunt from tree stands than by driving the brush.

It is clear that hunters use a vast amount of forest and agricultural land in the Pinelands. The clubs whose members use the area only during deer week obviously make less intense use of the Pinelands than those whose members use clubhouses year round. To all gun club members, however, the Pinelands are an integral part of their lives. To all members, maintenance of open space and habitat management are top priorities.

Members of year round clubs not only use the Pinelands for deer hunting, but upland game, canoeing, fishing and socializing with their families. They and their families take part in all forms of recreation, and some of them decide to reside in the Pinelands because of their love for the area, its residents and the activities they can pursue.

Members of gun clubs hunt a large amount of territory. In addition local residents cover a lot of ground, such as cedar swamps, which club members often avoid. Local residents also hunt foxes with hounds and trap fur-bearing mammals.

Clearly hunters, trappers and fishermen take every opportunity to cover every available hunting or trapping territory. Maintaining and managing habitat is important to them, and every development in the Pinelands takes away such habitat. Many local hunters and trappers are caught in a bind: they need to keep the forests and fields open, yet they need to provide housing and building sites for their children. Hunters and trappers have suggestions on habitat management and might be an important and willing source of labor and expertise in implementing management schemes.

The attitudes of all hunters and trappers toward the state, especially agencies of the Department of Environmental Protection, is ambivalent. On the one hand they appreciate the state's concern for and work in managing areas for wildlife; on the other, they are annoyed that these efforts are often tentative for lack of staff, and they have an ingrained distrust of the state's power to purchase land or restrict its use.

Many hunters are sophisticated about techniques for wildlife management, the health of the deer herd and management problems. They applauded state efforts to plant rye strips to improve deer feed, but are angry these strips are not managed and have reverted to Indian grass. As one gun club member stated, "It would have been better if the state never planted the rye strips than to plant them and then not manage them. The strips were an artificial food source which caused a boom and bust in the animal population. Deer need a permanent food source, not a quick fix."

Most hunters strongly supported the Green Acres program because it compensated owners for their land and preserved open space. However, they have recently seen that a lot of Green Acres funds have gone for

parks and recreation, and many areas which the state bought are unsuitable or off limits for hunting.

It is essential that state agencies, including the Pinelands Commission, gain the support of hunters for management programs. In the first place, there are a large number of hunters and trappers, and some gun clubs own several thousand acres of land. In the second place, hunters come from all parts of South Jersey and have a broad-based constituency. Thirdly, gunning club members are often politically and socially important elements in their communities; many are professional people and politicians, and many others are active in local voluntary organizations such as volunteer fire or ambulance companies, the Kiwanis, Grange and Rotary.

Hunters, especially gun club members, are often integral parts of their local communities and, therefore, have voices which may be more powerful than their numbers alone might indicate. They believe in home rule and private property and, while they strongly support conservation efforts, they just as strongly resist state efforts to abrogate what they view as local property rights.

Last, it must be noted that a number of hunters and their families from the Delaware Valley and North Jersey decide to reside in the Pinelands and become "Pinier than thou." The classic example has been described by Tom Ayres in his article on the Pinelands Cultural Society in Natural and Cultural Resources of the New Jersey Pine Barrens. In this case Joe and George Albert from Sayreville, Middlesex County, built a hunting cabin near Waretown, then moved into it permanently, and the cabin became the first home of the fledgling Pinelands Cultural Society which now has its headquarters at Temporary Albert Hall in Waretown. A significant number of other examples are scattered throughout the Pinelands.

Deer and game hunters kill their prey, but fox hunters only stalk the fox. With their packs of hounds they run on foot for miles through the woods. Like the hunters described above, fox hunters have their "sections". A rough outline of some of these is shown on the extensive land use map. Crowding is a major problem, so fox hunters rarely get together in large hunts. They are extremely competitive about their dogs and their territories, which are large. (One territory extends from Pasadena to the Forked River Mountains.) Old and young long-time residents dominate the sport, but some fox hunters come to the Pinelands from other parts of New Jersey. There are well over thirty packs in the Northern Forest Region. Sand roads and large contiguous tracts are essential to this use, which is thus very sensitive to disruption from urbanization. Major issues include over-crowded roads and conflicts with trappers whose traps sometimes catch dogs.

Trapping is an enormous money-making enterprise. Trappers utilize the Northern Forest Region heavily, for the many habitats provide muskrat, raccoon, beaver, and fox. The number of trappers continue to increase, as evidenced by the fact that trapping school membership in southern New Jersey has jumped from 100 to 600 in only three years.

Interest group officials estimate that there are between 1500 and 2000 trappers in the Pinelands alone. These include clambers and construction workers who engage in trapping as part-time work, school boys who generally concentrate on muskrats, and white collar workers who simply want to supplement their income. The Northern Forest Region provides a rich selection of accessible habitats, including private marsh lands where trapping by agreement or lease may be allowed; farmlands where trappers provide a form of predator control; State wildlife management areas; and the many lands under speculative ownership which people use without permission or agreement. Trappers utilize the streams, the contiguous bogs and swamps, the small but ubiquitous transition zone between wet and dry environments, and the upland. All of these habitats are important, for they provide a mix of animals. Protection of streams for the purpose of preservation of water quality and extensive uses must include a buffer adequate to the protection of this range of habitats. Elimination of the transition zone may eliminate many animals. The raccoon, for example, has no saliva and must therefore wash its food in the stream. It also needs dry dens, which are found in high banks or, in the case of swamp-lined streams, away from the stream in the mesic transition zone. Habitat loss is a major concern. Large contiguous tracts are again necessary because the isolation of woodlands and swamps by roads or development will cause the animals to migrate out. Trappers believe that such migrations are due to highway kills triggering habitat abandonment by other members of the species. The trappers are afraid that "ecology" will mean no more fur harvesting. They believe that they take care of the habitat and the animals, and that they have a greater interest in the well-being of the ecosystem than humane society fanatics who want them shut out of the Pinelands.

Following a seasonal pattern, city dwellers and suburbanites fill the Northern Forest Region to use the trails, the streams, the sand roads, the parks, and the vistas, and to enjoy the feeling of being somewhere where it is "so fine". People from California with its majestic mountains and spectacular uplifted coast canoe the rivers of the Pines, and come away with the knowledge that they have been some place special. George Mick and the Bell brothers own canoe rental businesses in the middle of the Pinelands, and they estimate that they serve as many as seven thousand canoe trips per season, including scout groups, churches, outing clubs, or just families and friends. From March through December there is an endless stream of people coming from such places as Philadelphia, other parts of Pennsylvania, Northern Jersey, New York, Connecticut, Delaware, and Maryland. Important issues to canoeists and outfitters are the maintenance of sand roads for canoe hauling; trash dumping; the maintenance of put-in and take-out areas; expanded facilities for over-night camping; regular cutting of deadfalls that block stream channels; and the crowding of rivers during times of peak use. Other important recreational uses include horseback riding, hiking, cycling, and camping at the various State facilities and private campgrounds. Bert Nixdorf, president of the South Jersey Outdoor Club, describes over 91 separate bike and hike routes within the Pine Barrens in his book, Hikes and Bike Rides.

Forestry is another major land use whose resources are located within the Northern Forest Region but whose users are, for the most part, located outside. The vast majority of the primary users (including loggers, sawmill operators, and pulp mill owners) are found either along the coast or in the crop agricultural areas. The urban industrial corridor of the Delaware and its feeder railroads and highways attract most of the secondary wood-using industries.

Loggers either work for specific mills or they work independently and sell to mills. Most have other forms of work: some repair heavy equipment for farmers; truckers, other loggers, and construction companies. Thus by the nature of their other forms of livelihood they seek boundary locations between agricultural, suburban, and forested areas.

Prospective cutters bid on cutting rights from State and privately-owned lands. Only 15% of the privately-owned forests of the Pinelands are operated under State-recommended management plans. The major issue of Pinelands forestry is thus poor management and under-utilization. There remains untapped a tremendous, renewable, economic resource for New Jersey and the entire Mid-Atlantic Region. Through proper forest management, growth rates and stumpage value for landowners within the Reserve could increase six fold, from a present \$504,000 to \$3,593,000 (Pierson, 1979). A progressive forestry program can become the key to land use management for the Pinelands National Reserve as the centerpiece for a multiple-use strategy. Most of the research has already been done; only implementation strategies remain to be worked out.

the effect of Pinelands planning

Pinelands planning will affect several distinct groups of people who live in and use the Northern Forest Region, including large family cranberry growers; woodland village residents who own smaller amounts of land and work in the woods, grow small crops, or work for the State, county, or township; extensive users from outside; speculators; and conservationists. Growers will be affected if large amounts of land are taken off the taxrolls and if their agricultural practices are interfered with. Woodland village residents need places for sons and daughters to live, and they do not own much land. They will also be affected by the impact of State purchases on their tax burden. Extensive outside users might be subject to some curtailment of use rights. Conservationists want unique, scarce, and rare areas bought or otherwise protected. The speculators wait in the wings to see what the tide of fortune will bring. Will they be bailed out? Will they be provided with development opportunities not found under the old, local systems of control?

It is in the best interests of the Commission to treat the cranberry growers as a distinct constituency and to seek ways to work out water resource protection measures, recreational conflicts, and tax burdens. These people own and occupy large contiguous tracts of land, are powerful in the region and in the State, and also represent a distinct and unique

use and resource of the State and nation. The people themselves are as valuable as the water and the land. In my mind there must be a "cranberry strategy" formulated by the growers and the Commission that meets the needs of the growers, the federal legislation, and the extensive users.

The woodland village residents represent another challenge. If they all owned large amounts of land (and some do), then a type of large-lot zoning coupled with other management tools might prove useful. Since all of them do not, another type of system will have to be added to a "large-lot" strategy. There will have to be a "village strategy" that will deal with these people and their interests, and which may have to extend into the surrounding woods if research reveals dispersed land holdings by residents. To begin to solve this question, more detailed land ownership information will be necessary. In any case the village strategy will have to include provisions for some kind of limited economic development and growth potential.

Extensive users are important both economically and socially to the larger metropolitan region. Should urbanization occur in the area, these uses will disappear wherever that development occurs. A strategy for the extensive users will have to deal with issues of access, sustained yield, and conflicts between recreationalists, current residents and owners, and preservation areas. Forest management will also be important to gatherers, loggers, and processors. Solid waste disposal to serve the needs of increased seasonal recreational users must be a part of the solution.

Purchase and regulation of sensitive or "critical" areas will satisfy the conservationists. The "conservation strategy" involves protecting the water regime, the agricultural lands, and the viability of the forests. Conflicts will occur if too much "preservation" and not enough "resource management for economic purposes" comes through in the plan. The exact nature of a fire management program and subsequent use and regulation of the forest for hunting, trapping, lumbering, and gathering will determine who will suffer and who will benefit from a conservation plan.

Speculators can either be big losers or big winners from implementation of the Pinelands plan. If the plan concentrates on purchases near large State-owned areas and sets up strict guidelines for permit applications in other areas, then there is a chance that monied interests can meet the guidelines and build in the interstices of the State-owned lands. A future landscape would then resemble park lands with concentrations of residential growth near major roads and around the parks. The actual amount of State "forever-conserved" land would rise, but it is quite possible that the amount of extensive use would decline because of interruptions from urban clusters. This potential future must be kept in mind when the Commission creates guidelines. If this is not a desirable future, then policies have to be written which guarantee continued extensive use coupled with scattered low density, rural development which does not necessitate sewer and water lines, parking

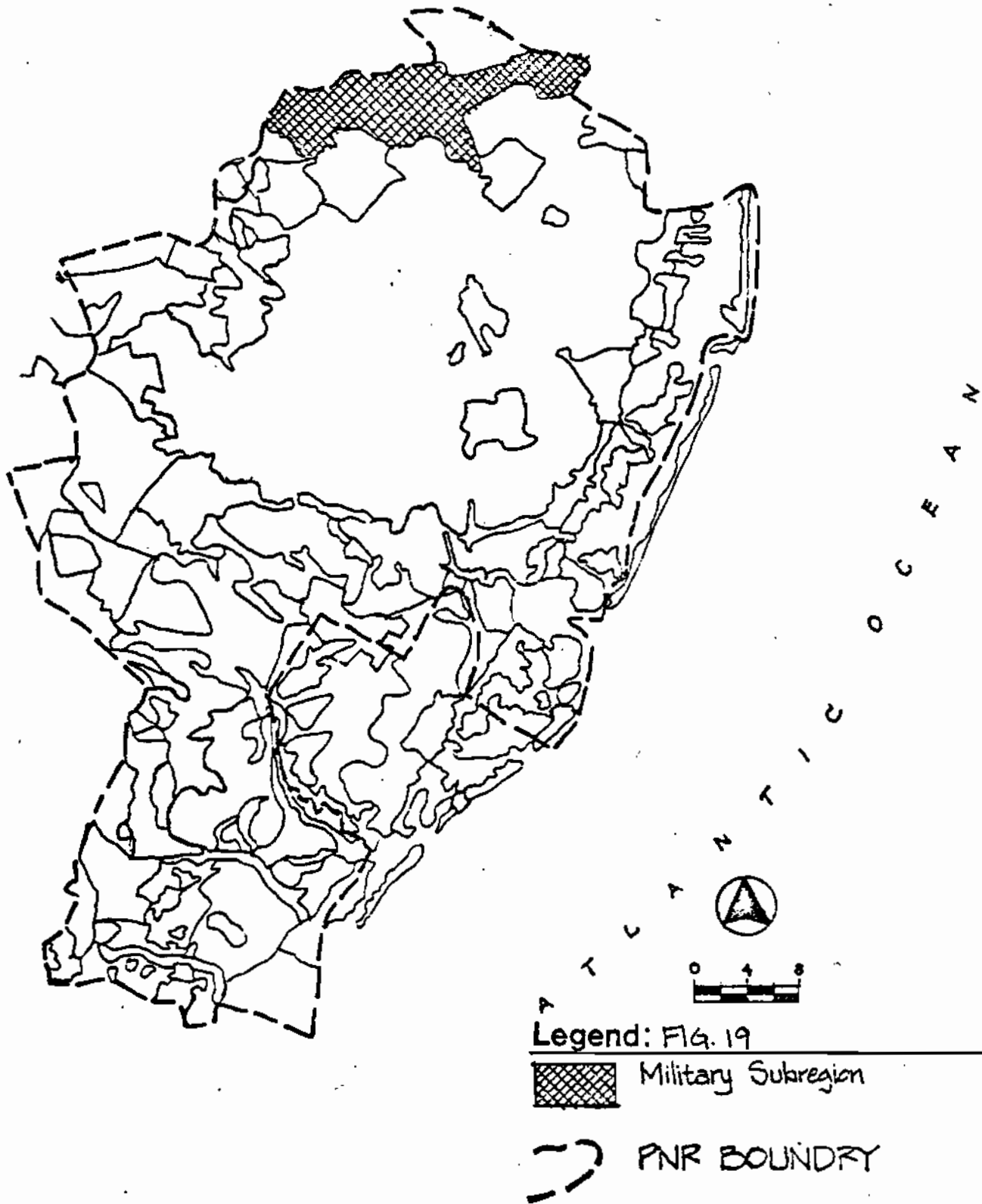
facilities, and paved, lit roads. It may be better to fight the taking issue inside the preservation area (in light of the federal act) than to hope that meticulous planning and design will form workable designs in response to performance requirements. If the interest of the Commission is use and users, then no use which preempts valued land will serve, no matter how well designed.

The State of New Jersey is the final major actor in planning the use and management of the Northern Forest Region. What will be the State land policies on their own lands? Will the State encourage a balance of forestry, preservation, recreation, gathering, agriculture and hunting? Will there be more "Atsion Lake"-type recreational centers? What will be the policy towards controlled burning? Will the land be used or taken out of use? Current management policies emphasize multiple use, yet agriculture is relegated to short-term leases that are supposedly conducive to "what the State is trying to do in the area". At State-owned Double Trouble is probably the only remaining active cranberry bog in Ocean County, and it is run by a person with only a short-term lease. His work is allowed because it complements the historical theme of the area. Will the increase in State lands mean an increase in visitors to the area? Will there be more facilities? If so, what kind and where? Will there be use quotas? These questions must all be addressed as part of the Pinelands planning process. The fewer the restrictions on extensive use, the more the current users will support the plan. I suspect that a larger influx of visitors would be welcomed by some merchants but not by local residents or by resident and non-resident extensive users.

Regional Contacts:

- Bert Nixdorf -South Jersey Outdoors Club
- James Furlong-President South Jersey Fur Takers Association
- Bill Haines -Chatsworth - cranberry grower
- Joel Mick -Jenkins, canoe renter
- Bell Brothers-Bel Haven, camp ground owners
- Mr. Bowker -Chatsworth, former Woodland Township Mayor
- Sid Walker -Batsto-Director Southern Region-Parks
- John Broomes -Chatsworth - store owner
- Jack Davis -Browns Mills - fox hunter
- Dilks Family -Chatsworth - gatherers
- Rusnak Brothers-Timber brokers-Waterford Works

Convenience of location and a conducive natural environment account for the location of both military and retirement land uses in the Pinelands. The military need flat ground for operations and bases, relatively isolated areas for operations, and they need to be relatively close to population centers. The Pinelands fits all of these characteristics. Developers of retirement communities seek clean, uncrowded, relatively rural areas close to recreational opportunities in areas with low tax rates. They also seek areas adjacent to major metropolitan regions.



Cultural Subregions of the Pinelands

A Human Ecological Study by Jonathan Berger, et al, 1980

Again the Pinelands fits all of these characteristics. While each of these uses focuses on particular phenomena of the Pinelands environment, neither depends on the renewable use of the environment, and both contribute in many ways to the economic and political life of the region. The two occur in relative proximity to each other in the Northern Forest Region.

Military Sub-region. This region incorporates Fort Dix, McGuire Air Force Base, Lakehurst Naval Air Station, and Lakehurst Borough. Lakehurst Borough, less than one square mile in area, is included in the military region as it is the home for many military personnel. The land use in Lakehurst Borough is therefore residential. McGuire Air Force Base consists of approximately 3500 acres which is roughly divided equally between airfield and base. The base includes all dwellings and service buildings and support facilities. Part of the airfield falls within the critical zone. The airfield consists of two runways and is open with grass and pavement. The McGuire informant was personally in favor of the moratorium, and discussed the AICUZ (air installation compatible use zone) program. Through AICUZ, McGuire tries to get communities surrounding the airfield areas to zone land near the runways compatibly with airplane use. They do not want growth in these areas for safety reasons and because of potential complaints about noise. So far this program has been successful. About 6000 military personnel and 2000 civilians work at McGuire. Both military personnel who live off the base and civilians tend to live in areas like Mt. Holly, Browns Mills, Bordentown, Willingboro, and New Egypt. Some people commute as far as 50-60 miles. Use of the Pinelands, in off time, includes camping in areas such as Batsto and Bass River State Park, use of the Ft. Dix recreation area (Brindle Lake), and use of the Ft. Dix range by the rod and gun club.

Lakehurst Naval Air Station is a 7400-acre tract in Manchester and Jackson Townships. Most personnel are non-transient. Between 1100 and 1400 people are in the military, and they are a somewhat transient group. Civilian employees number about 2500. Off-base personnel tend to live in Burlington, Ocean, and Monmouth Counties, with many in Toms River. Also, two bus-loads of civilian employees come from Philadelphia. Most residential and building activities take place in the southern and southeastern portions of the Naval Air Station. Testing occurs mostly to the west. Lakehurst Naval Air Station is bounded by state and federal woodland and Jackson Twp. to the north, wooded area and Lakehurst Borough (where a few thousand personnel live) to the south, and the Manchester Twp. industrial area to the east. No position was offered concerning the Pinelands.

Ft. Dix consists of approximately 35,000 acres, plus about 36 smaller (averaging 5 acres each) properties elsewhere. Most personnel is civilian, and about 2000 military families live on the base. The built-up portion of the base is to the west, and is in the protected area. In addition to buildings, there is a water plant, a sewage treatment plant, and a landfill. In the preservation area are some wells for camping

and firefighting and a couple of septic systems. There is presently concern about obtaining new permits to continue to use the landfill. Brindle Lake is the recreation area. It is utilized by military people and off-post people. There used to be summer programs for deprived children and special olympics. Boy scouts have also used the lake. Public hunting and fishing are allowed by permit in areas where military personnel may hunt, but not in the impact zone. There are off-road vehicle trails, which are used by the public more than the military. Here there is the problem of trespassing. Permits are given for cutting firewood in areas to be cleared for training areas, or where it is desired that pines be allowed to grow. Burning is sometimes done. The post forester is in charge of management. The impact area into which rifles, artillery, and mortar are shot, is within the critical area. It consists of about 10,000 acres of wooded land with old cranberry bogs and much wildlife. People are not allowed in the area due to the fact that there may be duds. There are some complaints from residents in nearby townships, such as Manchester Twp., due to the noise from artillery fire, especially on weekends when reserves train. Basic training also takes place in Fort Dix, although the base is a little over half of the recommended size for a basic training facility. It is difficult to predict what land use will be in the future because of political and other decisions. Tanks are being used with increasing frequency at Ft. Dix, partially due to the energy crisis (Ft. Dix is closer than Ft. Drum in N.Y.). There is not a soil erosion problem yet. In terms of the Pinelands, the legal people say that once a land use plan is developed, Ft. Dix would be obliged to abide by it. Ft. Dix must abide by environmental laws, but need not obtain building permits. Army policy is to act as a leader in environmental protection (even though they were told to have tank training). There is no objection to the idea of preserving the Pinelands, but if there is too much restriction, the base will have to move. There is concern that an adverse decision concerning a landfill would result in an economic drain. The informant did not approve of the talk of building a trailer park at Brindle Lake. In terms of environmental concerns, the hierarchy is more concerned with promotions (if military personnel do not get promotions on a particular schedule, they are not kept in the service) than the environment. The environmental branch essentially helps to keep the army out of trouble. Finally, the hierarchy would like realtors to tell people that Ft. Dix is nearby so that noise, dust, or vibrations (from tanks) are expected when new residents move into the area. Either Ft. Dix has to operate as a good training center, or it doesn't operate at all. Training activities cannot be given up.

the effect of Pinelands planning

The federal government will comply with regulations. Nonetheless, two questions loom large: First, are there hazardous materials stored on the bases and do they endanger the environment? Second, if conditions are safe, can public use be increased? Other issues include the coordination of military forest management with the Pinelands plan, and potential future uses of the woodlands and the bogs in the event that Ft. Dix closes down. These lands could all easily be incorporated into

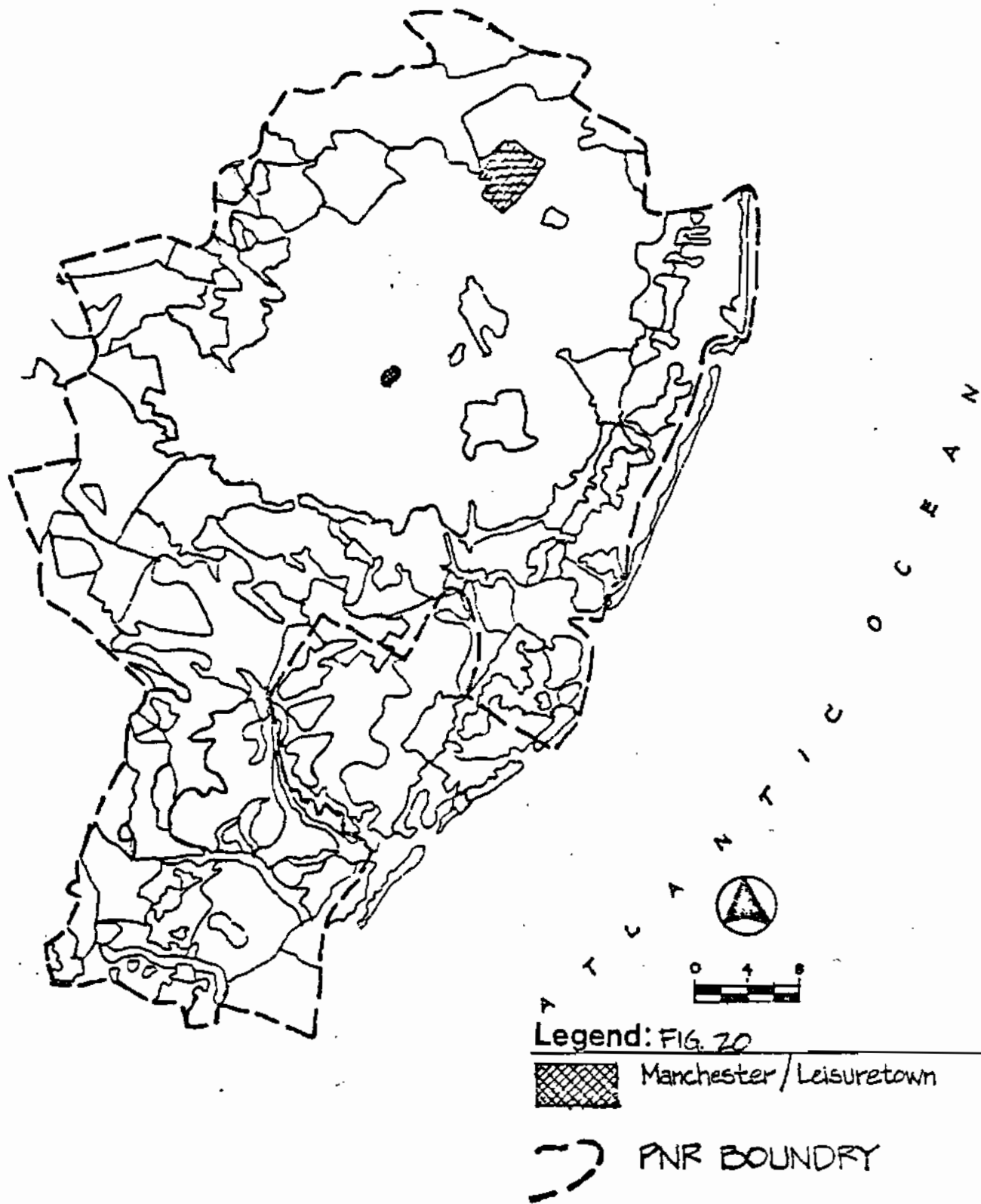
the regional economy.

- Regional Contacts:
1. Joe Haug, Ft. Dix, environmental branch
 2. Nick Grand, Lakehurst Naval Air Station, Deputy Public Affairs Officer
 3. Mr. Poor, McGuire Air Force Base, Deputy Civil Engineer

Retirement Sub-region. Information about the retirement land use comes from Manchester Township, Ocean County, where there are seven senior developments. A similar community - Leisuretowne - exists in Southampton. The first of these developments began in 1962, but the major influx of people has been within the past six to ten years. Most of the seniors come from northern New Jersey, New York, and Pennsylvania. In Manchester the requirements for residents of these planned retirement communities are as follows: at least one of the owners must be a minimum of 52 years old, up to three people may inhabit a dwelling, no resident can be under 19 years of age, and residents are responsible for maintenance and services within these communities with the exceptions of police and ambulance service (and presumably fire service). The vast majority of residents of these communities are well over 52 years old, and are retired. Reasons for moving into such a settlement include a desire for peace and security away from congested cities, the low real estate tax rate, and the convenient location of the township relatively close to past homes and near the beach and bay. The tax rates are low because the seniors require few services from the township, and because the township likes to keep a ratio of 4 or 5 new senior dwelling units to each single-family dwelling unit.

Activities of residents of senior developments are generally confined to the developments. There are usually clubhouses and sometimes extensive recreation (indoor and outdoor) facilities. Some residents who play golf would like for there to be a township golf course. A number of the seniors work part-time, often for the development corporation.

Residents of the senior citizen communities generally are well organized within their communities in residents or homeowners associations. There also seems to be a multitude of other clubs for various interests. Nevertheless, although the community associations most often deal with problems of the residents such as maintenance, they often serve as methods for dispersal of information. Community (senior) newspapers serve the same function. Many seniors are keenly aware of township goings-on, particularly when their interests are involved. The major such interest expressed was the tax rate. Particularly because most of the senior citizens are on fixed incomes, they fear and are against most measures that would increase their expenditures. Recently the issue of a new middle school for the overcrowded school system has been the source of much controversy. Seniors interviewed said that some senior citizens would oppose any legislation increasing their taxes, some objected to the confusion about costs for the proposed school, some opposed an



Cultural Subregions of the Pinelands

A Human Ecological Study by Jonathan Berger, et al, 1980

"elaborate" school and essentially wanted no frills, a few thought that education was important and thus supported the school. A number of younger Manchester residents, though, perceive the senior opposition to the new school with anger because of what they consider to be the seniors' isolation (physical and mental) from the community. They think that the seniors do not take responsibility for their new township. They say that just because the seniors' children were educated and their grandchildren are being supported (educated) elsewhere does not excuse them from supporting schools in this township. Some seniors respond to this argument by saying that they require very little from the township, and that they should not be expected to give so much in return.

Politically, it has been observed that the seniors tend to vote in a block. Since they are the majority population in the township, they control the vote. Furthermore, some senior citizens are very active in township affairs. This is shown by the fact that three of the five Manchester councilmen are residents of senior developments. In addition, the Manchester Community Coordinating Council is formed by representatives of senior villages in and around Manchester. The Council is concerned with local, state and national issues and legislation affecting all citizens, but especially senior citizens, and they will lobby for causes. Reports from this Council appear in local senior village newspapers. Senior citizens are definitely a group to be reckoned with.

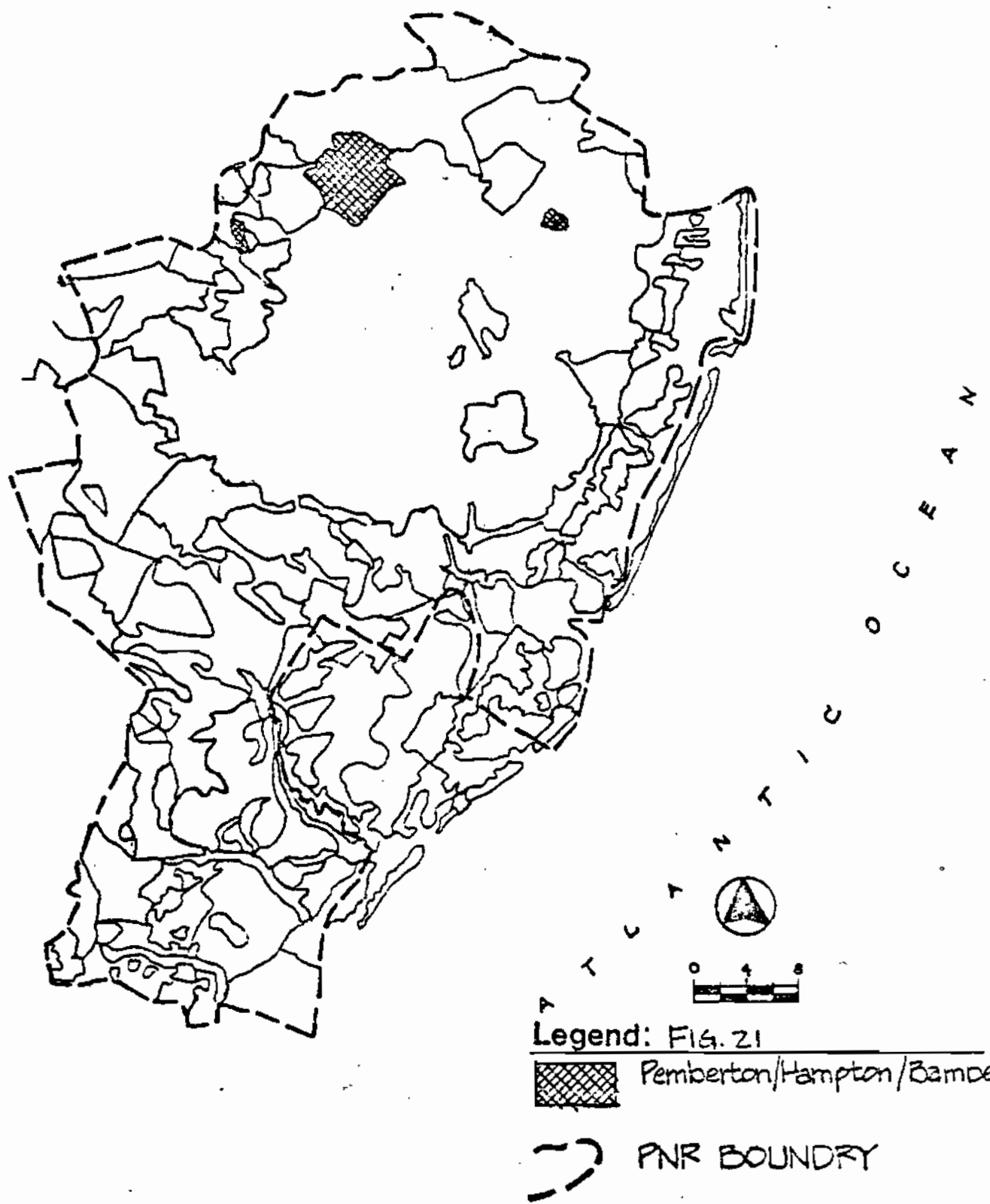
Opinions about the moratorium were not very strong. Most informants thought that their needs, i.e. low tax rates, should be considered. Some thought that a halt to development would increase their tax burden. This they were against. Otherwise, the senior citizens interviewed were generally in favor of preservation of the Pinelands.

the Effect of Pinelands planning

As the planning program continues, information about the Pinelands must be supplied to this relatively literate but very uninformed constituency. Because they hold a swing vote, they must be shown the importance of their immediate environment. Of equal importance is the necessity of warning these people about the fire hazard: no retirement community should operate without adequate fire fighting pressure on hand and without a well-rehearsed evacuation plan. This should be coordinated with the County Emergency Preparedness group.

Regional Contacts: Manchester Township

1. John Novak, Board of Assessors
2. Mary Kruysman, Planning Board (secretary)
3. James Jados, Environmental Officer, also on Environmental Commission
4. Anthony Sussex, Councilman
5. Mr. Krajacich, Planning Board, chairman
6. Kenny Erikson, Board of Education, chairman
7. Don Leary, School Board Secretary



Cultural Subregions of the Pinelands

A Human Ecological Study by Jonathan Berger, et al, 1980

The Lakes: Pemberton, Hampton, Bamber. Within the Northern Forest Region developers have built several lake communities. The oldest cluster is in Pemberton Township near the town of Browns Mills. Next in age is Hampton Lakes in Southhampton and finally Bamber is the newest lake community. As in Medford and Evesham and Buena and Monroe there are lake and residents associations. The inhabitants vary. Bamber is a mixed community in terms of age and length of stay. Country Lakes in Pemberton houses 50% military personnel. In Country Lakes there are also real estate brokers, and some local politicians. Some people commute to New York, Philadelphia, and Moorestown. At Lake Valley, near Pemberton, the community is mixed both racially and ethnically. They are blacks, whites, Puerto Ricans, Koreans, and even some Japanese and Hispanics. There is a low turnover rate, even the military stay for a long time. Each lake community has extensive recreational facilities that includes, play fields, beaches, docks, and club houses. These are places where people live because they like the environment and because there is available housing at a range of prices.

Issues are similar. They include schools, road maintenance, and water and sewer service. At Bamber the State has begun to acquire land and this has led to suspicions on the part of the residents. Bamber Lakes Residents For Action formed to deal with the acquisition question. Again, as in any place even the property rights of the smallest land holders become issues. Notwithstanding, the problems of state control, most of the lake residents favor the moratorium. One said, "The Pinelands are like the last button on Gabriel's Coat." The feeling is widespread that older housing can be improved rather than having open land converted.

affects of Pinelands planning

Land conservation and preservation measures will be looked on with great enthusiasm. If the state tries to control the lake shores then there will be a different reaction. Should it prove necessary to acquire lake shore land then a careful negotiation process coupled with continued property rights must be developed. As in other lake areas educational programs on lake care and maintenance will be of value. The associations are the best way to reach people for educational purposes.

Regional Contacts: Lake Valley Association - David Hall 894-9426
Country Lakes Community Association -Stephen Albans
893-9067
Bamber Lakes Residents for Action
Presidential Lakes Civic Association - Kathy Neville
893-8752

The Southern Forest Region

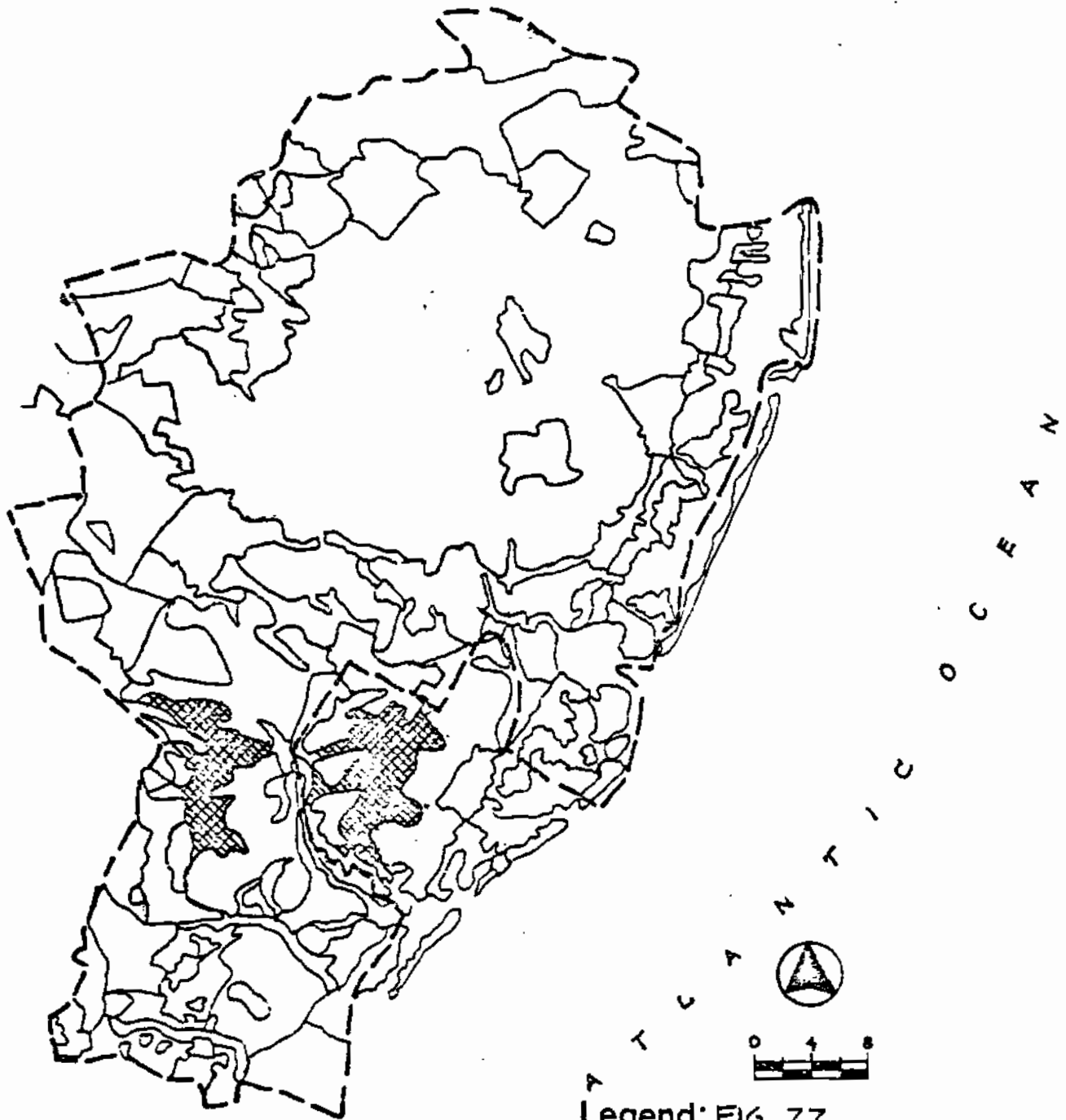
The Southern Forest Region has its own character: it is culturally and ecologically distinct from its contiguous northern neighbor. Marsh (1979) has called this region "an archipelago" within which "the best and driest land is along the coast and on the river banks. The configuration of the archipelago places a rim of dry islands along the coast and just between the rivers, amongst a network of impassable swamps..." The road network logically follows the dry rim, and is thus different from the honeycomb, sand road pattern of the Northeast Forest Region. There are and have always been cleared agricultural lands, although there were but no longer are cranberry operations. In contemporary times the southern forest has had a higher population density than the northern forest, and it has historically been used more intensively. Ethnically it has been and continues to be a place of first settlement for new immigrants. Today local rotaries are providing havens for "boat people". The Southern Forest Region has had a diverse ethnic history as well as a diverse land use history, while the northern forest has been much more homogeneous with respect to both people and land use. The southern area has changed more. Both areas support the cluster of extensive land uses which includes trapping, hunting, gathering, recreational pursuits, and forestry. Descriptions of these uses are found in the analysis of the Northern Forest Region.

The field reconnaissance defined an inhabited forest region and an uninhabited forest region south of the Mullica River. The placement of more field workers in the Southern Forest Region resulted in a relatively more detailed classification of land areas there, but historical analysis has shown that these areas have remained distinct over time. The following sub-regions have been included as examples of the different use and control patterns of the inhabited and uninhabited regions of the Southern Forest: Inhabited - Atlantic County, Cumberland County: Leesburg State Prison, Cape May County: Primary Use Agriculture - Belleplaine, Cape May County: Woodbine; Uninhabited - Atlantic County, Cumberland County: Northern Maurice River Township, Cumberland County: Sand and Gravel Region, Cumberland County: Land Scam Development, Cape May County: Ex-Agricultural Woodland.


Inhabited Forest Region


Atlantic County. Associated with the inhabited forest settlement of Atlantic County are three distinct classes of land use, two of which are economic while the third is both economic and part of the network of social relations which hold the sub-region together. These are: blueberry agri-business, sand and gravel mining, and occupational uses.

There are two large blueberry farms that could more properly be called agribusinesses since each is over 500 acres. Growers associations provide brokerage services, selling to large buyers such as chain stores and the frozen food industry. Permanent, resident labor is employed nearly year-round for pruning, irrigation, spraying, and maintenance. During the six-week picking season, local labor contractors provide day-haul labor from Camden and Philadelphia. Personal relations



Legend: FIG. ZZ

 Inhabited Forest Region -
Atlantic County

 PNR BOUNDARY

Cultural Subregions of the Pinelands

A Human Ecological Study by Jonathan Berger, et al, 1980

between growers and labor contractors result in growers lending money to contractors for insurance, tags, or repairs to vehicles. In return, the contractor agrees to "treat the grower right", in effect promising him that his crops will get picked. The pickers are mostly inner-city blacks who can earn unreported income in this way.

A second important land use is the sand and gravel industry, whose major markets are the highway departments and the concrete products industry. An important byproduct is ironstone, the only building stone locally available. Ownership of the pits is usually local, often with ties to the township council or the county freeholders. Labor is local; often one man will live at the pit in a house trailer to guard the equipment and chase off shooters, motorcyclists, and trash dumpers.

The third class of use is actually a cluster of what could loosely be termed occupational uses. The spread-out settlement pattern allows space for operating a welding or auto repair shop, taxidermy service, boarding kennel, etc. Independent truckers can store a rig or two; one can sell old cars or antiques and junk, or operate a small campground. Often residents supplement seasonal work in construction or on the roads by trapping, selling firewood, storing boats, or gathering. This is what has been called the Piney lifestyle, although it is practiced by a wide variety of people.

The settlement pattern of the Atlantic County inhabited forests is a result of the concurrence of small landholdings (often lots 150 feet wide by $\frac{1}{2}$ mile long), dry ground, and access to county-maintained roads. The pattern that developed is one of scattered single-family dwellings surrounded by pine-oak forest, crossroads towns which may consist of a gas station, a bar, a grocery, and two or three houses, and small trailer courts. Two forms of subdivision are characteristic: the "land scam" type, where a grid of sand roads with impressive-sounding street names serves several hundred lots, most of which are vacant and many of which are owned by the township; and the small subdivision put up by a local builder-developer on 10 or 20 acres fronting a county road. These subdivisions tend to be smaller and lower-priced the further west they are located. A third type of settlement is the Lake Subdivision, an example of which is Totem Lakes near Nesco. An abandoned cranberry bog and its surrounding headland is bought by an outside developer, the bog is flooded and given a mellifluous name, and cheap houses are built on the headland. Flooding the bog raises the ground water level, causing septic tank problems.

The social organization of this subregion centers around hunting, fire-fighting, and religion. Hunt clubs are for men, church is for women, and the volunteer fire company is for everyone who is anyone. The fire companies hold dances, picnics, potlucks, bingo games, and benefits. Membership is an honor and a social necessity. Fire halls serve as polling places, and fur auctions may be held there. In the words of one key informant, they are the traditional primary social organizations of the sub-region and are in some ways more important than the constituted

governing bodies with which they share membership.

the effect of Pinelands planning

The moratorium has had the effect of slowing the pace of development in this sub-region. Small contractors do not have the resources to deal with the Pinelands Commission and have had to curtail their operations. Regulation of building has made large numbers of small lots worthless to their owners. "We've quit selling undeveloped land in the area", a Hammonton Realtor told me, because of the uncertainty about the possibility of development. An interesting side effect has been the loss of a major source of fuelwood with the suspension of clearing operations. Regulations on burning make it difficult to manage the land, and residents fear a buildup of forest floor litter that will lead to a major conflagration. The loss of the several hundred units a year that were going up in this sub-region has increased the pressure on the uninhabited areas where large landholdings offer outside corporations the opportunity to come in with Planned Unit Developments.

Before the moratorium, the pattern of development was slow and steady, and except along "the pikes" was not a threat to the open character of the landscape or the established pattern of land use. The pattern of small landholdings, often with botched-up or vacant titles, made it easy to build a house but hard to build a subdivision. The typical local builder built 5 or 10 homes a year. Clearing the lots provided firewood for home use or local sale. Construction employed local residents and kept the area's small contractors busy during the season.

It seems likely that without regulation, this pattern of development would continue, because of the difficulty of assembling large pieces of land in this sub-region. Eventually, groundwater pollution would become a problem and the forested quality of the area would be changed.

With existing regulations on lot size and sewage disposal, the inhabited forest could absorb a considerable amount of development without adverse effects on water quality. Alternatives to the septic tank should be tested for use, including outhouses. A possible solution to low-income housing could be the sale of lots that are owned by the townships to a housing authority, or through FHA to low-income homeowners.

Regional Contacts:

residents	- volunteer fire companies
	church social groups
	hunt clubs
	trailer court residents
	resident associations in subdivisions
blueberry growers	- Atlantic Blueberry Co., Hammonton
builders	- Homebuilders Association, Contact Dave Satinover, Blue Eagle Homes, Northfield.

forestry

-Ronald Detrick, area forester
in Mays Landing (625-1124)

low-income residents- Joe Gaynor, Atlantic County
Human Resources Department.
Atlantic City thinks that
some of this land should be
developed as low-income
housing.

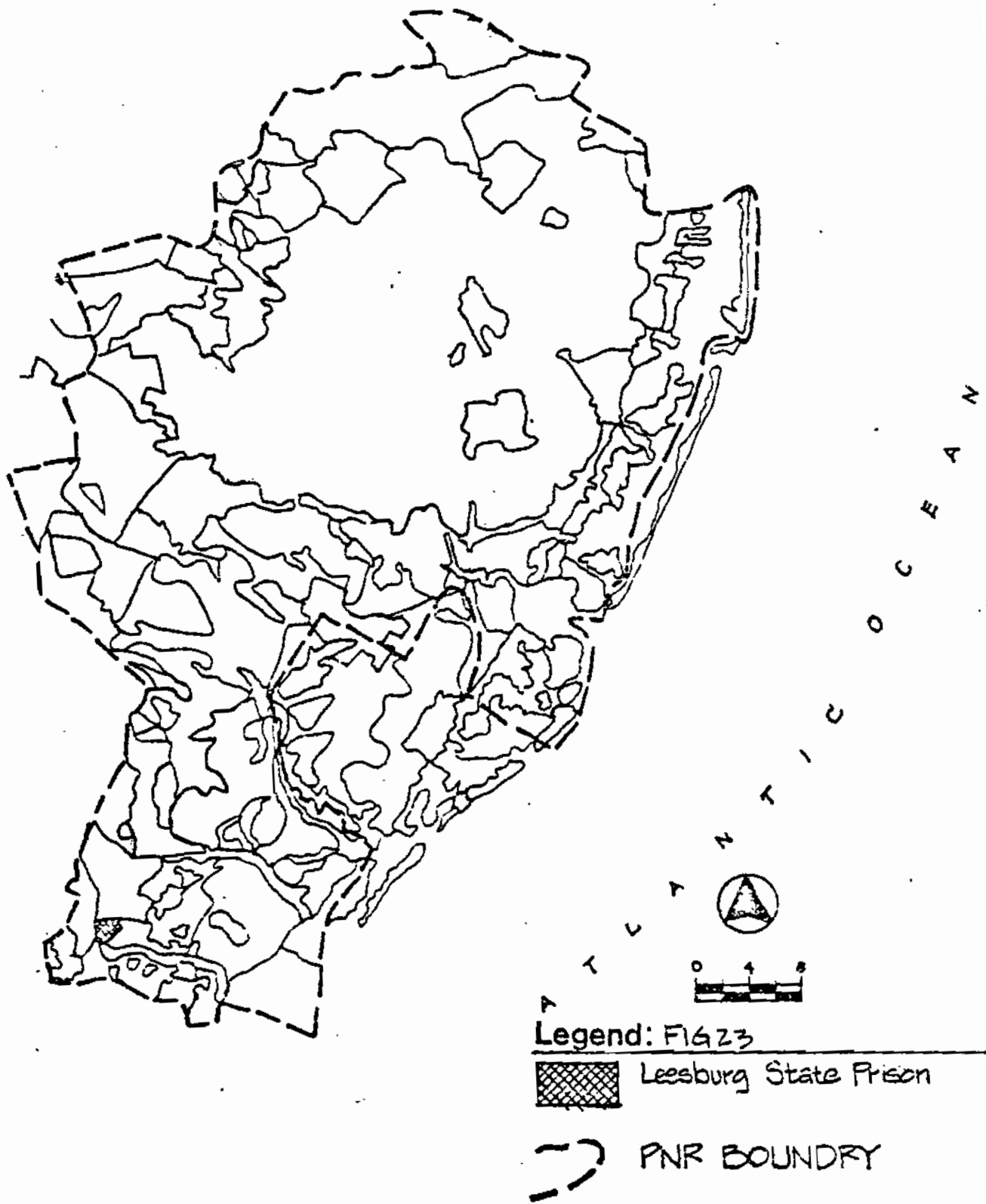
Cumberland County: Leesburg State Prison. Leesburg State Prison is a medium security prison and a minimum security prison farm. The farm is a dairy and swine operation, the output from which is distributed through the central purchasing office in Trenton. The primary use of the facility is for corrections, although employees are allowed to hunt the grounds. Employees and clientele come from all over, but the majority of the guards are hired locally. The guards from Heislerville are so numerous as to have formed their own pistol club, the Menhaden Marksmen. The warden lives in a big white house across Delsea Drive from the prison, while other settlement in the prison can be divided into trailer court and locked cells.

This is a unique sub-region because it is an island in the community, much like the Woodbine State School. Its interaction with any of the surrounding people or places is extremely limited, although a liberal prison administration a few years back was reported as contributing more escapees than necessary to the local scene. This succeeded in getting many surrounding residents to refer to the place as "the country club". The rest simply call it "the farm". All, however, are keenly aware of the fact that the prisoners and the administrators live in better houses than anyone else in the township. Nonetheless, since the prison is the single largest local employer outside of Millville, it is very important to the chronically-depressed local economy.

The prison is here to stay. Expansion may be hindered by the new Pinelands regulations, but this is not an issue at the moment. This region is an example of State institutions throughout the Pinelands.

Regional Contacts: administrators - warden
New Jersey Department of Corrections
employees - Menhaden Marksmen
employees social club

Cape May County: Primary Use Agriculture - Belleplain. Belleplain first appeared on maps in 1863 as a stop on the Millville and Cape May Railroad. At this point it was part of Cumberland County, and in 1867 a post office was established. In 1878 the county line was redrawn and Belleplain station was included in Cape May County. In 1921 the town officially adopted Belleplain as its name. The town was always an agricultural center with some small industries. There was a brick factory there in the middle-to late-1800's. Now, Belleplain can be described as a remnant town center almost completely surrounded by the State Forest of the same name. Belleplain, like Woodbine, is an anomaly in the county because it was started relatively late and it does not, and has not, shared the



Cultural Subregions of the Pinelands

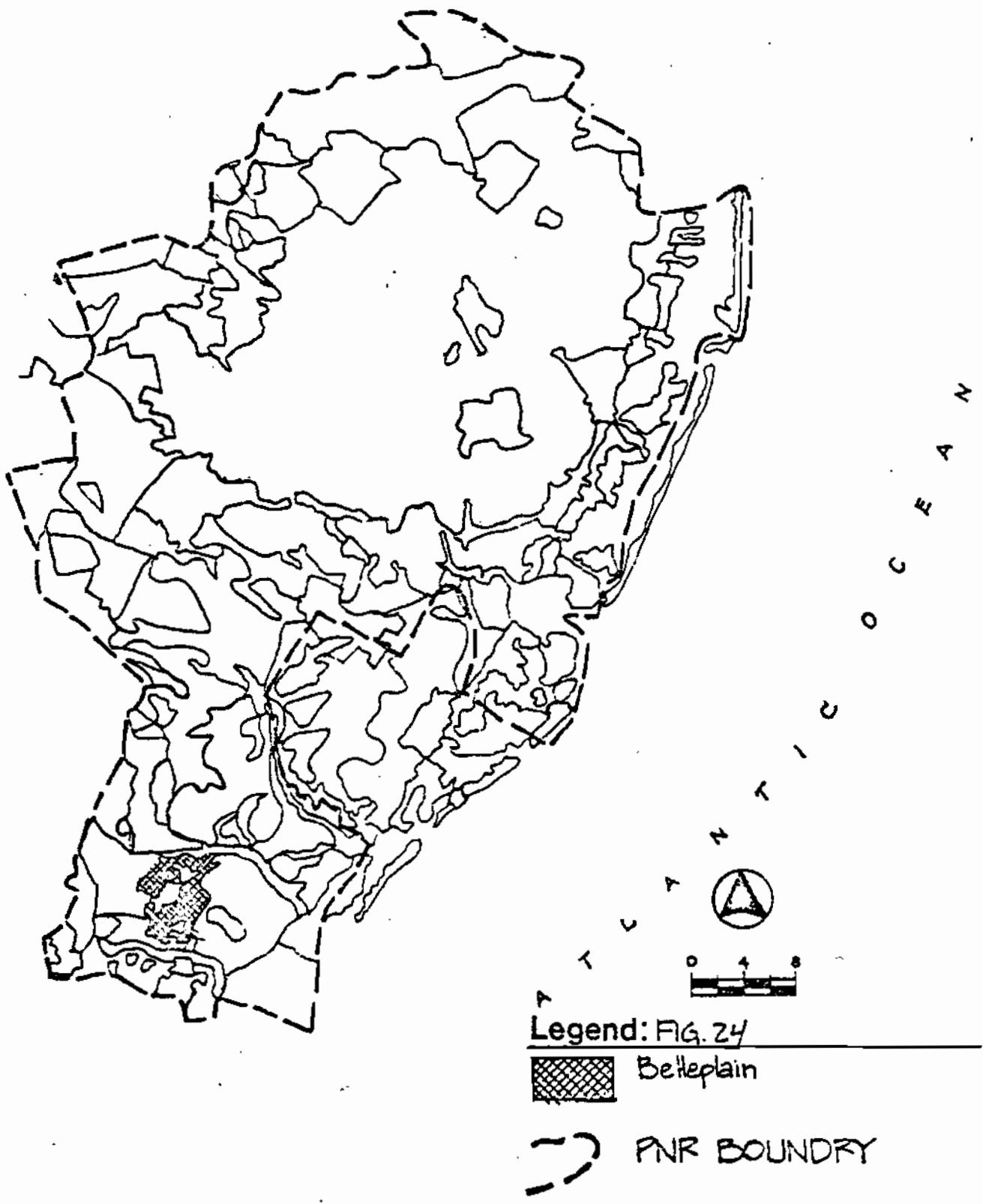
A Human Ecological Study by Jonathan Berger, et al, 1980

traditional relationships to bay, marsh, and ocean so prevalent in the rest of the county. Today there is one large tract of blueberries, but most of the rest of the farmers have turned to grain or soybeans as labor costs got out of hand. The field crops are sold for animal feed, in one case to Frank Perdue and his chickens. There are several Italian farmers left in the area who came to Belleplain in the 1930's, 40's and 50's to grow vegetables and fruit, but they are by and large no longer in business and much of what had been farmland has been incorporated into the forest under Green Acres. There are two small industrial employers: Champion Lumber, which makes pallets for shipping; and Mason Baskets, which used to be very influential in town and which made wooden baskets for shipping fruit, but which now makes wax-impregnated cardboard boxes. Mason owns the huge brown sheds next to the railroad tracks, formerly used to store the finished baskets. There are several abandoned cranberry bogs near Mason's, some owned by them and some owned by the State. The Germanio Building Supply is the biggest and really only commercial activity in town. They sell only to local builders and are not supplying anything to the housing boom in Upper Township out of choice. Most of their business is shifting to the Vineland area. They also sell hunting licenses and gear. The Belleplain gang and the Reutter gang are located in town (hunt clubs), and there is an active fire company and VFW post. With agriculture on the ropes and residential construction held up by the moratorium, not much of anything is happening in Belleplain. Most people here work in Millville.

Belleplain residents are mostly blue-collar workers heading for the factories in Millville. The hunt clubs here draw their membership locally and from Millville, and they hunt throughout Dennis Township. Much of the land in the area is owned by Les Germanio, who is a farmer, ex-contractor, and representative to the Pinelands Commission appointed by the Freeholders. He is currently growing corn and soybeans, but the tax rate on cropland (which is applied irrespective of the crop being grown... corn and soybeans are not very profitable) is forcing him to take land out of production and plant it in trees to qualify for a woodland assessment of \$19/acre (as opposed to \$408/acre). His home building company, Evergreen Homes, was sold three years ago, and this year the new owners went under. It used to be a big business, building upwards of 100 homes per year all over Cape May, Cumberland, and parts of Atlantic Counties. His wife died recently and he must sell some land to pay the inheritance taxes, but he is having trouble finding buyers for his land even when it is priced as low as \$400/acre; the moratorium has pretty effectively frozen his assets in a township where developable land, such as he owns, is going for \$6000 to \$8000 an acre.

This is a unique sub-region because its orientation is inland and agricultural in a county where even mainland communities are oriented to bay, marsh, or ocean. It is much different than Woodbine, but, like Woodbine, it stands out as a unique settlement. It is perhaps one of the only towns in the county oriented towards Millville to the west.

Belleplain is an agricultural, crossroads town. There are people in town that still farm, but most of the residents commute to jobs.



Cultural Subregions of the Pinelands

A Human Ecological Study by Jonathan Berger, et al, 1980

The aerial photograph of the sub-region clearly shows Belleplain as an island of relatively small fields in a sea of woodland. With the end of passenger rail service, the town center has pretty well dried up and the post office is no longer there.

the effect of Pinelands planning

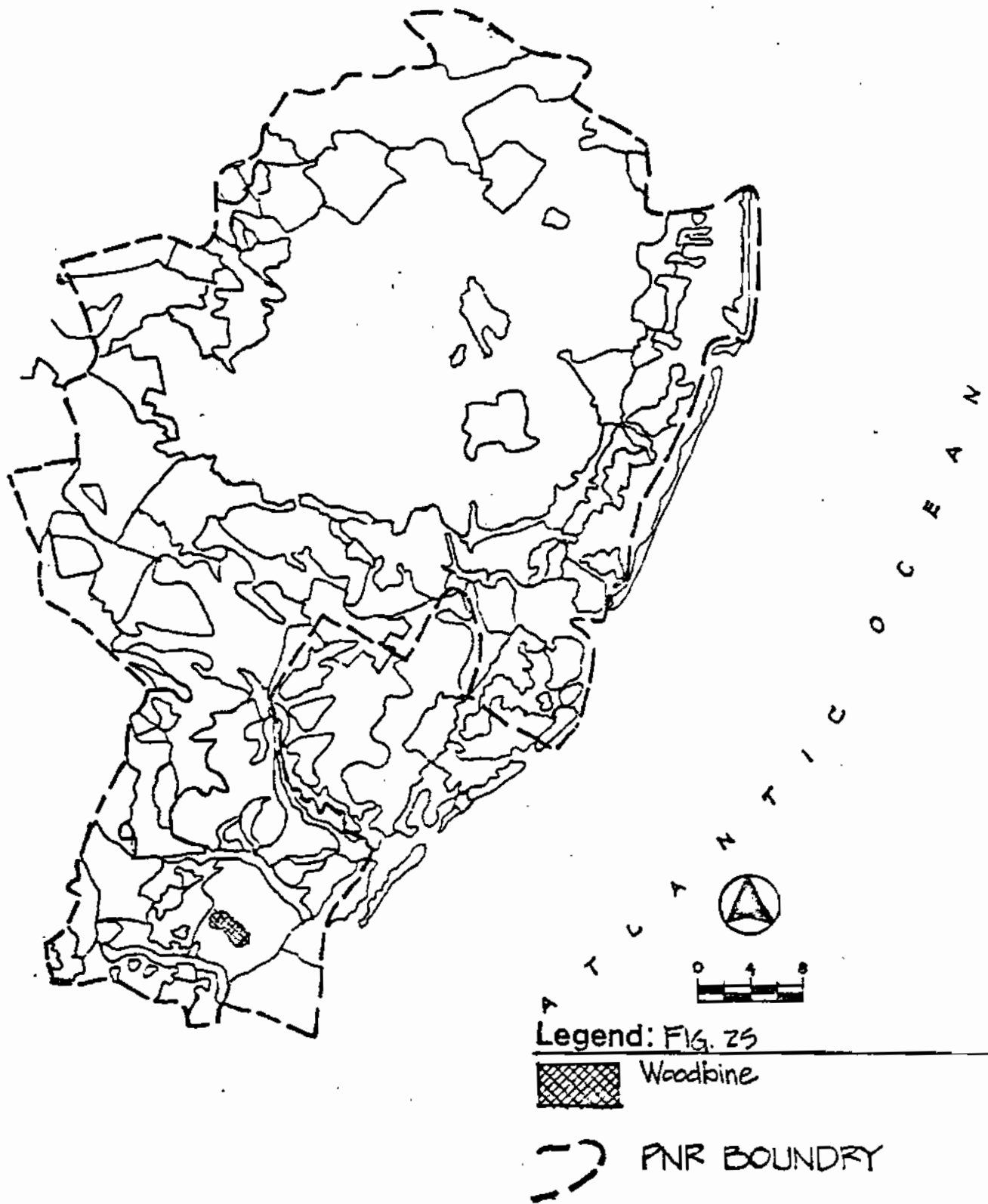
If the moratorium stays, then little will change except that continued uncertainty about future land use, especially residential development, will hurt the major landowners in the area. Many of these landowners are farmers for whom their land represents their equity for retirement. Reducing the value of their land from \$6000/acre to \$400/acre is making no friends. If the moratorium is lifted and people could have their way, then, given the current economics of agriculture and the proximity to the casino-inspired development, it is not unlikely that a substantial increase in residential development will occur. If severe restrictions are put on development and farmers are not compensated for the lost value of their land, then people will suffer and lose a lot of money. The population in the county is aging, largely because of an influx of seniors to the southern part of the county and to winterized summer homes, but also because the sons and daughters of the farmers cannot find employment locally.

Regional Contacts: Les Germanio
Greg Mason
Fire company
VFW

Correct & ...

Cape May County: Woodbine. The dominant land user in Woodbine is currently the State School, which is a major employer of town residents, especially the Puerto Ricans. Woodbine has the only sizeable population of Spanish-speaking people in the county. It wasn't too long ago, however, that Woodbine was the location of basically all of the industrial employment in the county. Garment factories thrived during the world wars making hats and uniforms. Presently there is only one factory left, the Quinn-Woodbine textbook factory, and it is having trouble making ends meet. Other than the State School and the factory, there is an airport that offers pilot training and several private planes, and Creighton Solar which makes custom solar systems. There are also several garages, a grocery store, a pizza place, a barber shop, an insurance dealer, and several realtors. These businesses and several bars represent the total extent of the local commercial activity, but it should be noted that this is considerably more than any other settlement in the northern part of Cape May County. There are several churches, an elementary school, and a human services center that offers Headstart and programs for the elderly.

Land use in Woodbine has gone through several distinct phases. Woodbine was founded in 1891 as a Jewish agricultural settlement. It was set up as a very planned community which, on one hand, wanted to return Jews fleeing the pogroms in Russia to their biblical occupation of agriculture, while mainstreaming them into American culture. It was



Cultural Subregions of the Pinelands

A Human Ecological Study by Jonathan Berger, et al, 1980

ambitious and extremely idealistic, and the agricultural period in the town's history did not last long for several reasons: bad soil and a population with the idealistic zeal to farm but with no experience farming. As a consequence, the town began to attract industry around the turn of the century, but most successfully at the start of World War I. From World War I through World War II, Woodbine served as an industrial and commercial center for the entire northern part of the county. It used to have 2 movies, 3 doctors, and a bakery, but that is all gone now as are a wide range of voluntary associations and an active baseball league. After World War II the factories started to pull out: the demand for uniforms evaporated; and Woodbine's remote location finally got the best of it. Since the early 1950's the town has been in a state of severe economic decline. Mainstreaming the Jewish population was so effective that the kids grew up, left for educational opportunities in the cities, and in one generation were mainstreamed forever out of Woodbine. Many of the old factories have burned down or been bulldozed. The town is not in good shape and its survival will depend on its ability to attract rateables and employment. In fact, the County Economic Development Commission considers Woodbine to be one of only two really prime sites for industrial development. Obviously there will be conflicts with the current policies of the Pinelands Commission. As an example, the town wanted to sink a new well, but they cannot get a permit unless they promise that the population of the city will not increase. Right now the town exists as almost an island in the county. There is very little interaction between the town and surrounding communities, primarily because the town has little to offer. Undoubtedly some of this isolation is due to the racial composition of the population. About 15-20 years ago Puerto Rican migrants began to stay year-round as they got jobs in the low-paying factories. They now comprise about 1/3 of the town's population. Blacks had been part of the town since its inception, but there was a large influx in the 1950's from Port Norris and Bivalve as the oyster industry was hit by MSX. They too account for about 1/3 of the town's population. This is currently a poor town, offering little employment (except from the State School), and in dire need of some kind of economic boost. Its proximity to Atlantic City offers some hope if it can come to grips with an internally and externally recognized leadership problem and if the Pinelands Commission doesn't regulate it out of the landscape. This is not a thriving community and, like another relative newcomer to the local landscape, Belleplain, it does not share the same primary relationships with bay, marsh, and ocean that the rest of the settlements in the region do.

The residents of Woodbine are poor and not so poor. The poorest residents live in Woodbine Manor, the only subsidized housing on the mainland north of Cape May Courthouse. It "keeps the cops in business". The developer, Kiejdan and Trocki in Northfield, originally told the town that it would be subsidized housing for the elderly, but when everything was said and done, it was quickly inhabited by the poorest of the poor. It was built in 1972 and is currently a mess. There are many small houses left over from the original settlers and a wide range of ethnicities; Poles, Italians, Blacks and Puerto Ricans are particularly well represented. There is a riding club located in the town, the Hidden

Acres Riding Club, that draws membership from all over Cape May and Cumberland Counties. By and large, most of the people using the town tend to live there too. Those that don't work at the State School work in Millville, Atlantic City, or in the southern part of the county. The town is laid out on a grid pattern with the center of town marked by the intersection of deHirsch and Washington Avenues, again reflecting the conscious attempt to mainstream the original settlers (the Baron deHirsch funded the new town and Washington, of course, was the father of this country). Land use and population have been in transition since the day the town was founded, and that is a characteristic that has persisted to this day. The town today is attracting large, poor families and is losing its remaining rateables, which means that it is being brought close to the edge of survival.

This sub-region is unique because of its history in the region and because it has problems and prospects unique to the area. Woodbine exists as a distinct island in the cultural and political tides of the county, and as such it will require special treatment and consideration. This is not simply a question of land use control. Woodbine represents different cultures than are present in the rest of the county. Its relationship to the natural environment is different--we found no hunt clubs in the city--and its ties to other, more urbanized communities throughout the Delaware Valley will require more research.

the effect of Pinelands planning

If the moratorium stays, then little will change in the community, and the end of change will mark the end of the community. Woodbine exists today because it has managed to scramble over and around obstacles to its existence in the past. The town must develop something in the near future in order to survive, and if the moratorium restricts this, then things could get worse. If the moratorium is lifted and people could have their way, then one of two things is likely to happen. If the County Economic Development Commission is successful at landing the two industrial prospects it says it has for the town, then things may pick up one more time, assuming that the companies are fair and honest (which several recently-failed concerns were not) and that the town government doesn't antagonize the rest of the development commission. It is also conceivable that housing and recreation facilities might get built in the city as its economic woes decline and as the demand for high ground 'casino' housing continues. The other possibility is that the town will remain fragmented with poor political and economic leadership, in which case deterioration will continue and the town will disappear. The uncertainty of the moratorium is not helping things, but the mess in city hall is probably more destructive at this time. Severe restrictions on development will almost certainly seal its doom.

Regional Contacts: Charley Payne
Hal Abrams
Mo Siegel
Angel Alecia

Uninhabited Forest Region

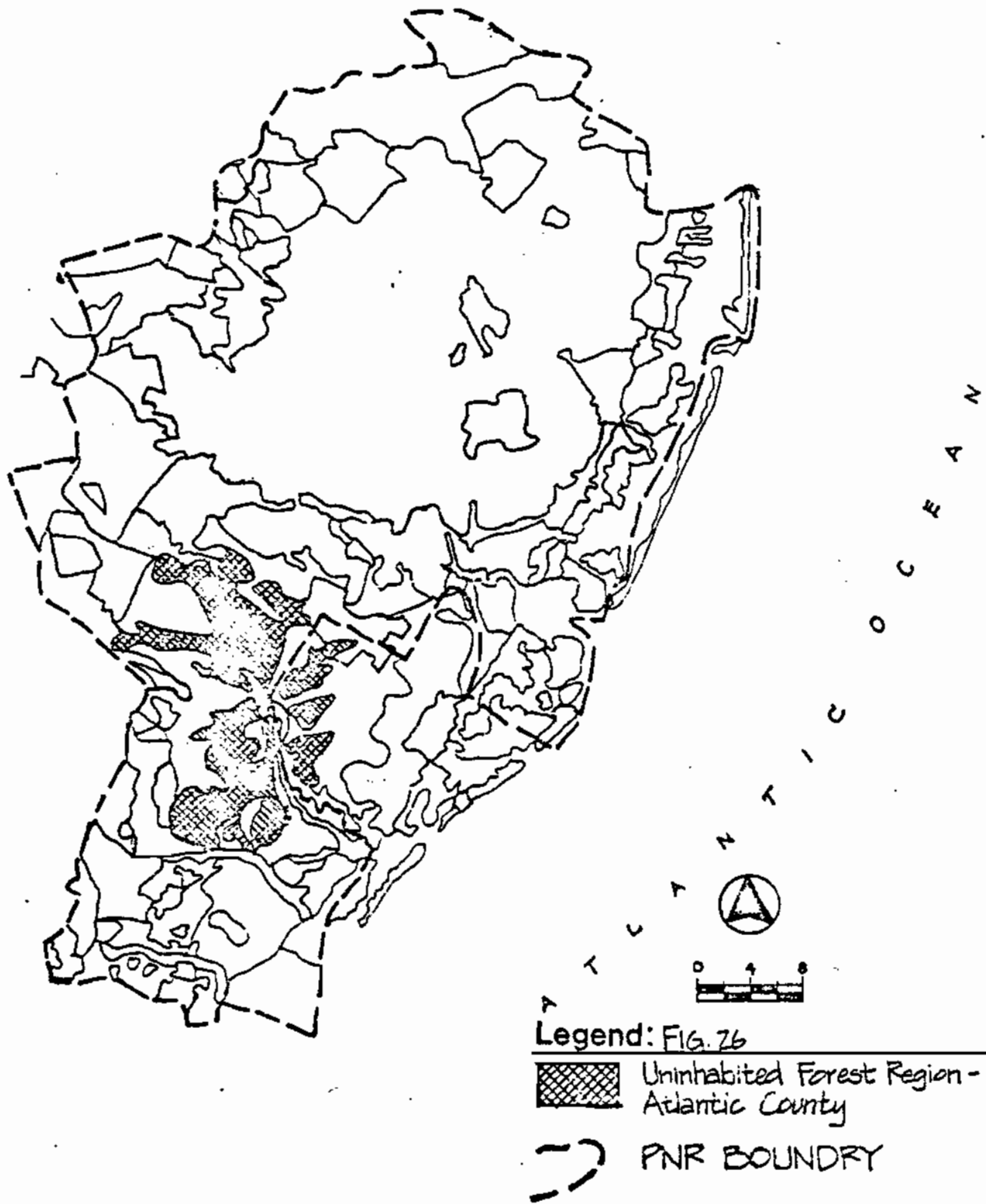
Atlantic County. This sub-region contains the major portion of the forested land in Atlantic County, and also extends into Cumberland and Cape May Counties. It is mainly pine-oak and oak-pine forest on the dry ground, and maple swamp with scattered stands of white cedar on the wet ground. It is crossed by paved roads, including the expressway, but because there are so few access roads, travellers tend to drive on through. It is crossed by a few very poor sand roads, most of which end in impassable swamp.

Economic uses of the land include large blueberry farms, sand and gravel pits, forestry, and land speculation. The scale of these operations, with the exception of sand and gravel, is larger than that of similar ones in the inhabited forest sub-region, because of the number of large landholdings. There are single parcels of land that are more than 1,000 acres here. These large holdings tend to neighbor each other, often with smaller tracts and a scattering of small-lot land scams tucked in between - all uninhabited.

Like the inhabited forest, this sub-region supports a wide range of extensive uses and interests. Canoeists pass through on the larger streams, often staying overnight at unofficial campsites. Horseback riders and four wheel drivers penetrate the sand roads. Hunt clubs use some of this land by arrangement with landholders, possibly as part of the arrangements for fire protection. Hunters who reside outside of the area belong to clubs that own their own land here. Although we found no direct evidence in this sub-region, gatherers and trappers may be using it also. Another use is scientific research, for the relatively undisturbed habitat is a good place for wildlife research, and the inaccessibility of the sub-region reduces the problem of vandalism of expensive scientific equipment. This remoteness and lack of settlements also makes this area a prime site for illegal uses such as trash dumping, firewood theft, poaching, and murder.

Users are similar to those in the inhabited forest, with the inclusion of loggers who live in western New Jersey and commute to the woods, and speculators who may be local or may have their offices in New York, Philadelphia, or Fort Lauderdale.

This sub-region is uninhabited as a result of the many large landholdings whose owners live elsewhere, and the large amount of swampy land. What small pieces of ground are available are inauspiciously located, far from county roads or on wet ground. Yet this sub-region is not wilderness. It has been cut over, burned over, and dug over nearly as much as the rest of the Pinelands. However, because of its inaccessibility, it contains a great amount of undisturbed wildlife habitat and represents a major source of uncontaminated water.



Cultural Subregions of the Pinelands

A Human Ecological Study by Jonathan Berger, et al, 1980

the effect of Pinelands planning

The moratorium has presented one more hurdle for the big developers to jump in order to build in this sub-region, and has probably slightly diminished the value of speculators' holdings. However, a company with the resources to buy two or three thousand acres and prepare a Planned Unit Development, also undoubtedly has the resources to negotiate its plan through the various regulatory agencies and satisfy their requirements. A 5000-acre PUD has received most of its approvals in Hamilton township, and the Makepiece/Wymouth Co. still retains its holdings, no doubt with high hopes of similar success in that same jurisdiction. There seems to be a feeling in this region that the moratorium has not affected the big developers; if anything, it has increased the pressure for large-scale development while hindering the small builders who are in competition for the housing dollar. If this is true, then it would seem likely that the moratorium is posing something of a threat to the type of land that it proposes to preserve.

Without the moratorium, it is possible that the development of this sub-region would occur even faster, but the outcome could well be the same. The development of large tracts of land in this area would seriously hamper traditional extensive uses, would pose a threat to water quality downstream, and would impair the best wildlife habitat in Atlantic County. A possible alternative to these scenarios would be one in which development rights were purchased, by condemnation if necessary. This could be coordinated with a forest management program that would allow landowners to reap greater profits from their land. Forests in this sub-region, and in the Pinelands generally, suffer from a lack of management and are underutilized.

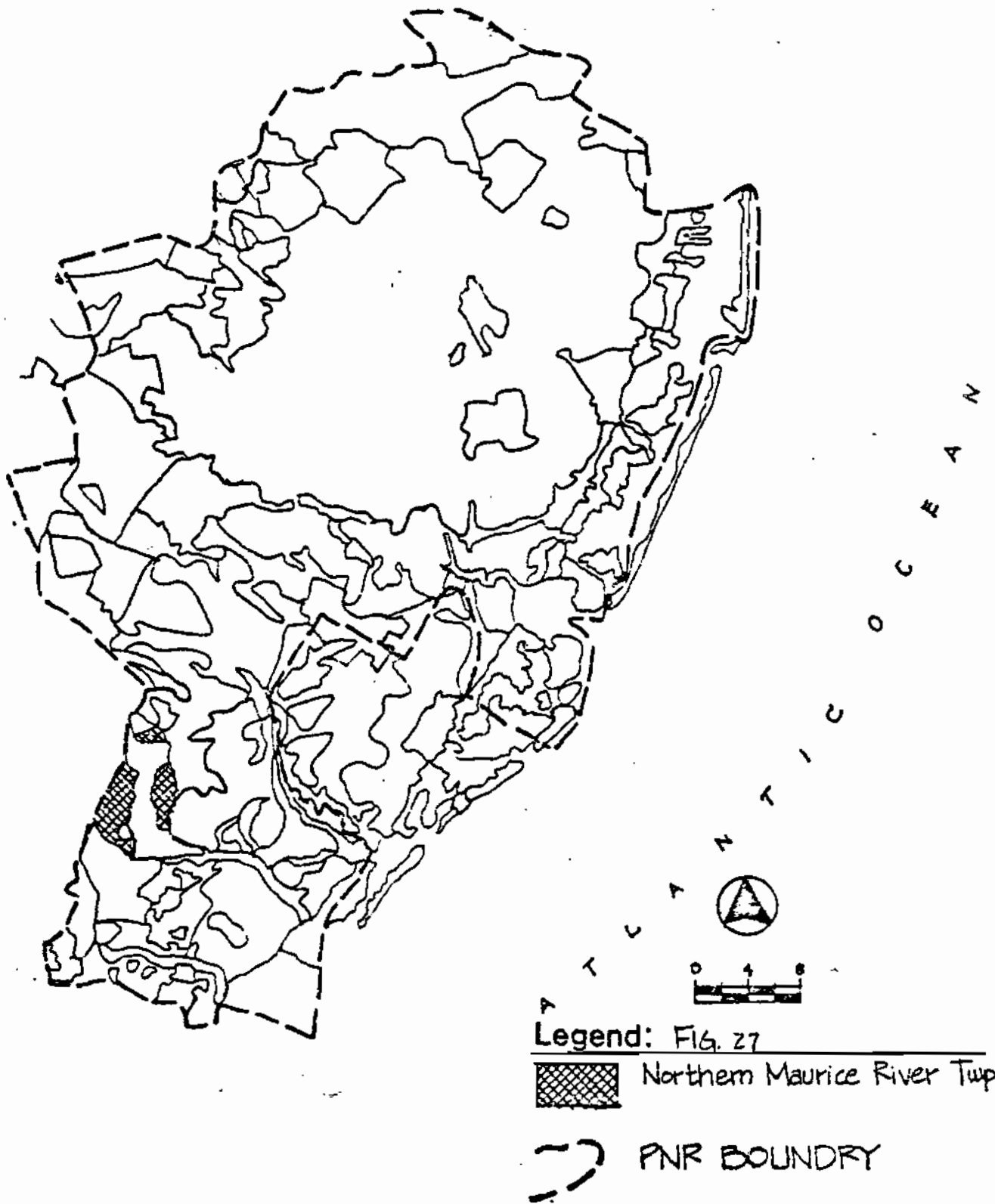
Regional Contacts:

hunters and firefighters	-volunteer fire companies
non-resident hunters	-County Federation of Sportsmen's Clubs, Mays Landing.
blueberry growers	-Atlantic Blueberry Co., Hammonton
large landowners	-Refer to Atlantic County tax records or the Real Estate Atlas of Atlantic County.
canoeists	-Marina Association. See Mrs. Hennaut at Mullica River Marina.
scientific	-Rutgers and Stockton State Universities, departments of earth and natural sciences.
forestry	-Ronald Detrick, Mays Landing (625-1124).

Cumberland County: Northern Maurice River Township. Most of the northern part of Maurice River Township is wooded and undeveloped. It was last used intensively in the 1800's when it was virtually clear-cut for cord wood, a fuel which was displaced by the appearance of anthracite in quantity in the cities. Today, this large area is primarily used for recreational purposes. In fact, it is an extremely important recreational area for the residents of Millville, who use it for hunting, trapping, motorcycle riding, horseback riding, and hiking. The township has the largest concentration of rare and endangered species of plants in the county, many of them in this sub-region, due to the fact that so little development has occurred here. Conservationists have catalogued all of these species, and one of them has recently bought some swamp land along the Maurice River at a tax sale to protect some of those species. The Cumberland County Historical Society has documented the location of all historical buildings: mills, furnaces, homes, etc. There is a summer camp in this northern part of the township, and gathering takes place on the uplands.

Other landscape features include one now-abandoned, town-owned gravel pit. There is also some residential development taking place in the extreme northwestern part of the sub-region, much of it spillover from Millville and especially East Vineland, which apparently is attracting some casino people. Nonetheless, the social, cultural, and political focus of the region is to the south. As Ezra Cox said when asked about who lived in the northern part of the township and what their involvement in the township was, "They pay their taxes, and that's about it." This part of the township has always been subject to speculation. The County Economic Development Commission almost attracted a small industrial park to the area, to be located where Route 47 meets Route 55 north of Port Elizabeth. Many people feel that this township and this part of the township is ripe for development, but that the biggest hindrance to this is the lack of good transportation; Route 47 is referred to as a "horse and buggy road", and the completion of Route 55 is seen as the "key to opening the area wide". At any rate, there is a realization that casino development will require lots of land for support facilities, and this sub-region is seen to be right in the path of that development. This sub-region can best be described as recreational right now, but it is a place that has been ripe for something for at least 100 years.

The hunters using this land are largely associated with hunt clubs on Union Road: South Millville, Mennantico, Good Sports; those in the township core sub-region: Camp Gang, Riggins Gang; and those in Belleplain: Reutter Gang and Belleplain Gang. Undoubtedly there are more. The Union Road clubs, like most in Cumberland County, are affiliated with the powerful Cumberland County Federation of Sportsmen's Clubs, powerful because in a county of about 100,000 people, they count about 5000 members. The Union Road clubs get together and sponsor a sportsmen's jamboree every year. It is a hunting 'fair' aimed at hunter education and having a good time. It started out as a one-day affair, but proved so popular that it has expanded to two. It draws large crowds from all over South Jersey.



Cultural Subregions of the Pinelands

A Human Ecological Study by Jonathan Berger, et al, 1980

Conservationists in this area are from the Cumberland County Conservation League. They are completely against Route 55, and they will probably have a real fight on their hands because we were told that Route 55 would "probably go through this time" and because there is a new coalition of economic development commissions that has on its agenda the completion of that highway. The conservationists originally organized around the issue of discharge by Millville sewers into the Maurice River; they are vitally interested in the watershed of that river and the activities within it.

Trappers are generally county residents who have arrangements with private landowners. They are represented by the South Jersey Fur Takers Association, and they sell to fur buyers in the southern part of the township.

As in all the wooded areas in this part of the Pinelands, there is a lot of firewood stealing; some suspect that it is the local people who are stealing the wood, and as you drive through the area there are certainly a large number of roadside firewood sellers in sight.

This sub-region is unique because it is owned privately but used extensively according to longstanding arrangements between owner and user. The users tend to be more local than the users of the State-owned lands. This sub-region has, at various times, been the site of almost every type of land use realized or idealized for the township.

The settlement of Cumberland has a fire company, but little else. It is presently an area of roadside settlement where the houses are relatively close together, harking back to the days when the Budd Iron Furnace was located nearby. This was a long time ago, and nothing that we have found leads us to believe that this has been the site of much activity since then. The people here are oriented to Millville for shopping, employment, and entertainment, and have little to do with the township core community to the south. Bennett's Mill, to the north, represents another relative concentration of homes, but no stores or institutions. Some of the houses represent the so-called rural resident ('piney') settlement pattern, and some of the houses are fairly suburban. Settlement in this sub-region, like the sub-region itself, covers a wide variety of types.

the effect of Pinelands planning

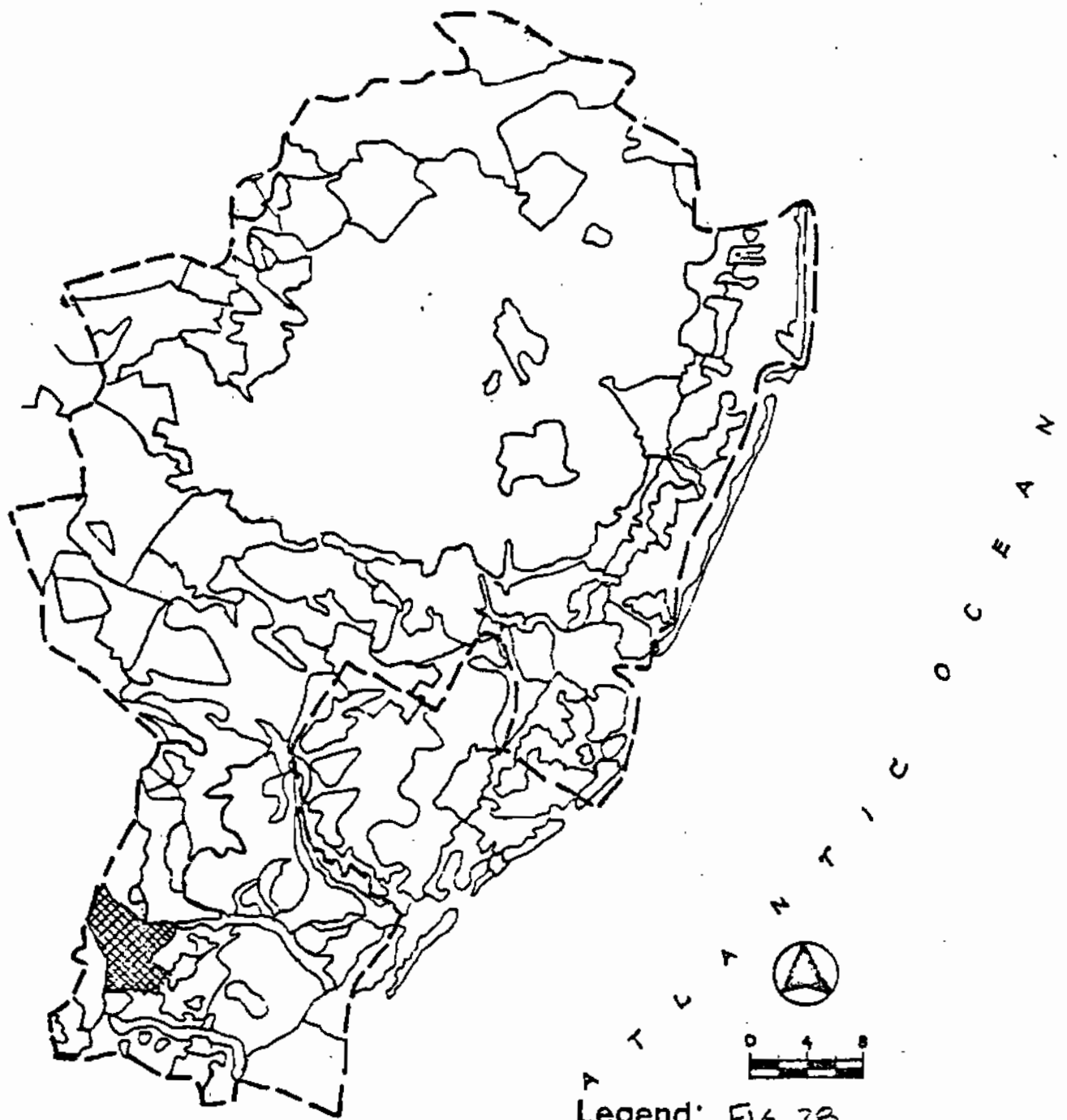
If the moratorium stays, then this sub-region will be used pretty much as it is used today. Speculation will probably continue but, as always, it may not be clear for what purpose or use. Spillover residential development will continue on a limited scale. If the moratorium is lifted and the people could have their way, then there will probably be some light industrial development, perhaps some housing developments south of Milmay and south of Cumberland, but otherwise the rate of change will depend entirely on demand generated from Atlantic City; clearly, proximity to Millville and Vineland has not generated much enthusiasm. There seems to be mixed opinions about the effect of a completed highway 55. Probably the most important aspect of this project is that it will form a connection

to areas outside of the township, especially to the east in Cape May County.


Regional Contacts: Dan O'Connor
Cumberland Fire Company
Cumberland County Federation of Sportsmen's Clubs


Cumberland County: Sand and Gravel Region. Sand mined in this region is used primarily in foundries. This is because the sand east of the Maurice River has a thin coating of iron oxide on it, and the iron makes it unsuitable for glass and fiberglass production. The sand is either dry mined, using drag lines, or wet mined, using dredges. There are two dry pits: the one owned by Goffs is almost depleted, but the one owned by Whitehead Brothers in Dorchester has plenty of sand left. The sand from the dry pits is what is called a 'natural bonded' sand; the thin coating of clay on the sand allows it to pack into different shapes for casting. Once it is used, the clay bond is lost, and the sand is discarded. The dry pit custom mixes about 16 grades of sand for foundries located all over the mid-Atlantic region and as far away as Nebraska, although none of their customers are in South Jersey. The wet pits or sand washes produce a sand without the natural bond. In this case a synthetic bond is added and if the foundry has the equipment for adding the bond, the sand can be reused after casting. The sand washes can produce many more grades of sand than the dry pits. The Whitehead dry pit is the only producer of natural bonded sands in the state. The gravel is used on roads, and the clay from the sand washes is processed by Jessie Morie. There are only about six sand companies in this sub-region; we were told that "they bought up all the land to discourage competition" and they presently have only a fraction of their holdings in production. This means that the majority of the sub-region is wooded, primarily with white oak. Consequently, another land use in this sub-region is firewood stealing. The sand companies do not sell timber rights to local loggers because the loggers don't reclaim the land when they are through. The Whitehead operation in Dorchester is extensively posted because of the poachers; they have had people coming onto their land with tractors to get wood out! Hunting for upland species is another popular land use, especially in the old pit areas, because "the deer love the hills and hollers where it has grown up". Laurel, holly, and ground pine (*Lycopodium*) are gathered in this sub-region. Conservationists have hiked every inch of this land, and have mapped the endangered plant species. Gathering and extraction are the economic uses, but the majority of the land is used for recreation. Motorcycle riders and clubs come from as far away as Philadelphia, and pose severe liability and erosion problems for the companies.

The sand companies in this region include Whitehead Brothers, Jessie Morie, Owens-Illinois, George Pettinas, Goff, and New Jersey Silica Sand. They are all off-site, corporate owners and they own about 33% of the township. Their holdings are managed by local residents, two of whom are on the township committee. Labor comes from the towns making up the Maurice River Township Core sub-region. The foundry sand business is



Legend: FIG. 28

 Sand and Gravel Region

 PNR BOUNDARY

Cultural Subregions of the Finelands

A Human Ecological Study by Jonathan Berger, et al, 1980

very sensitive to the national economic scene, and they are beginning to lay off workers. Owens-Illinois is considering changing its operation to a glass sand pit by installing extensive equipment to wash off the iron. This process uses extremely strong acids and chemicals and is initially very expensive.

The hunters come from the hunt clubs ringing the sub-region; South Millville, Mennantico, and Good Sports on Union Road, Cam Gang in Port Elizabeth, Riggins Gang in Leesburg, and East Creek on Delsea Drive. The hunting territories were established years ago and the companies do not have to grant permission every year for these long-standing agreements. The wood cutters come from all over but we don't have any solid information on their activities. The gatherers are part of a network of families that have been working Salem, Cumberland, and Cape May counties for generations. They live in the villages forming the township core. The motorcycle riders come from all over, but there is one club in Millville; they are constantly at odds with the companies because the companies cannot afford to patrol or fence their extensive holdings but they can be held liable for accidents in their pits. The conservationists correspond largely to the members of the Cumberland County Conservation League. They keep a keen eye on the companies. Most recently they succeeded at getting a permit denied for an oil storage facility at Leesburg for Whitehead Brothers. Whiteheads wanted to build two huge tanks on the banks of the Maurice River to receive oil brought in by barge to be used in their sand dryers. The Conservation League monitors the DEP reports, and when they saw this request for a permit they swung into action. Their President, Dan O'Connor, simply wrote DEP a letter detailing the economic and environmental impacts of a single oil spill on the Maurice River. He also suggested that Whitehead simply use their rail siding for the oil and gave a suitable location for the tanks. By this time, Whiteheads had already started to build the foundations, but their permit was denied and they had to cease operations.

This sub-region is unique in that it is controlled by about 6 companies, all in the sand and gravel business and all headquartered out of the region, but it is used extensively by almost the entire county for recreation purposes. The companies are a permanent fixture in the history, politics, and economy of the township as well as on the landscape, and it is likely that they will remain so. There are no settlements within this sand and gravel region.

the effect of Pinelands planning

If the moratorium stays, little will happen to the current land use activities in this sub-region. The companies have enough land in production to keep them in sand for over 100 years. Perhaps only Owens-Illinois would be impacted if they are not allowed to build their iron washing facility. If the moratorium is lifted and people could have their own way, then the future is unclear; probably nothing would change, but the corporate owners are bound by the ups and downs of the economy. Selling land hasn't previously been an option, but if Atlantic City

booms, then who knows? We have been told that the bugs have pretty well discouraged development in the township, but if a group as powerful as the sand companies wanted to develop, then they certainly have the political and economic clout to set policy. This sub-region can live with regulations, but it must be made clear that they will affect businesses that are currently one of the main employers in the township. If they become uneconomic, then a poor township will become much poorer.

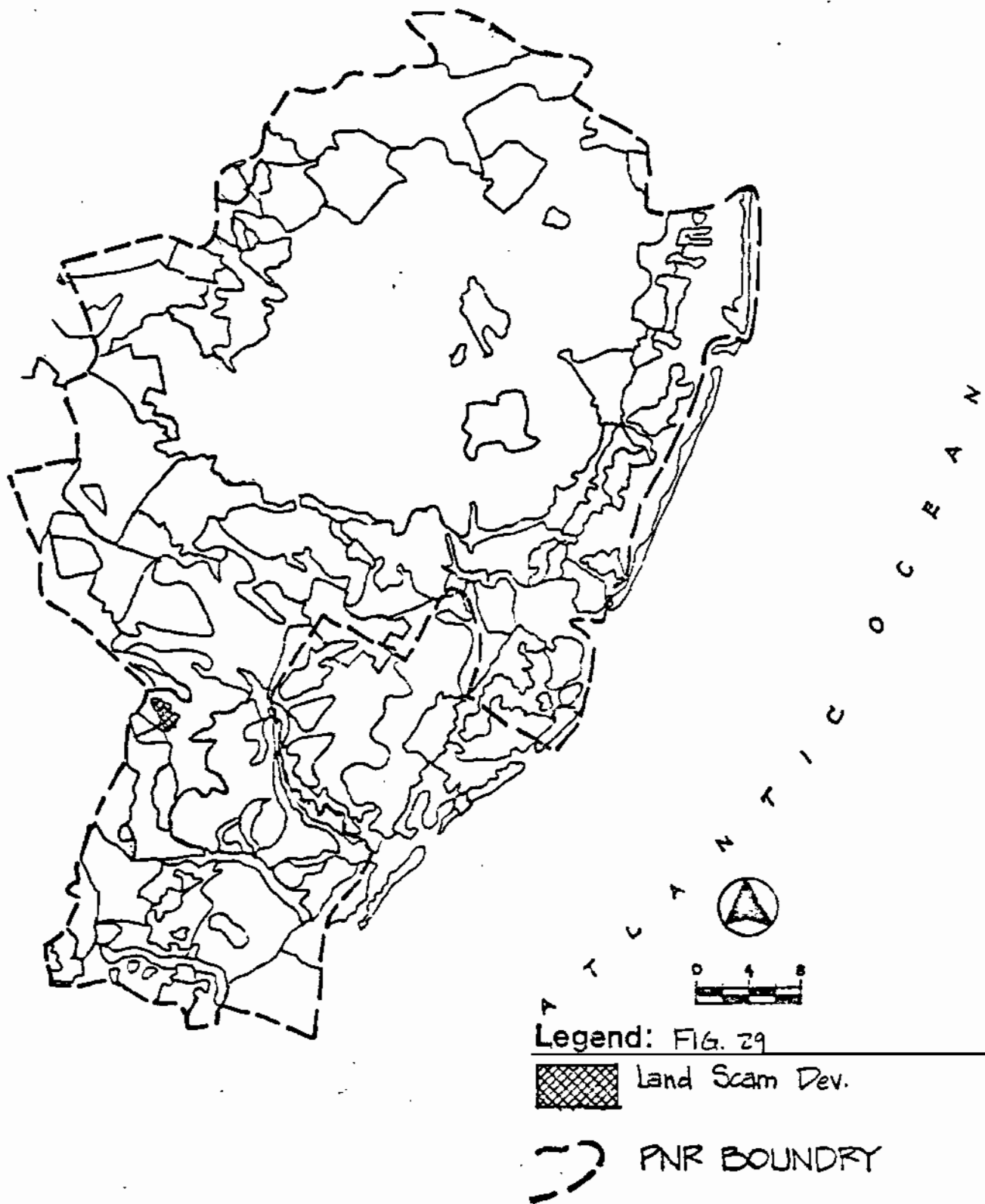
Regional Contacts: All of the sand and gravel companies
Dan O'Connor, Port Norris
Jean Curnow, Leesburg
Hunt clubs

Cumberland County: Land Scam Development. The primary use of this region is as a repository for the hopes and dreams of the many off-site owners. These scams work in the following way: The lots, 100x150 feet, are advertised in the New York City area. People in the Bronx and Brooklyn buy a lot and faithfully make payments toward the time when they can retire to their land and build a small home. As retirement nears, they call up the township offices and inquire about the timetable for installing roads and sewers. They then find out that the township has no plans for roads and sewers and that even if it had, it couldn't afford to put them in even if it wanted to, which it most definitely doesn't want to. Furthermore, township zoning does not allow building on 100x150 foot lots in that area; they would need a minimum of six lots. So, in disgust and anguish, the tormented city dweller misses a payment. At this point the developer steps in, forecloses, resells the lot, and the process starts all over again. Meanwhile, to protect himself, the developer takes the township to court claiming that the zoning is unfair because he had subdivided his land prior to the enactment of the zoning ordinance. The southern site is owned by a Mr. DeCarlo who is represented by George Shock in Millville and who has engineering done by Zell in Pleasantville. Lots are owned primarily by people in the New York City area, but also by people as far away as San Francisco. The land is hunted and is also hiked.

As mentioned above, there are small lot owners all over the country. The hunt clubs on Union Road, South Millville, Mennantico, Good Sports, gun in the area. Conservationists associated with the Cumberland County Conservation League hike and know the property.

This is a separate sub-region because it is land privately-owned by many, but functionally controlled by just two developers. As Jack Feltes says, "The DeCarlo tract is a real operation!" and we feel that its presence in the township shouldn't go unnoticed.

There is no settlement in this sub-region, and this is characteristic of the successful scam. Furthermore, the township doesn't want any settlement of any type, because then it would have to provide police protection and a new elementary school. (Police protection--a police force--is required when the population in the township exceeds 5000...right now it is at about 3900, and a police force would put an impossible strain on the township finances.)



Cultural Subregions of the Pinelands

A Human Ecological Study by Jonathan Berger, et al, 1980

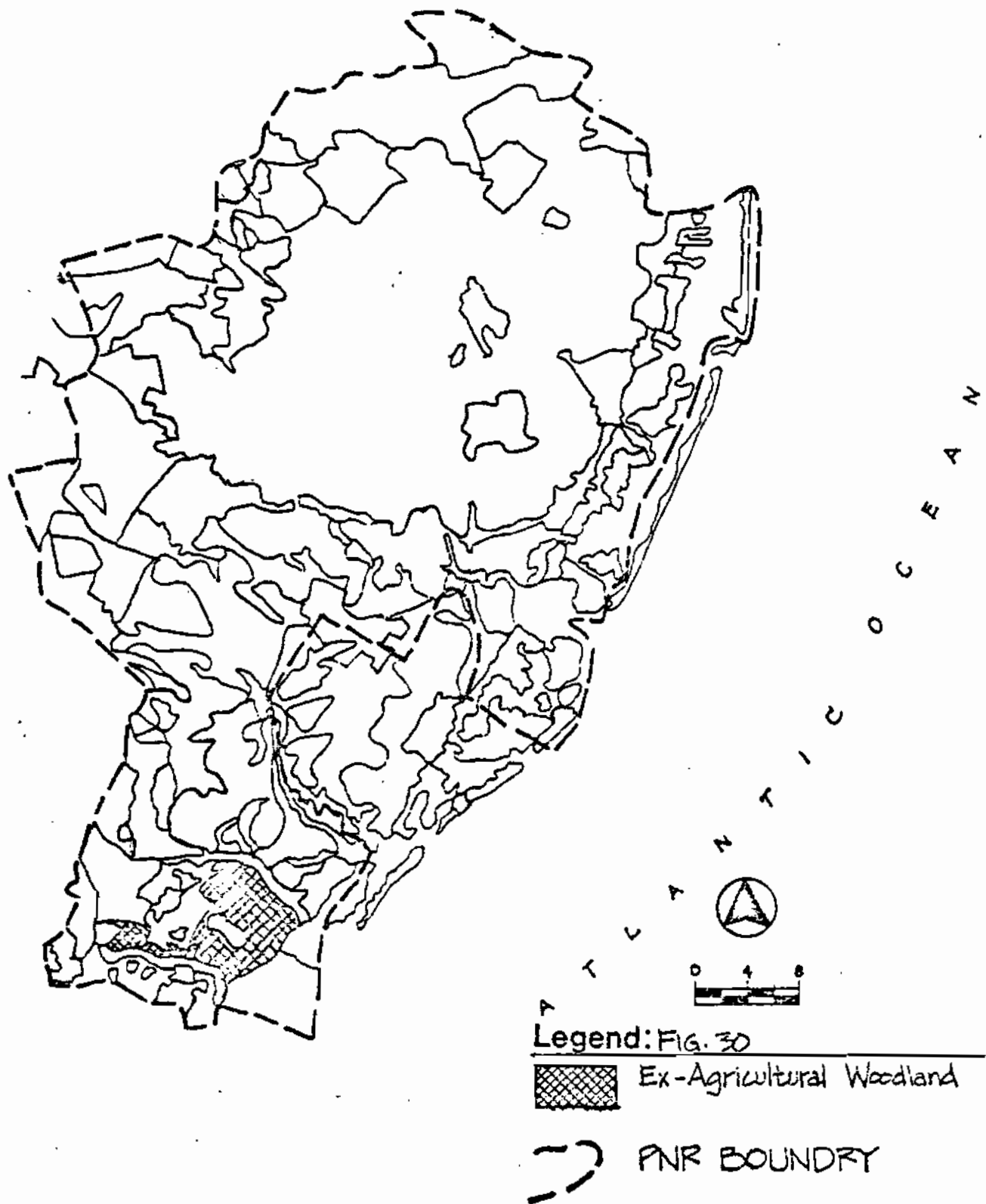
the effect of Pinelands planning

If the moratorium stays, then little will change. If the moratorium is lifted and people could have their way, then little will probably happen although the possibility of some settlement occurring becomes more likely. Needless to say, both the developer and the township really don't want anything to change. However, the more than 1000 lot owners probably feel otherwise. If the moratorium is lifted and severe restrictions on development are enacted, then the township will be unhappy, but not over this particular sub-region - they would just as soon have DeCarlo disappear. The hunters and the hikers would do well with severe development restrictions.

Regional Contacts: George Shock, Millville.

Cape May County: Ex-Agricultural Woodland. This is an extensive region, barely populated but intensively used. There are two distinct units in this region: Cedar Swamp and everything else. The cedar swamp is totally uninhabited. Its main uses have been cedar logging and cedar mining in the past. At the present time, practically every cedar tree worth cutting has been cut by the Brewer family - George Sr. in particular cut this area. His sawmill on the western edge of the swamp north of Dennisville and the Van Vorst mill on the western edge of the swamp just below Petersburg reflect this use. Brewer Jr. must now bring in cedar to his mill from Maurice River Township. Everyone would like to see the cedar return, but this would require careful, expensive, and sustained management, especially to protect the saplings from the deer in winter as this is their preferred food. A prerequisite for this would be the integrated ownership (or at least control) of the swamp. Aside from the above past uses, there would seem to be no other uses for the area besides conservation, hunting, and trapping, unless someone were to drain or fill it for development. The swamp is an intense focus for CAPE, an environmental organization, and Ruth Fisher has approached the County Freeholders about purchasing it to protect it every year since 1972, with no success. In the interim, increased land values (even in the swamp) have made this only less likely.

The rest of this sub-region is forested or returning to forest after agricultural abandonment, except for a few special use areas. Just west of the swamp on Dennisville Road above Mt. Pleasant is a very large area of abandoned and very active sand washes. This area is easily discerned in ERTS and LANDSAT photos of New Jersey. The sand from these pits goes into CBS block, cement, and asphalt, much of it in a plant in Middle Township. A second special area is the region surrounding Woodbine, especially to the south of the Borough, where there are still some fields in cultivation or providing pasture for an occasional horse. None of this is of any commercial importance, and there is as much or more land that is now successional. Bernard Germanio has about 1,000 acres of land in this area, much of it just north of Woodbine. He was a swine farmer but, according to Mo Siegel, his business was wiped out recently by some unspecified swine disease. A final special use area



Cultural Subregions of the Pinelands

A Human Ecological Study by Jonathan Berger, et al, 1980

includes a number of abandoned cranberry bogs around Steelmantown.

The rest of this region is either swampy or woodland, much of it also farmed in the recent past. The uses to which this land is put are hunting, trapping, gathering, wood cutting, and speculation. Much of the dry ground in this region is also being considered as potential landfill sites for the county by the MUA. This has the officials and residents of Upper Township furious. Their sentiment is 'don't let the county do to the town what the state is trying to do to the county (i.e. Pinelands)'. Hunting is by local hunt clubs whose members come from the settlements surrounding this region. Their territories are very well established by arrangement with local landowners, and hunting in areas where they are not allowed is enough provocation to generate animosities between groups that will last for the 51 weeks after deer season is over. Wood poaching is increasing, particularly on unpatrolled or absentee-owner land. This is also an area that is used for gathering laurel and other natural objects. This is done by families and family groups, like the Collins brothers who live along route 50 or the Lashleys who are also from that area. This activity is on the decline and is practiced now only by those in greatest need. The details of speculation will be included in the section dealing with the moratorium.

There are no settlements of note in this region. Those who live in the region live in scattered homes lying along roads, with slightly greater densities of this rural settlement pattern the closer you get to the towns which surround this area. The densest settlement is probably in the area between Woodbine and Dennisville.

This area is a region because of the large cedar swamp. The rest of the area along with the forested land to the west is unique in that it is now and always has been very sparsely populated. This inland forest region is surrounded on the northeast and south by a ring of settlement that dates back 200-300 years. The interior is often swampy and not especially suited for farming (or much else). All the cord wood was cut off this area and on up into Maurice River Township back in the late-1800's. It was only after the railroad came down through the middle of the area, that Belleplain and Woodbine sprang up within it. Both of these communities have been struggling for survival ever since then.

the effect of Pinelands planning

The moratorium is very important to this region as there was considerable speculation and development activity in the area before the moratorium was instituted. Much land is owned by the sand companies in this area, often in association with real estate firms from out of town (places like Bala Cynwyd). There was also speculation and development on the dry land in this region along roads near or between established towns. Both Les Germanio and the Campbells 9&50 lands fall into this category. The 9&50 example is a classic case of why local builders and residents are up in arms against the Pinelands, and a perfect demonstration of the factors which must be taken into account when drawing up

regulations and guidelines for development. 9 & 50 had two subdivisions on the books when the Pinelands moratorium went into effect. Both were located on Dennisville Road, which forms the Protection Area border. To the west is inside the Protection Area, and to the east (towards the Cedar Swamp) is outside of it. The site on the east (which runs right up next to the swamp) was unregulated by the Pinelands since it was outside of the Protection Area, but the site on the west side of the road, which had 19' to groundwater, was caught. If the moratorium stays, it will have a devastating effect on smaller family operations like 9 & 50 who can't afford to sit on land for that long or to lose on a major (for them) investment. Already they are thinking in terms of phasing out the construction side of their outfit and moving into turnover as a staple. This does not mean that development will stop. The large, out-of-area outfits will come in with outside contractors, outside labor, big money, and step right in. If there is development with restrictions that are expensive, too expensive for a small outfit, this is what will happen. If the moratorium were removed, these small outfits would survive, at least for now. If development pressures get too high though, they may not be able to compete with the big firms for land when it becomes available. The maddening thing is that, of the two sites, the more important one to the environmentalists like CAPE is the one right adjacent to the swamp. They have a keen interest in protecting these ecotones to protect the swamp. It is unclear as to why the Cedar Swamp was not included in the Protection Area; the Commission should, in some way, try to protect that unique and valuable resource.

Regional Contacts: George Brewer, Les Germanio, Mc Cleod, Rutherford, Dave Van Vorst, Ruth Fisher, Stew Campbell

The Coast

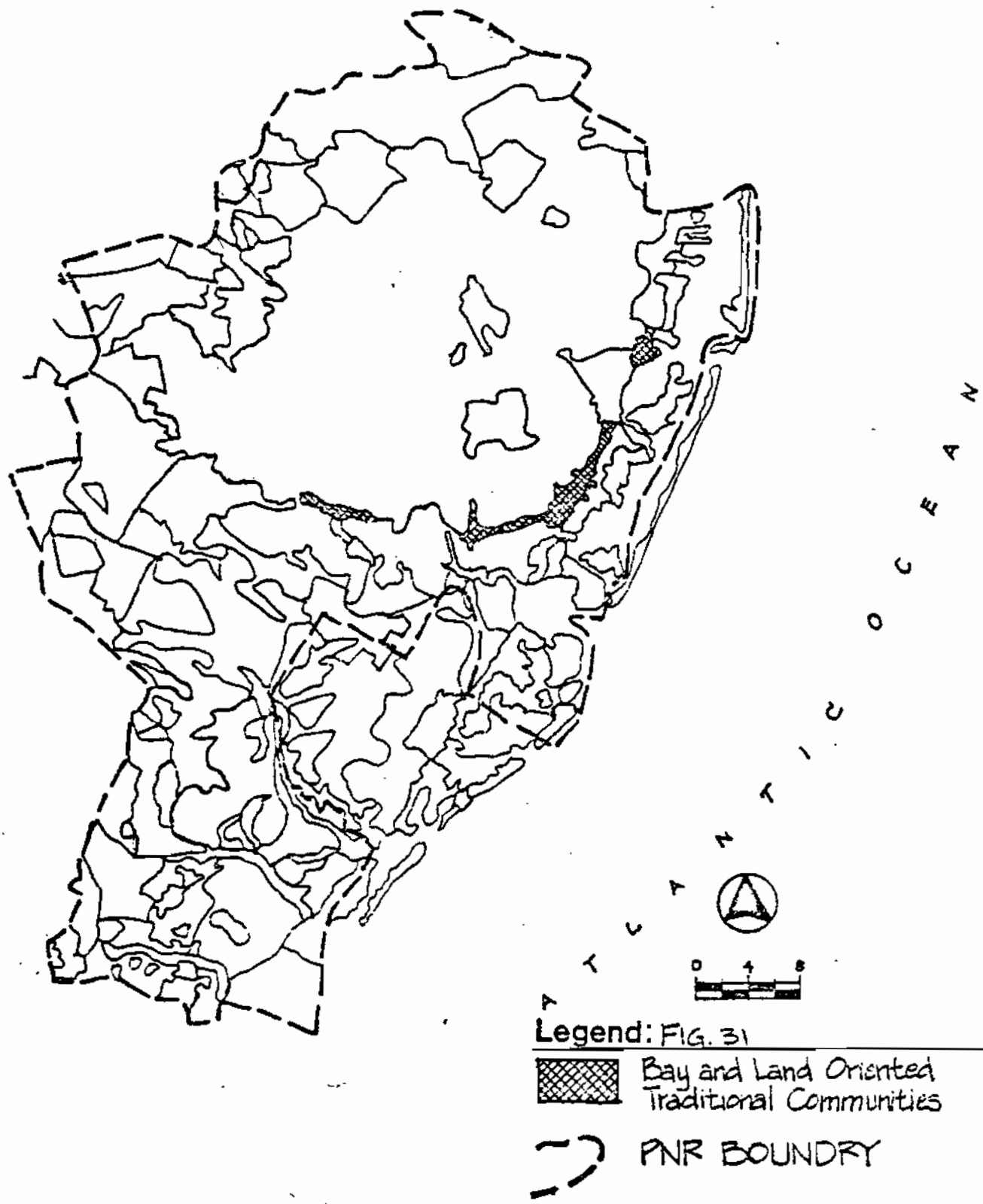
In pre-Columbian times the forests of Southern New Jersey extended to the edge of the marshes. Indians had cleared fields for corn in places where European settlers would later build their villages; Manahawkin means "land of good corn". Today there is a distinct inland corridor of settlement that runs from Toms River all the way to Maurice River, following the first high ground inland of the marshes. These settlements are located in a transition zone, accessible to users of the forest, the marsh, the bay, and the barrier island. The entire complex of ocean, beach, barrier island, bay, marsh, upland settlements, and the forest regions work together to provide places to live and resources for well over a million seasonal and year-round users. The social, economic, and natural processes of all of these locations are linked, with the major economic driver being the resort economies of the barrier islands. Also important are bay uses and forest activities such as small sawmills located on the coastal strip. The entire orientation of the coastal complex is the resorts, marine commerce, the forest products as they tie into marine and resort industries, and some scattered farms. The seasonality of events and the ebb and flow of visitors across these interactive regions provides one of the major dynamisms for the coast and the entire state.

It is impossible to divorce an understanding of the inland settlement strip from its connections to barrier island, bay, marsh, and forest. This is an historical transition area which has remained stable over 300 years of use and settlement. Prior to the retirement boom it had not fluctuated inland except in the south where some farmers had cleared fields. This eastern transition strip is a stable community which derives its unique character from its location at the interface between several zones of distinct land uses and cultures, in contrast to the agricultural-forest transition zone in the west, which represents an irrevocable conversion of forest to low density, suburban housing in the woods. The functions of the coastal strip and its settlements and towns vary as does its immediate environment to the seaward. Where there are barrier islands containing resorts, there are coastal strips that provide services to these areas and to the seasonal visitors who use the islands but cannot reside there. Where there is a convoluted, marsh-covered shoreline, inlets of low sedge islands, and no stable barrier beach, the coastal strip harbors settlements and people with less of a resort orientation and more of a fishing and forestry orientation. There are narrow strips up the tidal rivers which have few links to the resorts but which are estuarine, boat building, small industry, shellfishing, and forestry areas. Delaware Bay is another system altogether, for there is no barrier island and long-time, resident families still use the marshes for salt hay farming. Finally, the available resources and the pressure for retirement, mainland service, and resort housing helped create more urbanized coastal strip areas.

Each of these areas has its own special set of actors, issues, and environments, but there are also many complementarities among the different sections of the coastal strip.

Bay- and Land-Oriented Traditional Communities

From Cedar Run to New Gretna is a chain of villages linked by a common road and bay, similar occupations and relationships of resource users to the State, and related families. At both ends of the strip, in Manahawkin and New Gretna, businessmen have organized to support their interests, but these are only local. Tuckerton is one of the larger towns along the coast, but its social structure is representative of the area. Older long-time residents dominate land development, real estate, and banking. Other, less wealthy long-time residents work in service occupations in the town and adjacent areas. The older, Republican, established families dominate the municipal government. Tuckerton has a modest array of fraternal and service associations, with the older, more established families belonging to the Masons, the Rotary, the historical society, and the Optimists Club. The historical society, the Redmen, and to some extent the volunteer fire companies and rescue squads crosscut upper, middle, and working class income groups. Summer residents do not or cannot participate in these associations and have thus formed the Atlantis Country Club, which generally has no members from the old borough. Retired residents belong to a senior citizens club, the historical society, a garden club, and a community center-drinking club called the Mystic Isles Community Association.



Cultural Subregions of the Pinelands

A Human Ecological Study by Jonathan Berger, et al, 1980

In most of the coastal towns, small family operations predominate. These include sawmills, clam wholesalers, small grocery stores, other food and drink stores, some marinas, and small boat yards. A majority of the people in the villages are long-time residents. Their children occupy newer homes built in clusters on the outskirts of the older, wood-frame settlements. Most of the small cedar mill owners in New Jersey and a high percentage of the Atlantic Coast shellfish lease lot holders are found between Manahawkin and New Gretna.

Cedar operations are usually small because of the difficulties involved in obtaining the cedar. It is hard to cut and, although plentiful, speculation has obscured clear title to the cedar swamps and thus cutting rights are not sold from these lands. Mill owners therefore attempt to establish working relationships with swamp owners who have a clear title or they try to convince local speculative owners to have their land surveyed. Most mills have only one full-time logger, and rely more heavily on people who bring in occasional truckloads. Loggers cannot get their machines into the swamps, so the wood is cut with a chain saw and carried out on the shoulders of the crew. This necessity for hand labor discourages large operations. Demand for cedar is generally high. Many of the homes built on the mainland and the barrier islands utilize cedar because of its workability and resistance to salt spray. The mill owners keep in close contact with one another, helping each other out by such actions as the loaning of equipment. Many have kept their operations small on purpose due to supply problems and their desires to "keep it small and in the family and to be able to sleep until 10 a.m." The owners are usually life-long residents of the coastal area.

Baymen are also long-time residents. Shellfishing has historically been one of the major industries of the Atlantic Coast of New Jersey, and recent estimates indicate that shellfishing brings in even more income than fin fishing. While the availability of cedar sometimes slows the mills, the weather is what slows the Baymen's business. In the cold winters, it is dangerous to work the "wildland", or open bays. Closer to the shore there is protection and more shallow water. It is inshore along the convoluted, marsh-covered shoreline that one finds the lease lots. These represent a very small percentage of the available bay, as most of the very productive waters are open to everyone. Yet their protected state and overall convenient location makes these the prize possessions of a relatively small number of families. Many of these families have been in the business since the turn of the century, and have yet to give up their leases. They renew these leases annually, and 126 out of the 420 total leaseholders live between Manahawkin and New Gretna. Their bay is the protected bay south of the Manahawkin Causeway. Only one lease lot is found in Barnegat Bay; the rest is wildland.

Many Baymen are also duck hunting guides, clam wholesalers, deer hunters, and charter boat captains. It is hard work, but as one man said, "It grows on you." Issues of import to shellfishermen include winter weather problems, a high susceptibility of the resource to pollution, a decline in the number of harvested hard clams, lack of enforcement of

shellfish regulations, seasonally fluctuating demand combined with rapid changes in the business climate, and poaching on leased beds. A shellfishermen's association deals with most of these issues as they arise. To cope with the pollution problem, the State of New Jersey has recently begun a "relay program", by which clams are dug from polluted waters and transferred to clean waters. Here they cleanse themselves and, if passed by the State, they are eventually sold. The relay increases the supply of clams, but it also increases the amount of work involved.

The State plays a major role in the shellfish industry. Licenses are necessary for all recreational and commercial operations. A shellfish council, appointed by the governor, makes decisions on all lease requests. This is a non-paid board that usually listens to the scientists and administrators at Nacote Creek, the State shellfish laboratory. The Coast Guard, the Department of Environmental Protection in Trenton, and the Nacote Creek Office are all involved in actions on oil spills and bed closings. The Army Corps of Engineers and the State Office of Coastal Zone Management oversee bay dredging permits. Obviously the Baymen are opposed to dredging because this destroys the bottom habitat, and they fear that there will be casino-derived requests to dredge the back bays adjacent to Atlantic City for luxury yacht slips and shorefront condominiums. Baymen and leaseholders at Absecon will suffer greatly if this occurs, for this is the most productive relay bay in the entire system. Baymen throughout the Pinelands benefit from relayed clams out of this bay, and these represent a considerable number of people: officials at Nacote Creek issued over 20,000 licenses in the past year. It is not just the full-time Baymen who have economic, emotional, and recreational interests in the continued viability of the shellfish industry. Recreational shellfishing is very popular, and this attraction of people to the Bays means that local merchants and builders have considerable interest in the Bay and the people involved in shellfish management and harvesting.

Baymen live in the towns and clam wholesalers advertise along the roadways of the coastal strip, but they work the Bays and the marshes. Small farmers live on the margins of the villages, advertise along the roadways, and work the land behind their houses. As late as the latter part of the 1950's, a flourishing chicken industry occupied the coastal road to the south of Toms River. There have always been farm plots along the road as even Baymen grew food in the past, but the chicken industry was a cash generator. (So expansive was the east coast chicken industry that pilots often commented about the "snow" on the ground during the summer.) Only the rise in feed costs forced the chicken farmers out, the last of whom went with the first huge Russian grain sale of the Nixon administration. Today the small farm plots remain, and many of the now elderly farmers grow vegetables and sell them to the summer customers who once bought chickens. They derive other income from the rental of garden plots to summer and year-round residents of Long Beach Island. Every farmstead along the road represents at least one vegetable farm. These people have known the hard times brought on by the depression and later by the demise of the chicken industry, but they remain on their farms and have a deep attachment to their small fields and woodlots. Some also own extensive tracts of marshland.

Merchants in the traditional bay- and land-oriented towns have little or no competition from strip commercial and shopping centers. A balance has been attained between the current population and the available facilities. Stores are physically attractive and oriented toward both seasonal and year-round users. Major commercial issues for this region will be covered in the section on Manahawkin.

the effect of Pinelands planning

People living in the traditional communities of the Route 9 corridor will bear the brunt of tax increases brought on by State purchases of lands in the interconnected forest region. A high proportion of the population of each township crossed by Route 9 resides in the town centers. Baymen will benefit from regional ground and surface water controls, as will the vegetable farmers and the scattered summer residents. Cedar mill operators will only benefit if there is a forestry program on the newly acquired swamps and if the bid structure set up for the sale of cutting rights on public lands allows smaller operators to compete.

Concern about the extent and type of new development is double-edged. If development increases, the rather obvious, short-term benefits of increased construction jobs and overall maintenance of employment must be balanced with the lifestyle disruptions which might occur. At the moment no strip commercial development exists, other than a smattering of small stores. If such development does occur, then the interior cross-roads-main street commercial areas of every town and village may suffer decline and closings. Should the runoff from such facilities be directed into the tidal creeks, lease lots could suffer from the water pollution. A large influx of newer residents will bring in money to the region, but it will also bring the potential for community disruption. The newcomers will almost certainly not be welcomed by the older residents, who have even been closed to people who moved in as much as ten years ago. People who come down for the weekends are called WEBS - "Weekender Bastards". There is also the possibility that the people who move in will demand or require greatly increased services. One small apartment complex built just north of Tuckerton attracted numerous welfare families. A further possibility is that the building of condominium, vacation-type housing will raise tax rates and thus make it difficult for the sons and daughters of the long-time residents to stay in the area. The potential for this is greater at the southern end of the coastal strip at New Gretna because of its location close to Atlantic City and at the mouth of the Mullica River with its excellent boating opportunities.

Looking ahead to potential plans and standards, it is likely that wet woods will be out of the development picture and the tidal creeks that cross the coastal strip will have significant protective buffers. If development does occur, it will probably occur in the present fields and not in the forests. Older farmers might benefit from the sale of the now highly-valuable lands, but they may also be badgered by developers to the point of annoyance. Should these fields become the siting place for new growth, or should new growth be restricted to in-fill housing

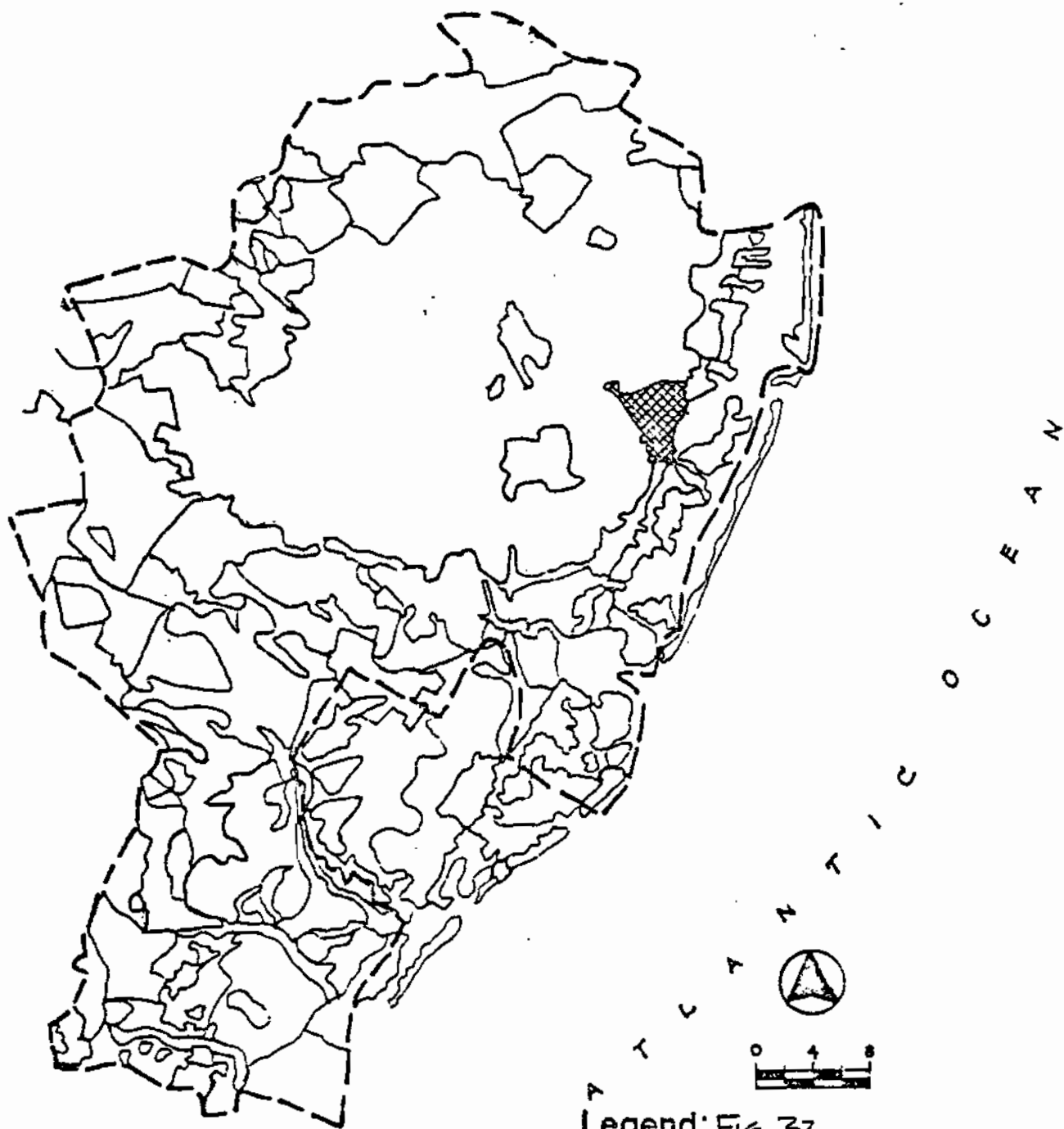
in the villages? The fields offer a chance to cluster at their edges, thereby allowing multiple owners to benefit. Clusters could promote a sense of place for newer residents, who are going to have a hard time being accepted by the present populace. The villages have the advantage of pre-existing services and the potential for up-grading those services with increased funds. If the type and scale of the village development is appropriate to the area, then both new and older residents, younger families and retirees, could all benefit from expanded housing opportunities. What the future landscape will look like depends heavily on the extent of development pressure in this area. I suspect that it will not be great, since present CAFRA regulations permit subdivisions of less than 24 units without a permit, and there are few of these being built. A greater development potential exists at Manahawkin.

Regional Contacts: Herschel Abbot - Cedar Run
 Norman Larsen - Cedar Run
 Mrs. Pullen - New Gretna
 The various volunteer fire companies
 Nacote Creek Shellfish office - State of N.J. -
 Mrs. Mueller


Manahawkin Mixed Development


Manahawkin is a region of the Pinelands that contains examples of every development type found in the region: there is an old coastal town, a lake development, a lagoon development, and a large forest development with club facilities. Not surprisingly, Stafford Township (of which Manahawkin is a part) has the highest percentage of land held by speculators in the entire National Reserve. This settlement and ownership pattern is due to the resort barrier island, the Causeway, the exit and entrance to the Garden State Parkway, the capacity of the new sewer system, the conducive climate, proximity to the Bay, and the firm establishment of a resident entrepreneurial class that first focussed on development of the island and has now turned its attention to the mainland. Manahawkin is an example of what New Gretna could become if so desired by regional and local interests, for New Gretna exhibits a similar concurrence of factors and is even closer to Atlantic City.

Cedar mill owners and Baymen may live in Manahawkin, but commerce is the major land use. The area is a regional center for the provision of services for both summer and year-round residents. The Southern Ocean County Rotary represents many of the area's active merchants. Although the Rotary claims membership of merchants and professionals from Barnegat to New Gretna, a substantial majority come from the Manahawkin or Long Beach Island areas. They meet weekly in the Caravelle Inn and discuss local and regional business problems. Important issues include the current freeze on building due to the moratorium, the seasonality of business, fear of a proposed energy cluster at Oyster Creek, summer traffic and road repair, Atlantic City competition, solid waste disposal problems, potential pollution of the Bay, lack of public transportation, and the maintenance of channels and inlets. The business community has substantial



Legend: Fig. 32

 Manahawkin Mixed Dev.

 PNR BOUNDARY

Cultural Subregions of the Pinelands

A Human Ecological Study by Jonathan Berger, et

interests in a high quality environment. They have had to develop a system of land use which develops and heavily uses the land and the bays, but which also has maintenance functions. Not surprisingly, the merchants of southern Ocean County have called upon the federal and state governments to help them maintain their environment and thus support heavy seasonal use.

Two major problems have faced the merchant community in their interaction with the land and water of the coast. The first is water pollution brought on by high density development built over highly permeable soils and shallow groundwater which is connected by regimes to the Bays and the tidal creeks. To deal with the pollution in Barnegat Bay and at the same time expand their capacity for increased development, the merchant community and other concerned groups had a modern sewer system installed at public cost on the mainland. The current settlements of both the Bay and the Island use only the slightest fraction of the capacity of this system. The system has an ocean outfall and receives water from the Kirkwood Formation, which has a very high (in the thousands of gallons per minute) safe yield. Because of the unused capacity of this system, the merchants look forward to relatively pollution-free times with little obstructions to mainland construction. Since its installation, water quality in the Bay has improved.

The second problem facing the merchant community is the shifting nature of channels and inlets in response to diurnal, seasonal, and catastrophic movements of the sea. Dealing with this problem required a coalition of federal, state, and local officials. A large sign just before the Manahawkin Causeway publicly advertises the appreciation of the merchant community for dredging and channel work done on Barnegat Inlet. Clearly, technology and public funds represent the significant interface between these merchants and their environment. They argue that the economy is bolstered and the economic health of the region preserved by their actions. Others, however, raise the question: What will be the next government intervention needed to counteract heavy over-use of the environment? There is already a controversy about running a private sewer line up a small creek valley that contains endangered species.

A mix of long-time residents, retired couples, and younger blue collar and professional families inhabit the various settlements of the Manahawkin region. Some represent families who had visited the shore in the summer and then decided to move their children to a more rural environment. Others moved in because of the low tax base or relatively cheap housing in lagoon developments. Teen-age vandalism and a lack of adequate educational and recreational facilities are problems faced by a number of the settlements. A local clergyman noted a difference between those settlements where families bought lots and built their own homes, and those where people moved into an existing house. In the former, the people seem to have more of a stake in their environment and the families are more cohesive. In the prefabricated developments, there seems to be a higher number of youth-oriented problems. This is not uncommon in other lagoon areas along the coast, for the entire regional Pinelands High School District is plagued with such problems. The County 4-H Club

is sponsoring "cooling-off" homes for children who have problems staying at home. Host families are recommended by clergymen and public officials in an attempt to provide guidance and a very localized response to a growing problem.

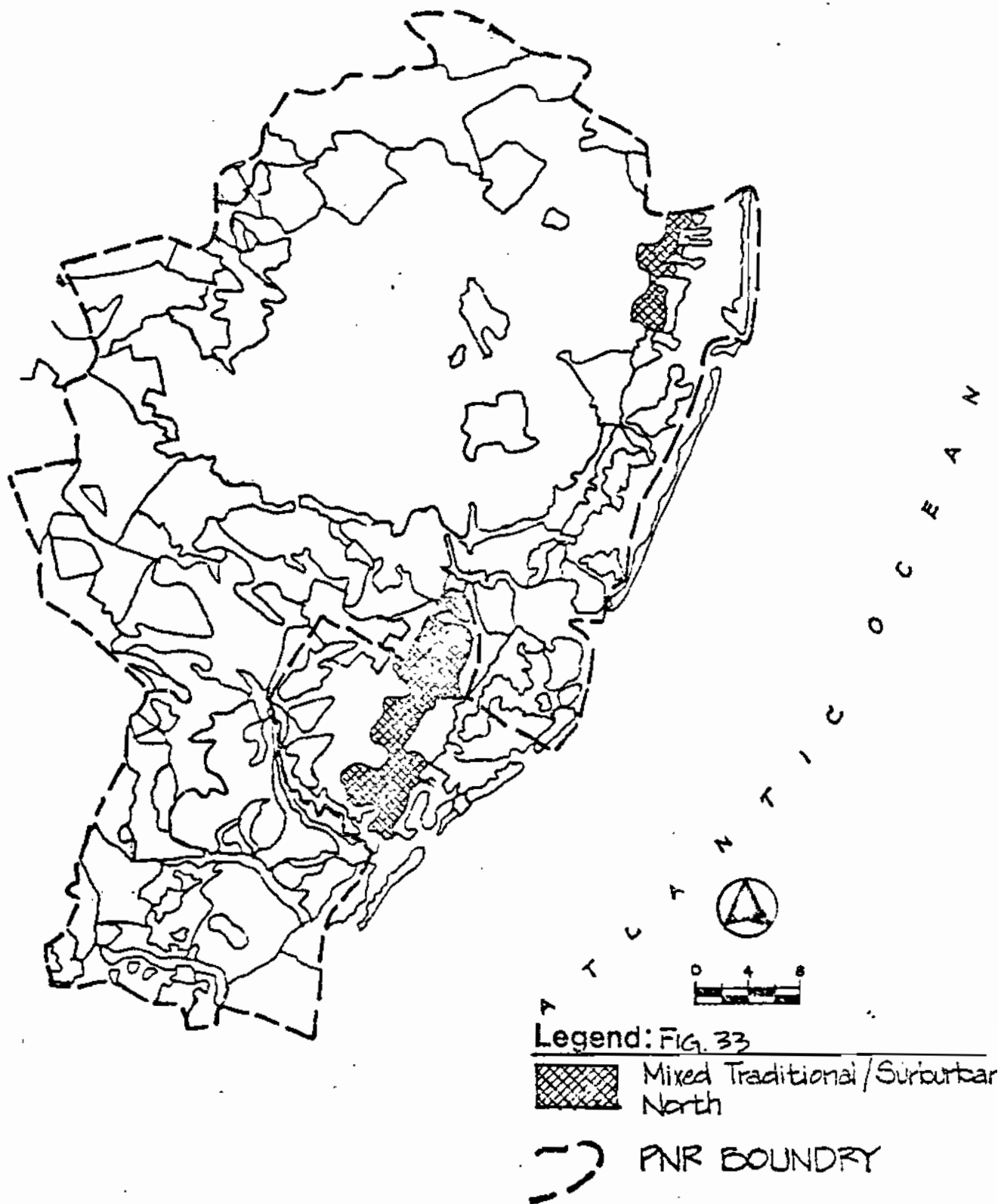
the effect of Pinelands planning

When the moratorium is lifted, there will be continued building and speculation. Since the island is built up, the vested economic interests have now turned their attention to Route 72. The sewer line is already in place, so lot size/groundwater regulations will not affect the developers. The question which remains is: how far into the forest region will the development occur? Will it spread into the more traditional bay- and land-oriented communities along Route 9 to the south and north? Pine Estates, a trailer park, is the westernmost development on Route 72. It is very close to the headwaters of all the small creeks that drain to Barnegat Bay, and is only five miles from the Plains. New strip development and road widening continue along Route 72 immediately east of the Garden State Parkway. Current CAFRA guidelines have managed to keep a few swamps out of the range of the bulldozers, yet it seems inevitable that more development will come. The best that can be done here is to institute a strict, sensible, and locally-informed program of forest preservation and management which will increase opportunities for extensive forest use and decrease the fire hazard. The development community has had their work destroyed by natural catastrophes on the barrier island (much to their delight, since they could then reinvest in the same properties). Will the same situation occur during a drought summer with a west wind and a big fire? Perhaps it is better to increase densities along Route 9 than to allow the suburban spread to continue west of the Garden State. History has shown that the Cape May Formation, which forms the basis for developments in Manahawkin and along Route 9, is the safest, most amenable environment for settlement and intensive use.

Regional Contacts: Jack Cervetto - Warren Grove
Pastor Rudy Schneider - 597-2696
Bill Sherry - 597-7421
Christopher Noonan - 597-1251

Mixed Traditional/Suburban - The Northern Coast

Just north of the village of Barnegat begins an area of intensive commercial, industrial, and residential development. Forked River, Lanoka Harbor, and Toms River form the multiple centers of this continuous, pulsating, development region. There is a large concentration of industry here, including numerous sand and gravel mines, processing plants, and a nuclear power station. At Toms River there is a large shopping mall complex. These industrial and commercial centers have been laid upon the traditional coastal resort and marine economy, and all are linked to a housing boom for second homes and retirement villages. As the director of the Chamber of Commerce said, "We can't stop. We have to provide roofs over people's heads." Perhaps because this explosive growth, the mix of



Cultural Subregions of the Pinelands

A Human Ecological Study by Jonathan Berger, et al, 1980

people in this area have crystallized in their minds three landscapes for the future, variations on which are found throughout the Pinelands. These are development with technology, development with sensitivity (preserves, standards, and aesthetics), and "leave us alone" (or junk piles and trailers).

Development with Technology is the current strategy of the Manahawkin and Upper Route 9 merchants. An eye is kept on the most prominent environmental standards and the working processes of the shoreline, but within those minimal constraints all possible land is open for development. Development proceeds at the pace allowed by the money market, energy supplies, and consumer demand. Merchants' and manufacturing societies; captains of industry; power companies; bureaucracies charged with provision of water, sewer, and roads; regional chambers of commerce; banks and realtors - all covet this future. The necessary economic incentives for this constituency are provided by the northern coast's proximity to New York, Philadelphia, and North Jersey; the mild climate and available outdoor activities; and a large and increasing population of Americans in their fifties and sixties who are seeking housing for their retirement. Since the barrier islands are built up, advocates of development with technology believe that "it is time to start on the mainland". Counter to this and with the hope that they can educate growth is the second future landscape - "good development".

A sentiment typical of those advocating Development with Sensitivity is that expressed by the president of the Ocean County Historical Society: "We developed so fast that we lost much of our heritage. 'Planning' is associated with the development function, not with conservation and preservation." Historical societies, environmental groups, a few agencies of the State (Department of Environmental Protection and the Office of Coastal Zone Management), and even some concerned merchants and developers echo these feelings, and look for a solution in conventional growth management techniques combined with conservation and preservation strategies. Development will proceed with the application of appropriate technology in the areas where it "should go". There will be considerable State purchases, specific historic and aesthetic zones, and performance requirements for all new development. This future landscape most closely approximates the state of the art in environmental planning. There will be a strict review process and proponents of both development and conservation will live with the compromises.

Several members of the Waretown-based Pinelands Cultural Society espouse a vision of the future which is a simple request: "leave us alone to practice both intensive and extensive land uses". Older long-time residents and their children have seen their ways of life and their visions of the landscape changed and crushed before the onslaught of development. They want to be able to use the land the way they have in the past. They want to be allowed to harvest from the land, put up trailers without paved driveways, and keep animals in their backyards at Waretown and Forked River. Many of their valued land uses are highly extractive, and as such the hunters, the trappers, the cedar loggers, the sneak box builders, the gatherers, the firewood cutters, the Baymen,

and the small farmers are all included in their vision of the future. They want to use fire, and to be able to sell small plots off. They want to drink clean cedar water and walk the beaches and marshes as they did when younger. They want to raise animals and vegetables. They want to do all this in peace and quiet. They want to live on and use the land. Their vision includes neither boutiques in historical zones nor recharge performance requirements for developers. They don't need the Chamber of Commerce and their 'pitch' or the conservationists and their ideas. The Pinelands Cultural Society members claim to represent a way of life which they express through their music. They are not much loved by the 'development with sensitivity' advocates because they are unconventional, follow a different way of life, and are usually absent from the debate over growth or no growth. Many of their relatives have already moved to the South to places where they can live their life without the disruptions of development. The use pattern of the marshes comes closest to their vision for the future.

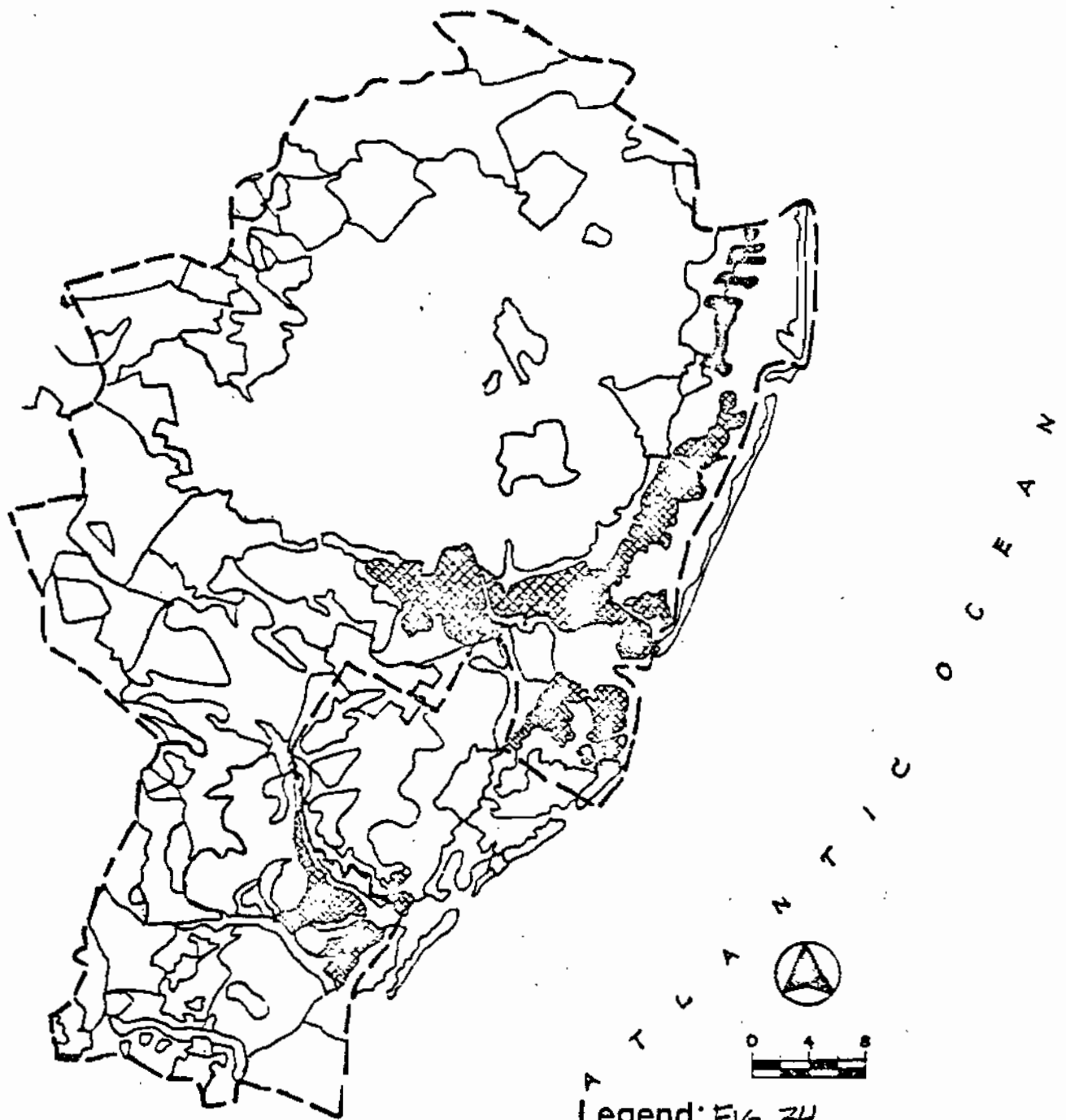
Regional Contacts:

Gladys Ayers	-Pinelands Cultural Society
Janice Sherwood	
Poly Miller	-Ocean County Historical Society, <i>511</i>
Chamber of Commerce	-Toms River <i>Council & Trust</i>




The Marshes

The marshes form a separate region because they have performed over millenia many special services for people and the ecosystems of the ocean, bay, and upland. The marsh is the interface between land and water, and as such offers extensive resources and opportunities as well as constraints to human use. Prior to the advent of major sewer systems, the inhabitants of the coastal towns used the marshes to filter their wastes and thus maintain the water quality of the Bay. The marshes have provided fields for crops, hunting and trapping areas, and breeding and feeding grounds for many land and water species. From earliest times to the present they have stood out as a distinct and interconnected physical, biological, and cultural region. The Pinelands area contains developed marshland; privately-owned, undeveloped marshes; and publicly-protected marsh refuges.

The 'developed marsh' is synonymous with lagoon housing, for primarily retirees and younger families. Civic associations, social welfare groups, and senior citizens clubs represent the users. Hunting, fishing, and trapping, as well as natural filtration of pollutants cannot occur in these developed areas. Water-based issues include pollution from septic tanks and inadequate tidal flushing, while social issues revolve around one-parent families with juvenile problems and services for seniors. The landscape of this region will remain stable unless a major storm or fire destroys any of the developments, although communities might change due to inadequate maintenance and tax delinquency of homes. Until such occurrences, however, these areas will continue to supply relatively low-cost, coastal housing.



Legend: FIG. 34

-  The Marshes
-  Developed Marsh
-  PNR BOUNDARY

Cultural Subregions of the Pinelands

A Human Ecological Study by Jonathan Berger, et al, 1980

Hunters and trappers rely heavily upon the undeveloped marshes for their livelihood. Every yard of marsh is leased to a trapper, and there are long waiting lists for leases in the "muskrat meadows". Crabbers work the marsh-bay interface and duck hunters seasonally shoot their prey from blinds or boats anchored just off the marsh. The South Jersey Fur Takers Association, Ducks Unlimited, the Sierra Club, the Littoral Society, and the Audubon Society all keep watch on the public and private undeveloped marshlands, while the Army Corps of Engineers oversees the dredging permit process.

For the most part, land use of the marshes represents a convergence of public interest and private economic gain. The only major conflict occurs with private marina owners, many of whom justifiably feel that the State has acted to "run them out of business". The first problems arose when the State opened public marinas and undercharged the private marinas. Later, changes in the dredging and bulkheading permit review process made it difficult to expand even onto one's own marshland. In this manner many of the use rights were taken away from the private marina owners, but the tax burden was not proportionally lowered. To further worsen relations, private surveyors under contract to the State rudely and dishonestly sent form letters to the wrong people, informing marshland owners that their land would be surveyed for public purchase and regulation. In those cases where a State purchase offer was actually made, it reflected a much lower value than that reflected in the tax assessment. This example of marshland owners and their relationships with the State should serve as a warning about how not to conduct a planning or acquisition process.

the effect of Pinelands planning

Current State regulations bar further urbanization of New Jersey's marshes. Many small, private marshland owners feel that the only exceptions to this will be for any and all requests of the casino barons and their hired city planners or for oil company applications for the construction of oil facilities. This kind of politically-motivated special treatment should not occur in any part of the Pinelands plan, for it not only undercuts national and state objectives but also leads to even greater distrust of the Pinelands Commission than is already expressed by many residents of the area.

Pinelands planning can provide buffers for the marshes and their tributary tidal creeks. Increased public ownership may be desirable from the standpoint of establishing wildlife refuges, but public purchase might be better directed to areas not so heavily regulated but more heavily used for profitable purposes. Loss by urbanization of marshland from the coastal economy would have severe economic and social consequences. Short-term speculative gain would not, in the long run, balance losses of renewable fur and duck profits and fish breeding services. Urbanization would also destroy the traditional in-shore lease lots.

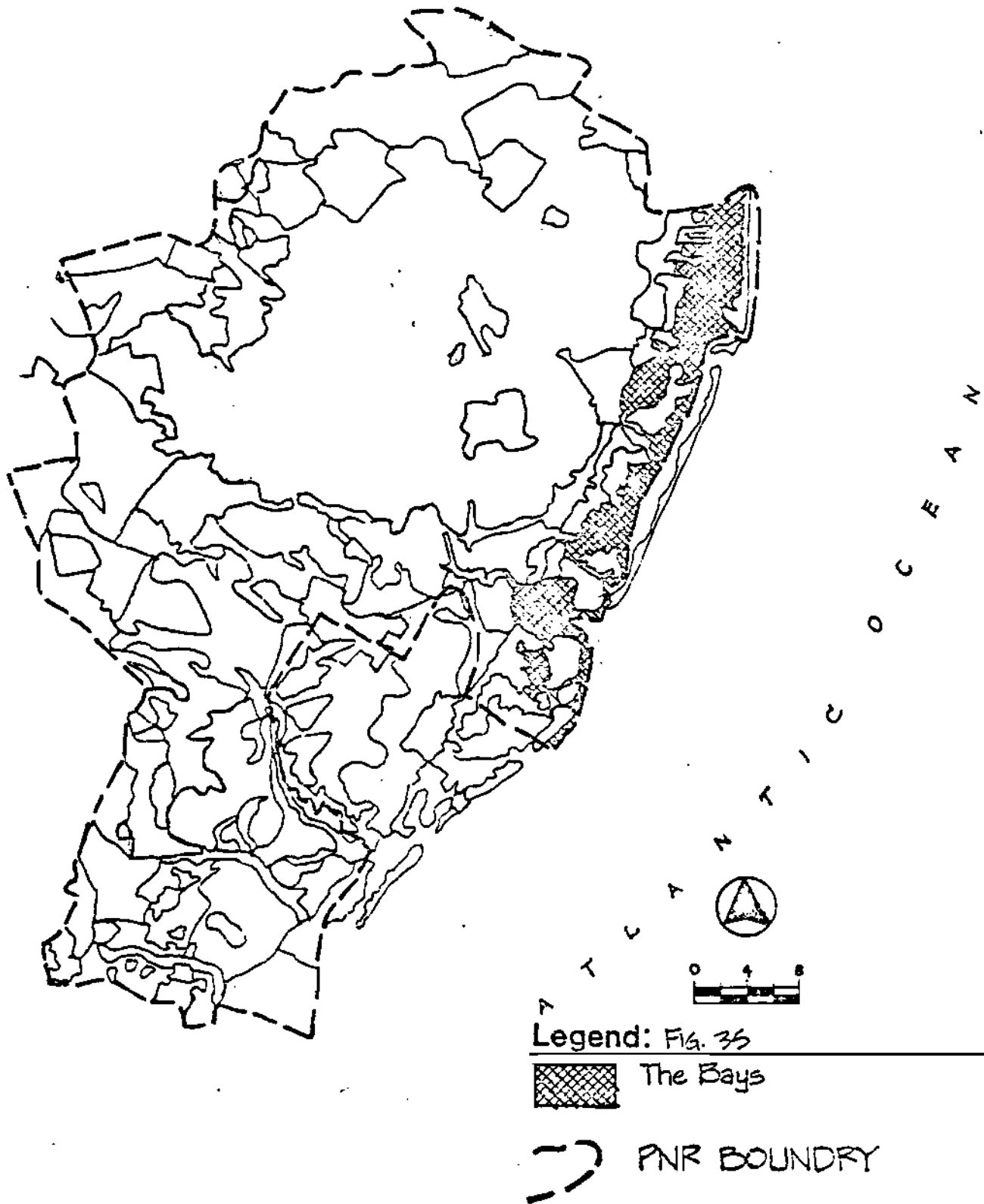
Regional Contacts: Duck hunting guides in the villages
Marina Owners
South Jersey Fur Takers Assoc.
New Jersey OCZM

The Bays

The border between the forest and the coastal corridor of settlements is in a constant state of flux. The marsh grows into or recedes back from the Bay. Yet the Bay itself is even more dynamic than these areas. Daily and seasonal tidal scouring and flushing, storms, dredging, and sedimentation from upland streams continually change the shape of the shoreline and the configuration of the bottom. Barnegat Bay has beaches on its mainland shore and very little convoluted marsh; it thus has very few in-shore lease lots. Manahawkin and Great Bays, on the other hand, have convoluted, marsh-covered mainland shores and a heavy concentration of in-shore lease lots. Both the northern and southern bays have considerable expanses of productive wildland, opportunities for duck hunting on privately-owned sedge and marsh islands, and access to the ocean through inlets at either end of Long Beach Island. They provide seasonal homes for a variety of fish (and thus fishermen), and have marinas on both the mainland shore and the barrier island.

Fin fishing provides a solid seasonal economic boost to the coastal region. Winter flounder migrate through the inlets and bed down in the mud off the channels near the barrier island. Bluefish prefer the deeper channels near the islands, as do blowfish and fluke. Tautogs are found around the rocks and jetties of the inlets and Causeways, while weak fish tend to stay inshore near the marshes. In Great Bay, sea bass and sea trout enter through Little Egg Inlet and swim to the "middle grounds". Bluefish, croakers, and bass frequent the many channels between the low islands within the inlet, and striped bass and white perch spawn in the mouth of the Mullica River. Boating is another activity of the Bay waters, enjoyed by individuals as well as power and sail squadrons.

Bay issues include "boat jams" during the crowded summer months, over-worked (and hence ineffective) marine police, pollution from islands and the mainland, the maintenance of channels and jetties, and fishkills from the nuclear reactor. Bay use is monitored and these issues addressed by boating, fishing, and hunting clubs; the Shellfishermen's Association; merchant societies; historical societies; environmental groups; various State and federal agencies; and the coastal townships. The majority of users come from outside of the region, with boat licenses being sent to five states. For the most part, it is long-time residents who run the recreational commerce which is associated with bay use. Many shut down their operations in mid-winter and go to Florida. This type of commerce attracts both resident blue collar workers and professionals who have left their urban or suburban jobs to return to their coastal homes and run boat yards, bait and tackle stores, or other operations.



Cultural Subregions of the Pinelands

A Human Ecological Study by Jonathan Berger, et al, 1980

the effect of Pinelands planning

The most important goal of Pinelands planning for the Bays must be the guarantee of high water quality. Upland stream conservation measures combined with careful supervision of new construction, growth, and the use of sewers on the mainland can greatly aid this process. It should also be obvious that marshes must be left intact and major dredging of bays and inlets other than in the existing channels must not be allowed. I further recommend that the Commission take a strong stand against the construction of additional nuclear reactors on the bays, the coast, or anywhere in the Pinelands.

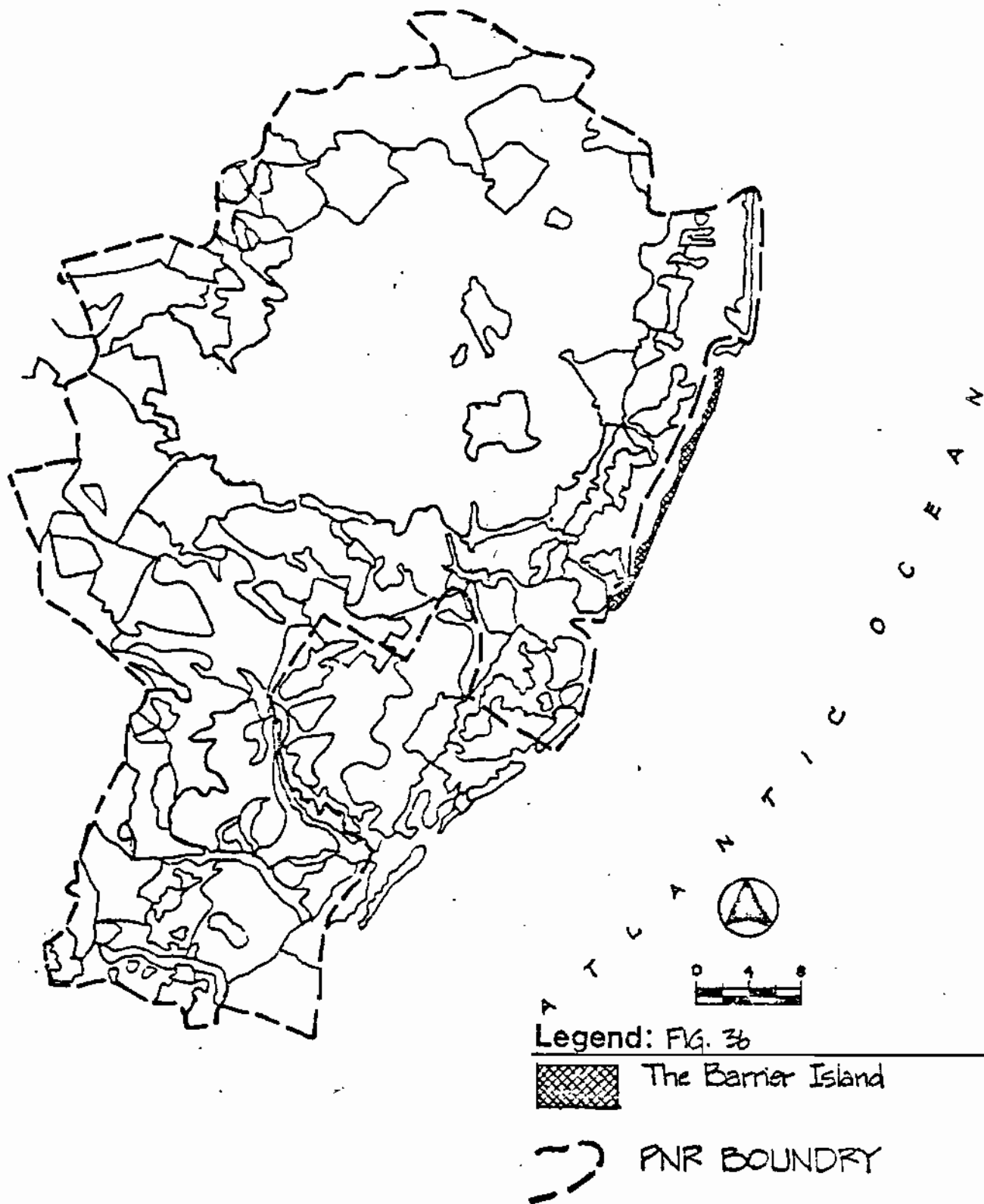
If policies for the forested regions and the coastal corridor lead to the establishment of more family camping areas, this will bring more users to the bays and could cause access problems from the mainland. Such facilities will create more business for the local merchant community, but will also establish a new kind of use pattern for Barnegat and Manahawkin Bays. These will not be day-trippers from urban areas, but will be families who cannot afford to rent homes on the island or the mainland and who therefore take advantage of the lower rates at the State camping facilities. The State Bureau of Parks already runs a bus from Toms River to Island Beach State Park. If camping facilities are expanded and they draw large numbers of people, a similar system could be worked out for transportation to Barnegat Bay or to Holgate Reserve. In such a way users could have access to both bay and ocean while residing on the mainland. The barrier island is highly valued for provision of that double access.

Regional Contacts: Southern Ocean County Rotary - Christopher Noonan-
597-1251
Long Beach Island Residents Associations.

The Barrier Islands

Developed and undeveloped barrier islands are located just off the easternmost border of the designated National Reserve. Island Beach State Park is included in the Reserve, while Long Beach Island is not. Yet all of the barrier islands are critical to the economy and ecology of the bay and mainland coast, and must therefore be considered in any analysis of the socio-cultural environment of the Pinelands National Reserve.

Although connected to the ocean, the bay, the marsh, and the mainland by hydrologic, economic, and cultural processes, Long Beach Island is a region unto itself. Its population rises from a year-round 5000 to over 150,000 in the summer. Among the year-round residents are retirees, well-to-do businessmen (such as the former president of the Ocean County Board of Realtors, the current president of the South Jersey Home Builders Association, and numerous bankers), and long-time residents engaged in maritime and water-based recreational businesses. There is also a smattering of semi-skilled workers who have made their homes on the island.



Cultural Subregions of the Pinelands

A Human Ecological Study by Jonathan Berger, et al, 1980

Many of the retirees chose the island for its scenery, mild climate, and low taxes, factors which attract many retirees to the entire coastal region. Most have moved to the island from nearby urban centers, for their new location is still accessible to friends and relatives in their old homes. Premium prices are rarely paid, for many simply convert their former summer homes into year-round dwellings or, if buying on the island for the first time, they purchase homes away from the more expensive bay and ocean view locations in the center of the island where they are protected from winter storms. They are concerned with the increasing numbers of seasonal visitors that destroy the quality of life they sought when they moved to the island, and hence some retirees are becoming more involved in municipal government. Their senior citizens clubs also form a ready base for political action.

Semi-skilled workers are employed on either a seasonal or year-round basis. Some find work only during the busy summer season, and then migrate to the cities or collect unemployment in Ocean County during the winter. The enormously expanded summer population originally meant more jobs for this group of workers, but recently teen-age summer workers have been flooding the seasonal job market. The resident workers feel that employers prefer to hire college help because the students face no emotional or economic problems at the end of the summer season. As a result of these employment problems and also because of competition for housing from outsiders, fewer and fewer of these semi-skilled workers can afford to live on the island. When they do live on the island, they generally inhabit the older commercial sections. Yet even these relatively undesirable locations are becoming scarce as they are also sought by groups of young people who rent them at various times of the year for a cheap, working, island vacation.

Owners of summer homes are in an anomalous position with regard to the Island. Few of them reside there for more than three months out of the year, they do not vote in local elections, and yet they have a large economic investment at stake. In general, there is a different relationship to the island established by the northern homeowners (in Barnegat Light, Loveladies, Harvey Cedars, and North Beach) than is experienced by those on the southern end (in Surf City, Ship Bottom, Beach Haven, and Long Beach). In comparison with the southern part of the Island, the northern areas are less densely developed and have a preponderance of modern homes. (This was the area most heavily damaged in the 1962 storm.) Homeowners are generally more well-to-do in this section, and as a result their second or third home is not as great an investment on their part. Their main interest in the environment of the island centers on beach erosion. The crowding and parking problems are vaguely annoying to them, but do not affect their island life to any great extent. This is in contrast to their southern counterparts, for whom beach crowding and illegal parking are very real threats to their lifestyle.

To southern homeowners, their island home is a major investment. Threats to lifestyle are felt more keenly by this group, since they have

fewer alternatives. Short-term rental units are prevalent in the south, and these have the potential for disrupting the environment of the nearby homeowners. Privately-owned, owner-occupied houses in the south are usually small cottages in close proximity to other cottages.

Renters are the most diverse group found in the island environment. They range from people who rent a motel room for one weekend each summer to families who rent the same house for the entire summer year after year. Their common relationship to the island is in terms of sun, sand, and water, with shopping and amusement areas considered to be bonus attractions. This group views the island in terms of its beaches, and are thus the most vocal group insisting on high beach quality. They see beach deterioration as the fault of the day-trippers. Since their stay on the island is limited, everything has to be "just right" during their tenure: they want good weather, clean and uncrowded beaches, fast super-market lines, and no worries about illegally parked cars in their driveways.

Day-trippers have much less flexibility of choice as to which beaches they will visit, since many are effectively closed to non-residents and others are too expensive for their budgets. Long Beach Island has only two municipalities that open their beaches to the public. Day-trippers from Philadelphia and other parts of New Jersey thus become experts concerning the various beaches: All of the beaches to the north of Ship Bottom require beach badges. Day-trippers must therefore drive several miles to the south after they cross the Causeway, and then find a place to park. Frequent visitors possess intimate knowledge about parking rules and the street system, and know where they can get away with what. A common ploy is to park in someone's driveway to avoid getting a ticket. Once parked, however, they have a hard time finding a place to change or to picnic, since it is prohibited to picnic or change on the beach. This prohibition means that day-trippers try to get as close to the beach as they can with their cars, thus leading to even more illegal parking. Nonetheless, they have a strong affection for the island and view it as a public resource.

Speculators in island real estate rarely live or even vacation on the island. Their properties are managed by real estate agents who handle the problems of renters living in the homes and apartments. Speculators generally do not worry about storm damage, for if the big one comes they can buy more property, rebuild, and rent again. The island was almost entirely rebuilt after the 1962 storm, for as soon as anyone could get to the island after the storm, speculators were making offers to people for their now-devalued homes and lots.

the effect of Pinelands planning

By purchasing more public lands and establishing more campgrounds on the mainland coast, the Commission could exacerbate summer crowding on the island. This type of indirect effect must be kept in mind when the Plan is being formulated, as should the impact of mainland land use management on water quality of the bay.

Regional Contacts: Residents Associations
Bob Dodd - Fisherman's Headquarters
Fishermen's Clubs
Yacht Clubs
Al Houghton's Boat Rental

This concludes the discussion of the ocean, barrier island, bay, marsh, and upland settlement complex that stretches from Toms River to New Gretna. From the mouth of the Mullica River to Great Egg Harbor and up the tidal rivers, the coastal character changes. These tidal navigation corridors form distinct sub-regions of the Pinelands, as they represent the link between the northern coastal regions and the narrower southern peninsula.

The Tidal Navigation Corridors

In Atlantic County, this subregion constitutes a more-or-less continuous strip starting at Somers Point, skirting along the north side of the Great Egg Harbor River, and ending at Mays Landing. Also within Atlantic County are the ends of a tidal arc beginning at Leeds Point and Port Republic, stretching into Burlington and Ocean Counties, and dipping back into Atlantic County along the reach of the Mullica River running from Batsto to Lower Bank.

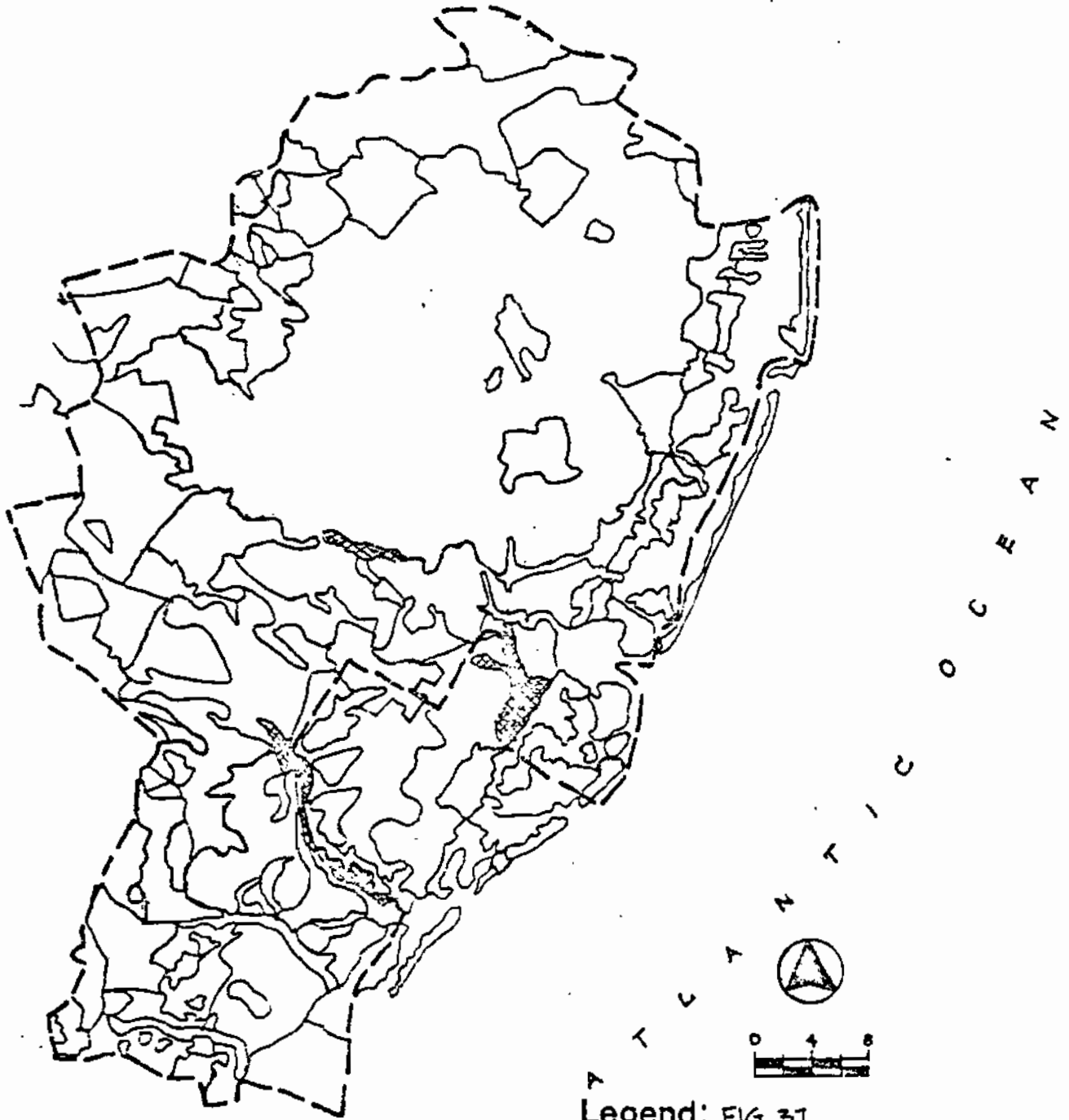
This subregion was historically important as an early glass-and iron-producing region for the American Colonies. The owners of forges, iron smelters, and ships built fine homes for themselves here, many of which are still standing and inhabited by their descendants. The strong maritime tradition is still evident in the healthy boat building industry and the numerous marinas and small boatyards. While a resident of the inhabited forest is likely to have old cars or trucks in his year, a resident of this subregion is likely to have several boats and piles of crab traps.

Historic interest is high in this subregion. Families which have lived in the same house for two hundred years tend to develop a certain perspective. The artifacts and ruins are in evidence everywhere, such that it suddenly becomes obvious what the landscape and the people did with each other. The walls of the forges are made from the same ore-ironstone - that was taken from the overgrown diggings in the forest. Cedar, oak, and pine were used for building and fuel. The long, slow, tidal rivers enabled the boats to come up on the flood to Green Bank, Batsto, and Mays Landing.


The uses in this subregion coincide quite well with physiographic features. The tidal rivers provide channels for large boats, still a necessity for the boat-building industry (at least for the larger boats). Brackish water is favored by many fishermen as being more productive than freshwater: during the 6-month fishing season, marinas in this subregion do a booming business in bait, supplies, beer, repairs, and the sale and rental of motorboats and canoes. The seaward ends of this subregion contain the homes of many baymen and clamdiggers. They use their homes as a base for storing their boats and equipment, and the lucky ones have direct access to the water from their property. Recreation and work are not easily separated, in that the work and leisure activities are not all that dissimilar. In general, sporting use of the river occurs along its length, whereas commercial fishing occurs at its mouth and in the bays into which it feeds.


Towns, hamlets, and single homes, as well as the river roads linking them, are all located on dry ground. Dry ground at the head of tidal navigation provides industrial sites, most notably for boat-building and plastics industries in Leeds Point, Mays Landing, and Port Republic. Dry ground between the river road and the water provides the opportunity to live by the water, or to operate a small marina or campground.

Residents of the tidal navigation corridors use the contiguous areas in various ways. Tidal marshes are trapped and hunted by arrangement with the owners: good trapping lease may provide several thousand dollars per year in unreported income to its holder. Waterfowl hunting is again by arrangement,



Legend: FIG 31

 Tidal Navigation Corridors

 PNR BOUNDARY

Cultural Subregions of the Pinelands
 A Human Ecological Study by Jonathan Berger, et al, 1980

usually through the hunt clubs. The boundaries of the marshes are also trapping sites for raccoons. Freshwater swamps are occasionally used for trapping of beaver and for cedar logging. The importance of these swamps is, however, really more as a barrier to use and travel than as a resource for any present use. Forests on dry ground are used for hunting by the hunt clubs, and to supply fuelwood for the homes in this subregion. The residents also use this area for recreational driving on the sand roads.

Off-site users include the recreational boaters and fishermen who keep many locals employed at the marinas, campgrounds, stores, and cafes. Fishing, boating, and waterskiing put a strain on the river resource that affects the riparian landowners, locals who must dodge heavy summer boat traffic, and the downstream baymen who suffer when pollution forces the closure of shellfishing grounds.

The rich historical associations provide a backdrop for the lives and activities of residents, but also draw the attention of off-site proponents of historic preservation. Sightseers drive through the subregion, taking pictures and reading their guidebooks, but so far the only tourist development has been the marking of historic sites and the construction of a rather whimsical parody of this subregion at "the Historic Towne of Smithville". Newcomers to the Atlantic City area are buying up some of the older homes and renovating them. Older homes may pass out of the ownership of the old-line families as the influx of wealthy new residents makes itself felt.

"We're originals, our family had a grant from King George... we used to own the land where Atlantic City and Brigantine are now".

"The towns around here were all named after the families that lived here... Leeds Point, Smithville, Weekstown. The families - a lot of them are still there."

"My husband was a Tuckerton man. He was in the Coast Guard when I met him... my son-in-law was in the Coast Guard too, when he met my daughter... we all live in the same house. It has seven bedrooms."

The classic settlement pattern of the tidal navigation corridor is probably the cluster of houses along the river, with larger towns at what was once the head of navigation. Mays Landing is a classic example. Here the ground rose fast enough for there to be a big mill pond, Lake Lenape, and a number of older mill buildings clustered around it, while barely a quarter of a mile away was the bulkhead where the lighters and small coastal craft could tie up. These subregions also follow the old river roads, along which are scattered crossroads towns with 4 or 5 houses. Where there is dry ground between the road and the river, there can be seen many winterized summer homes, houses with several boats lying around, and perhaps a dock or slip. Small campgrounds are interspersed with the residential development. At major stream crossings, there are bridge communities that grew up in the early years, again because of the intersection of land and water transport routes.

Life in these areas means family and fire company activities. The following descriptions show the concerns and processes at work along the coast, specifically within the tidal navigation corridor.

"My husband was from Tuckerton. He lived here all his life; I didn't. After he died, I left with the girls when they were in the 7th grade or so. I wanted something better for them than soda jerking - that's all they would have had to look forward to here. One of them died when she was 18 and the other one met a boy from Alabama who was with the Coast Guard here. (My husband was with the Coast Guard, too.) They married and settled in Parkerton."

"We love it here: we have the woods, the ocean, the bay... we'd like to see it preserved. We always go out, take the truck out on the sand roads, get stuck, all get out and push the truck. We'll be in the house and my daughter will say, 'come on, let's get in the truck and go out' - we don't have a care in the world when we're out there. It's the same in the bay. We all go fishing together in the bay, even go out in the ocean. Our friends and in-laws come out with us. Why one time I remember we got stuck out there in a storm, with lightning and thunder crashing all around us and the wind just a-blowing! It was a real experience for our guests from Alabama."

"We go canoeing in the Mullica and Wading Rivers, that area. We have four canoes but we don't fish in the fresh water. We do one river one time, another another time."

"Jim (son-in-law) is a sign painter, has J&D Signs on U.S.9."

"We're not much for changes, we'd like to see it preserved as is, that's why we live here instead of Florida - the beach is 20 minutes away, there's excitement in Wildwood and Atlantic City, we hunt. Jim hunts with the bow and with guns. My daughter goes out with him; the kids go out too and they'll hunt soon as they're old enough. The girls catch a lot of fish.."

"We never sell our catch, we eat it all, freeze it while it's fresh. We're a seafood family - Mim gets tuna and I can it, jar it actually."

"The problems I hear about are the rising costs of housing, taxes, - now you have to get a permit to do anything, you can't fix up a run-down place and if you do your taxes go up. That's why there are so many run-down looking places around here. People are worried about the high cost of everything. When is it going to stop? I wouldn't want to be raising a family now, that's for sure. I see women shopping at the meat counter. I wonder who gets the meat in her family?"

"We live in a big house, 7 bedrooms, myself, my brother-in-law, my daughter, Jim, the three kids. We all work together, all contribute, that way we can afford small luxuries. We burn wood; no, we don't cut our own, we buy it. We couldn't live this well anywhere else..."

"We know everybody, they're all friends. When we see them out on the water, we say 'Hi, how are you, what did you catch?'"

"One time a whole big car full of people came up and asked if our house was for sale, if they could look around. They were Puerto Rican, said they had lots of money, could buy the place. Only the man could speak any English. He said the house had

too many bedrooms, that if they bought it they'd have to invite his mother-in-law to come live with them. (laughs)..."

"Our family came in on a grant from King George. We're what you might call originals. The land where Linwood and Atlantic City are now was part of the grant... It used to be everyone's name was the name of the town they lived in, one family would settle in one place and stay there for generations... that's where you get Leeds Point, Weekstown, Smithville, and so on..."

"We're fire company members, hunt club members, we're social clubs and churches. There's four generations in our hunt club; guys come in as junior members, when they're big enough. I was just about this tall when I got into the Oceanville Club and went on my first hunt."

"The volunteer fire companies are the social centers in the communities around here. They have halls big enough for dancing; most have kitchens. There are a lot of activities for adults and young people too. If I wanted to get anything done around here, I would work through the fire companies."

"As long as there are guys like me in the company, Clamdiggers, there will always be some one to respond to a call..."

The Effect of Pinelands Planning

The moratorium on building, combined with other state and federal regulation, has brought building activity to a halt and made a lot of routine maintenance, such as the annual sledging in of loose pilings, difficult. Industrial users fear they might not be able to sell their plant should they choose to relocate; Pacemaker Yachts was unable to convert 400 acres of cedar swamp it owns during a recent bankruptcy that caused it to lay off 500 workers. The cumulative effects of arbitrarily enforced regulations on an economically marginal area could conceivably drive out many of those who would choose to stay. "We haven't got housing for our children"... The pattern of extended families living close together cannot be maintained unless they are allowed to build a few new homes.

Without regulation, this subregion might prove too tempting for recreational development. Historic 'Townes' and tourist development of varying degrees of tackiness could easily submerge the present character of the subregion, with the locals being bought, instead of driven out. The development of Atlantic City can be expected to be accompanied by a dramatic increase in the demand for campgrounds and marina space. This could result in the loss of extensive amounts of tidal marsh and the degradation of water quality.

A possible solution to regulated development could include some form of historic preservation compatible with present use, a policy strongly curtailing development of tidal marsh and freshwater swamps, construction of sewer lines along the river roads, and buying up development rights on large pieces of dry ground. Most of this could be accomplished at the township level with technical and financial assistance from regional and state studies. An example of a local government capable of handling this kind of program is Galloway township.

Planning in Galloway Township is at a high level of sophistication. The planning board is composed of a combination of life-long residents with economic interests in clean water and undisturbed shorelines and woods, and relatively newer people such as academics from Stockton who have a broad overview of planning and Pinelands issues. These people can either suffer or benefit from Pinelands regulations. They are under terrific pressure for development from Atlantic City, and could use the Pinelands standards and guidelines to help protect their own interests. This group clearly represents a constituency for purchase or regulation of wetlands and riparian corridors in the southern Pinelands. Such planning and regulation must respect the rights and ideas of the long-time resident riparian landowners, and would find many of them to be cooperative, if they are approached in an open and sensible fashion.

Regional Contacts:

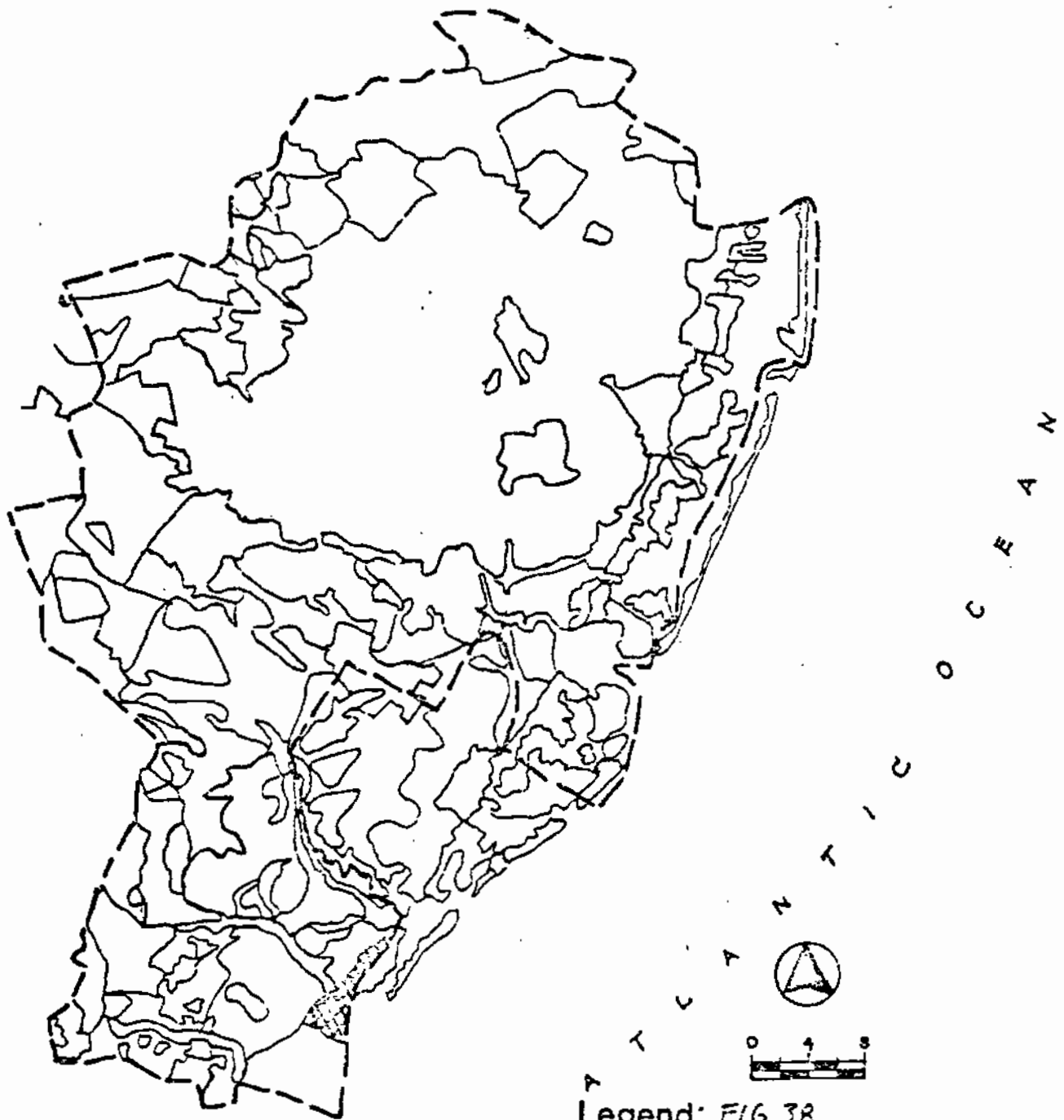
- Local residents - Volunteer fire companies, church social clubs, and hunt clubs.
- Trappers - Can be contacted through fur buyers, or by meeting them at the ends of tidal marsh access roads.
- Hunters - Hunt clubs.
- Marina owners - There is a Marina Association, but it is not listed in the directory. Contact Mrs. Hennaut at Mullica River Marina.
- Boatbuilding - Pacemaker - Egg Harbor Yacht Co., Lower Bank Ocean Co., Green Bank
Post Marine Co., Mays Landing
Workers are represented by the Teamsters Union - contact the shop steward at Pacemaker, Lower Bank.
- Historic preservation - Atlantic Co. Historic Society, Somers Point.
- Other industry - May be contacted through the Atlantic County Division of Economic Development, which publishes a good directory that is broken out by township and municipality.
- Local builders - Home Builders Assn. Contact David Satinover, Blue Eagle Homes, Northfield.
- Baymen - Contact Russ Beckley at Oyster Creek Dock, Leeds Point.

The Southern Coastal Corridors


The southern coastal corridor is distinctly different from both the tidal navigation region and the coastal strip north of the Mullica River. Here the archipelago effect created by the contrast between the wet and the dry finds its fullest expression. A dry rim paralleling the coast extends inland in finger-like projections which, not surprisingly, form transportation corridors. Four sub-regions comprise this southern archipelago, including the Remnant Agriculture-Suburban area (coinciding with Upper Township of Cape May County); Lower Route 9; the Route 47 corridor; and the Route 49/50 corridor. They form distinct regions because of unequal tax rates and varied land uses and social networks. In earlier times agriculture on the dry rim, maritime activities, and forestry united all these areas, but different family networks and marriage patterns kept them separate.


Remnant Agriculture-Suburban

This is a complicated region-in-transition. Vigorous building activity, attracted to low taxes and proximity to Atlantic City, is rapidly suburbanizing



Legend: FIG 38

 REMNANT AGRICULTURE / SUBURBS

 PNR BOUNDARY

Cultural Subregions of the Pinelands

A Human Ecological Study by Jonathan Berger, et al, 1980

a once rural landscape. It is also swamping a network of old families that have been here since the early 1700's. These old family descendants are Methodist, some Quaker, and are involved in a variety of land uses, most of which relate to the tourist trade. The new residents, by contrast, come from Atlantic City. They are either casino people, old Atlantic City residents that struck it rich in real estate, or they are leaving the barrier islands because of increasing taxes and the rising cost of living on the islands. The new residents do not share the same land use or settlement patterns as the old, and conflicts are inevitable. Five years ago this sub-region was dead, but now things are rapidly changing and not everyone is upset about it. Other land uses of note include the B.L. England generating station at Beesley's Point which is owned by Atlantic Electric. This phenomenal 'rateable' allows Upper Township to have one of the lowest property tax rates in the state, and is the sole reason for the area's rapid residential development. There is virtually no industry with the exception of a Coca-Cola distribution center and a New Jersey Bell installation, both at Marmora. Commercial development has not kept up with residential development and, as a result, there is no grocery store in the area and people go to Somer's Point to shop. The Wayside Village Shopping Center in Marmora offers only limited services and no groceries, but Avalon Realty has recently bought the place and will reportedly double it in size. Harold Shaw and his brother have a large swine and field crop operation near Marmora. He is the vice president of the county agricultural board. Institutional uses, apart from the churches and fire halls, include the New Jersey Marine Sciences Consortium (an educational consortium of mid-Atlantic colleges and universities), the office for the county marine advisory service on the site of the old Palermo air base at Palermo, and a senior citizens center on Route 9 near Marmora.

Route 9 is an historic tourist corridor, and it is dotted with campgrounds built by ex-farmers of the area on what used to be their lima bean fields. There are eight campgrounds in this sub-region and 43 in the county. Along with the campgrounds, there are gift shops, an occasional drive-in, and almost no bars. People meet each other at the churches or the fire halls, and the new residents are gradually getting integrated into the network. The Palermo Baptist church and the Seaville and South Seaville Methodist churches are particularly active.

This sub-region has gone through several distinct periods of land use, starting with the whaling and sea-faring days of the first settlers, to an agricultural period ushered in as land was cleared and whaling disappeared. The island resorts were developed around the end of the 1800's, and the automobile made the mainland more important as a resort support and recreation area. As resorts became more important, the decline in the lima bean market 15 to 20 years ago ushered in the campgrounds in large numbers. Now, the residential development is aimed at year-round, permanent residents, but it is interesting to note that the houses are being built by outside developers using outside contractors, labor, materials, and capital.

This is a unique sub-region because it is suburbanizing at a rate faster than anywhere in Cape May County. This rapid suburbanization is driven by the tax rate, for a \$150,000 house pays the same taxes in Upper Township as does a \$26,500 house in Maurice River Township. This area is closely watched by the Chamber of Commerce people as a place that is really moving in an otherwise

sluggish local economy. It is also the area most affected by the casinos, and efforts to regulate land use in this sub-region will have to respond to the growth pressures of the casino movement.

The main user groups can be classified as Outsiders (permanent residents in the new subdivisions of expensive homes that work in Atlantic City), the Old Families (people whose families have been here for generations and who are now involved in a variety of seasonal and year-round occupations ranging from real estate to campgrounds to gathering, and who are still most active in township government and social affairs), and the tourists who flock back year after year from as far away as Canada. The northward focus of the new residents is a new twist for this subregion; historically, the old families have contained their activities south of the Tuckahoe River and very locally, but this could change as the Outsiders get more integrated socially. This part of Cape May County might become more integrated into the resort economy to the north as suburbanization proceeds.

The Outsiders live in the so-called 'CAFRA subdivisions'. These are 24-unit subdivisions that have acquired this name because of the fact that CAFRA does not review subdivisions of less than 25 dwelling units. As you drive down Route 9 you can see many freshly-bulldozed cul-de-sacs vanishing into the woods. Many of the old families live in what can be called an agricultural settlement pattern: isolated houses set back off the road but with few barns still standing. There are some old houses clustered near the roads in and around the settlements of Beesley's Point, Marmora, Palermo, and Seaville, but Seaville is the only one that still has any concentration of older homes. The Garden State Parkway has effectively cut people off from the bays to the west of the barrier islands, and the suburban development creeping down Route 9 has all but eliminated hunting in the sub-region. Marmora is a commercial center of sorts because it is at the head of one of the access roads to Ocean City. There are two bars on the access road, Yesterdays and the Sandbar, that are the only places for people to socialize after about 6 p.m.; they are also the only places to get something to eat in the winter after the sun goes down.

The Effect of Pinelands Planning

If the moratorium continues, then there will be no more large-scale developments, and commercial development to serve the new residents may not be easily approved. The moratorium does not affect the development that has already started, and the biggest hindrance to further growth appears to be the mortgage rates. If the moratorium is lifted and people could have their way, the eventually every inch of dry ground would get developed, assuming that the generating station taxes remain in the township. In the past, it has been true that "development follows the tax rate", but recently the casinos are also supplying extensive pressure. Many of the old residents that were interviewed are in no hurry to sell, but they are aware of the fact that their land increases in value every day; sooner or later they will get an offer that they cannot refuse. Harold Shaw, a farmer, has already received and accepted such an offer for 30 acres of his land that was reportedly of 6 to 7 figures. Quick calculations make this seem a little unlikely, but land has been known to sell for \$30,000 an acre - a far cry from the agricultural value. If regulations are enacted that do not take into consideration the role

of land as security and the freewheeling traditional approach to land use, then the small local landowners will almost certainly get driven out and the land will probably be bought up by outside interests. This is already happening because the small family businesses and landholders are having a rough time lasting out the uncertainty of the moratorium; they cannot afford the legal and technical expertise needed to stay in business under the moratorium regulations.

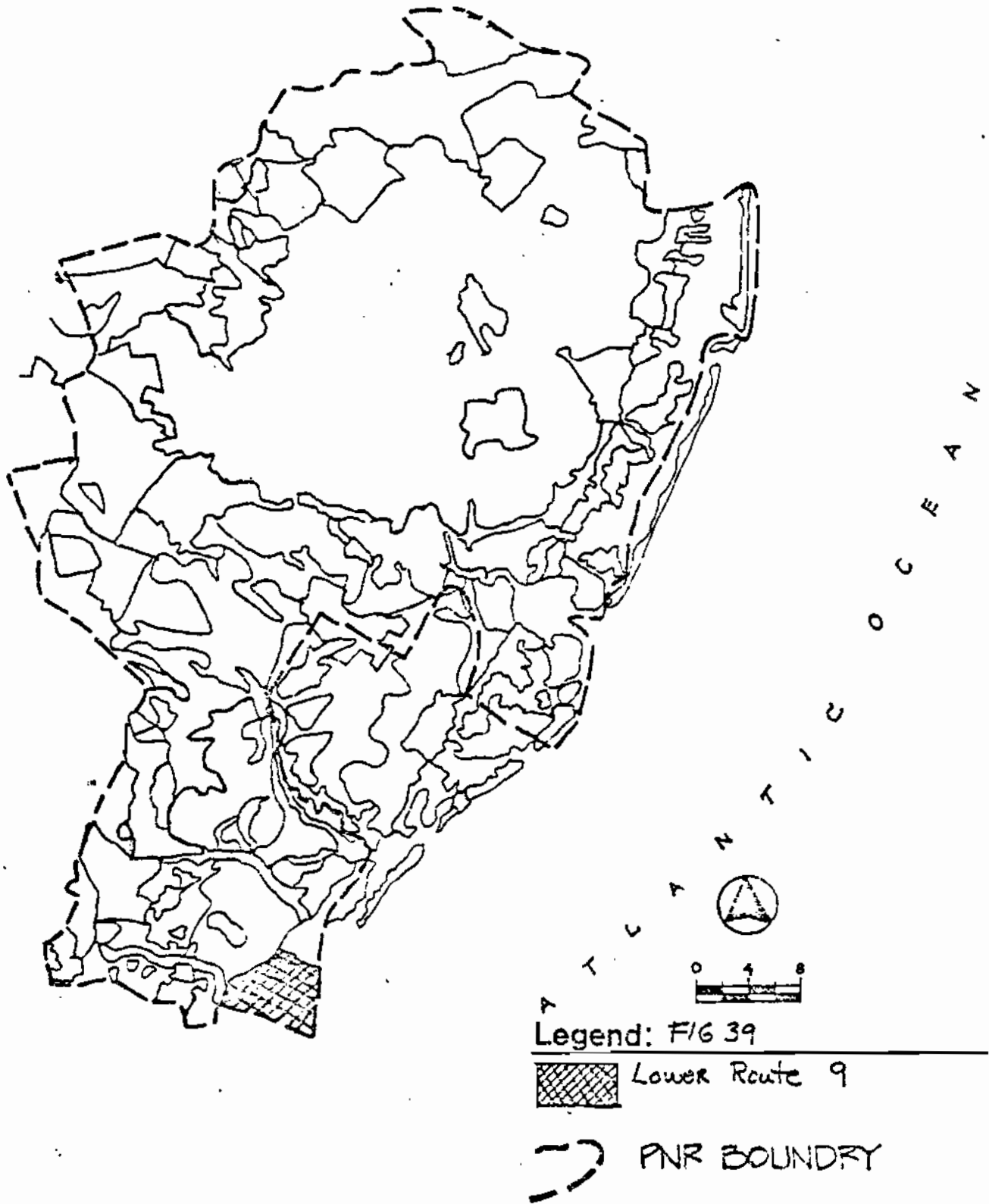
Pinelands planning in this area can benefit the widespread development interests as well as local conservationists. A growth management system that protected water resources and forest lands and left the future of agriculture in the hands of the farmers who own the land would be the easiest and least controversial form of intervention. The fact that the dry rim represents some of the only remaining farmland in Cape May County creates a dilemma for the Commission. Up and down the length of the coast the same question arises: if the goal is to preserve forests and water quality and the integrity of old historical centers, then in development-stressed areas the first land to go will be the agricultural portion of the historical land use pattern. The degree of intervention required to address this question depends on the ingenuity of the Commission and their response to public pressure as well as their financial resources and those of the counties. Could a transfer of development rights program occur here? The economy is active enough, but spatially this is not a promising area because of the narrowness of the upland strip. Where could the rights be transferred to except wetlands or other farmlands? Another possibility is the establishment of small cluster development districts set up through the placement of infrastructure. For the moment the resort economy has cast an urban shadow on agriculture. Should the Commission simply retreat before the Casino Boom? Perhaps there should be a hedge against the future that says some of this agricultural land may be needed later on to feed the area's populace. Whatever system the Commission develops will have to deal with the recurring issues of tax equity, precise agricultural land value assessment, adequate communications between planners and the public, safeguards against development interests that are present in the approval process, and the necessity of continuing a mixed land use pattern. These issues are discussed at length in the section on General Pinelands Issues.

Regional Contacts

Leon Misliaccio
Betty Corson
Avalon Realty (for development interests)
John Davis
Harold Shaw
Florence Speck (conservationist)

Lower Route 9

The lower Route 9 sub-region is comprised of the dry ground bordered on the South by the end of the National Reserve, to the east by the Parkway/ backbay, on the north by the border with Upper Township, and on the west by the Beaver Swamp, Cedar Swamp, and Dennis Creek Marsh. The region is one piece



Cultural Subregions of the Pineislands

A Human Ecological Study by Jonathan Berger, et al, 1980

of a continuous piece of high ground and historic settlement running from Beesley's Point down to Cape May. As such, both the northern and southern boundaries are arbitrary in that they cut across a network of interrelated long-time residents at places where there is no clear-cut social boundary. However, the choice of the township line as a border is defensible in light of the less developed nature of this southern section due to its greater distance from Atlantic City and its considerably higher tax rate than that of its neighbor to the north.

The region is complex, and supports a multiplicity of land uses. However, there is still a very rural atmosphere throughout the entire region, reflecting the fact that this region is at the earlier stages of development and suburbanization; there are virtually no year-round commercial enterprises to be found anywhere along this stretch of Route 9 - it is still quite rural despite the development which is taking place. It is this continuity that holds the sub-region together. Whether or not this will remain valid in the years ahead will remain to be seen.

The region is best viewed in the following perspective: There is the central corridor defined by Route 9. East of Route 9 is a relatively narrow strip of land which lies between it and the Garden State Parkway. It is this strip which seems to be the principal target of subdivision activity. On the west side of Route 9 are the majority of the 14 campgrounds in this region. Interspersed along the corridor there are still tracts of vacant ground. The further south you go on Route 9, the more rural it becomes. Going even further west from the highway, (west of the campgrounds) the landscape becomes even more rural in character. Agriculture plays a more dominant role, with large tracts of vacant woodland also present until you come up to the Cedar Swamp or Beaver Swamp. Thus, the basic pattern is (going from east to west) Parkway - Subdivisions/agriculture/vacant-Route 9 - Campgrounds/agriculture/vacant-agriculture/woods- swamp. The exception to this pattern is the isthmus of dry land extending westward from Cedar Grove/Clermont to South Dennis. This isthmus (which has Route 83 running across it) already has two subdivisions as well as campgrounds, expensive non-subdivision development, farmland, large tracts of vacant (often posted) land, and sand washes. There are settlements which dot the entire subregion: South Dennis, South Seaville, Ocean View, Cedar Grove, Clermont, and Swainton.

As already noted, the major land uses are recreational (campgrounds), agricultural, and residential. Important secondary uses are woodcutting, hunting, sand extraction, and institutional. The original and at one time dominant land use of the region was agriculture. Like everyone else in Cape May County, the changing economic climate has been eroding that agricultural base away for some time now. Most of what farmland remains is in sod (but there is a greenhouse tomato farm); a great deal of what was once farmland is now successional woods or fields; and much of the old farmland has been converted into campgrounds or residences. The farmers are often descendants of the original settlers of this area, and are often able to trace their lineage back through one or sometimes several routes to original Townsends, Ludlams, Leamings and Corsons, as well as a good number of other old families. These first settlers came from Long Island and New England, traveling down the coast with the whaling trade and fleeing the religious persecution of the Quakers. Farming was firmly established early on as small family subsistence farms, which

over the generations evolved into larger family commercial farms leading to the lima bean farms that dominated the agriculture in this area until the Seabrook processing plant pulled out. As farming became less and less economical, many of the farmers converted their land to campgrounds or sold it to others who converted it, in order to take advantage of the burgeoning tourist trade. The economic importance of the campgrounds is enormous. One campground in this region, "Ocean View", has 1200 sites and a 'camp store' with a 6-lane checkout area. An average campground has 30 - 60 acres of land with 150 - 350 sites. Heavy use of these campgrounds comes from megalopolitan (and in particular Delaware Valley) vacationers, and there is a strong contingent of Canadian users. (The South Jersey beaches are the first warm beaches you can reach from eastern Canada.) However, the gas crunch, increasing pressure from inflation, and the increasing demand for housing could easily see many campgrounds fold - there were casualties from the last bad summer.

Other old-time farmers have converted their farms into houses or small subdivisions, or have sold land to builders or speculators. The epitome of the former is '9 & 50 Homes' a partnership between the Campbells and Curtis Corson (who had the land). Their developments are built as a smaller local family business using local labor and contractors. They are putting up lower-priced housing (often FHA mortgages) to sell to young families who are leaving the barrier beaches after finding that they can't afford the prices for a first home there. These people are employed in commercial businesses either on the islands or on Route 9 further north, (car dealerships are a typical example). There are also new residents who are coming in from Atlantic City, most of whom are not 'casino people' but rather were residents of that area before there was casino gambling. They are now leaving in the wake of higher taxes, taking the profits from the increased value of their old homes.

The old residents have a separate social network from the new residents. The old residents are heavily involved in their churches (Methodist and Baptist), and many of them still spend part or even all of their summer at the South Seaville Camp Meeting where their families have had cottages since the late 1880's. The volunteer fire companies are also important gathering places (Curtis Corson was killed fighting a fire). The Cape May County Historical and Geneological Museum is also an important focus of interest and activity for the old residents. This was particularly true during the bicentennial preparations and celebrations. This network still plays an active role in local politics; however, continued infusions of new residents will undoubtedly end that, especially as many of the old families are disappearing (slowly) as children move out.

Agriculture is still a major land use. Despite all of the above, development is just not that extensive yet. This land use is more important as you move off the Route 9 corridor. One of the largest farms in the county is the Novasack Brothers turf farm located right next to South Seaville. Most of their market is local (the island communities are especially good) and they also serve developments within the county and nearby.

Cutting firewood is another major activity these days. This is a recent development (since last year due to the 'Energy Crisis') and it is impossible to characterize the population who is engaged in this as they will not talk about it. This is because most of the cutting is taking place on land which

is in public or absentee ownership. On one day alone we saw men doing extensive cutting in the woods around Swainton and north of South Seaville. There is also hunting in these wooded regions, but there are no hunt clubs that we heard of. There is also a major sand wash at the tip of the isthmus (Matalucci's). There are a couple institutional users in the southern end of the Route 9 corridor, notably the offices of the county Municipal Utilities Authority and the 88-acre USDA/SCS plant materials center where they do work on soil stabilizing plants. These are both in Swainton. This end of the region orients to Cape May Court House more than it does to the north, as shopping and employment are found there more conveniently. What little commercial use that exists is located on Route 9 and is highly seasonal, on the scale of roadside vegetable stands and driving ranges for golfers.

In general, the isthmus is more rural and less seasonal than the corridor, but, as high ground, there are already many "for sale" signs for large lots aside from the building that has already taken place.

This is a unique region in that it is tied together by a network of inter-related and interacting established families. It is also held together by the land use constellation of campground-agriculture-development-woods. What sets the Dennis Township side of the Route 9 corridor apart from the Upper Township segment is the markedly more rural and agricultural nature of this region, which is a function of this township's higher tax rate and greater distance from the development pressures of Atlantic City. In this region the balance of the land use pattern is clearly skewed in favor of agriculture, camps, and woods, whereas the Upper Township it is skewed to development and camps, with a good measure of commercial as well.

Older residents live in either scattered farm homes or in the small towns. Clermont, Swainton, Cedar Grove, and Ocean View are little more than crossroads with an historic church nearby. South Seaville and South Dennis are the two prominent towns. South Seaville, besides being the home of the historic Camp Meeting, also boasts a horse farm, and a major lumber and building supply center - Collins Lumber. Collins is used by many of the local developers and contractors. South Dennis is smaller, its claim to fame being its past as a ship-building town and center for cedar mining from the swamp. It is and always has been closely tied to Dennisville, being oriented to it and the Bay while South Seaville is more oriented to Route 9 and the coast. Today, South Dennis is famous for its spectacular Christmas light display at Meerwalds Country Store (the outlet for Meerwalds poultry and vegetable farm).

The Effect of Pinelands Planning

This region lies entirely outside the moratorium area, so it is impinged upon only indirectly. Builders from this region who have interests in moratorium-covered property have suffered a competitive decline against larger outfits moving in. If development restrictions are tight or if the moratorium stays in effect, then it might accelerate and intensify the development pressures in this fringe region. However, this area falls under CAFRA already, so developer must contend with that. Thus far the 24-unit strategy has proven to be quite effective.

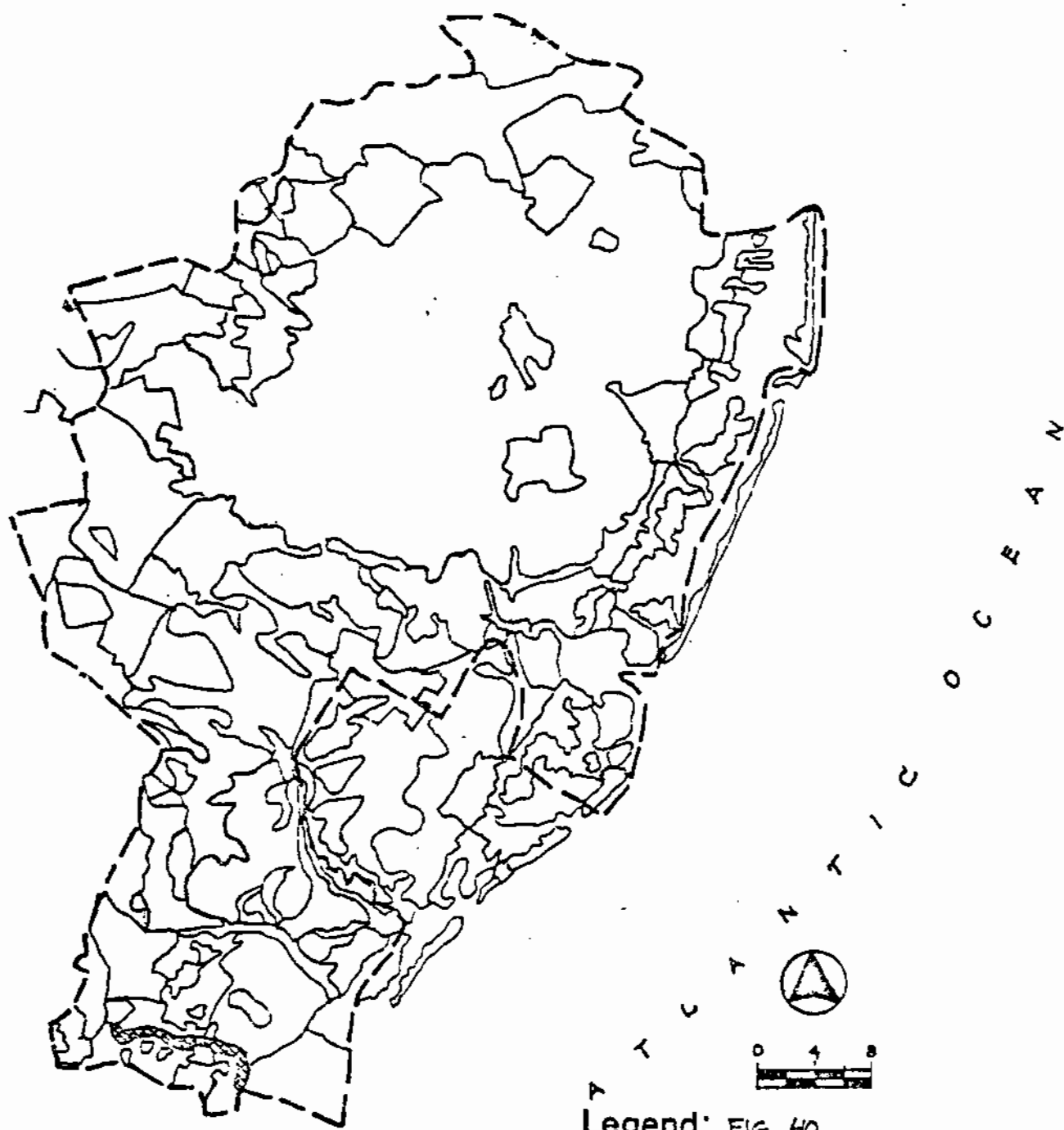
This region presents an interesting planning opportunity. It is not yet experiencing real growth pressures, and most of the land is still controlled by people who know each other, are related, and have common problems dealing with the resort economy. Thus, a flexible system could be set in motion that could accommodate several possible futures. If the Commission values the preservation of cropland on these dry strips and if they can come up with the necessary funds, some sort of purchase program could be initiated. If dry land preservation is desired but for the moment fiscally impossible, then the flexible system would be of use. In such a system there would be provisions to sell land as needed, but regulations would restrict development to only a small proportion of the land. Once that was developed, the remaining cropland could be resold at a price lower than its development value. This would allow people to use the land for crops and also for the campground economy. The end result is the loss of a small percentage of dry land in return for the conservation of a larger percentage of productive land. This offers a choice: stay as you are; respond to pressure and yet preserve a heritage; or respond to pressure and develop another productive system on the conserved land. This type of system could be beneficial for the local landowners, who lose neither their equity nor their lifestyle.

Regional Contacts:


Betty Corson
Bob Patterson
Dave Rutherford
Stew Campbell
Somers Corson


Route 47 Corridor

This subregion acts as a boundary between the marsh and the wooded uplands. It is a transportation corridor and was historically the route of one of the first roads in Cape May County. Route 47 is called Delsea Drive because it goes from the Delaware to the sea, and the automobile has made it an important tourist road. Consequently, this road is dotted with seasonal commercial and recreational attractions; vegetable stands; clam and crab stands; campgrounds; and marina docking party boats. There is a sawmill and fur buyers in Delmont, freshwater fishing in Johnson's Pond at Dennisville, several motels, and Bohm's turf farm. Bohm also operates the East Creek Hunt Club, and he has an application in to subdivide his farm. This is a subregion dominated by seasonal activities, and most residents have to do a little bit of everything to get by. It is the first high land that you hit as you come off the bay and has historically supported settlement much as the Route 9 corridor has done to the east. There used to be a lot of small agricultural holdings along the road but, although many of the fields are not completely forested yet, remaining agriculture is subsistence or for the tourist trade. Captain Bates Seafood gets a lot of customers from the campgrounds closer to the ocean who are looking for seafood but not at barrier island prices. Generally speaking, this road is a poor cousin to the main resort roads running along the eastern side of Cape May County... and it looks it. There is quite a bit of hunting and trapping in the meadows and this area serves as a minor support area for those activities, offering lodging, fur buyers, and at least one carver of decoys and maker of duck boats.



Legend: FIG. 40

 Route 47 Corridor

 PNR BOUNDARY

Cultural Subregions of the Pinelands

A Human Ecological Study by Jonathan Berger, et al, 1980

This is a unique subregion because it is the first continuous strip of high land encountered as you move off the bay, and it is oriented to the linear movement of tourists through it. Historically this was not entirely the case and local residents generally end up being oriented to the meadows, marshes, swamps, uplands, and bay surrounding them in order to survive. Naturally, most of the users are outsiders... tourists and hunters from all over South Jersey. Many of the trappers are not local people, although those trapping the private meadows generally are. There are several old sea-going families left in this subregion and, as mentioned above, only a few farmers, the biggest of whom, Bohm, wants to subdivide.

Settlements in this subregion encompass everything from the home of perhaps the most historically influential group of people in the northern part of Cape May County (Dennisville) to what has been termed the "piney" settlement pattern complete with cars, refrigerators, and washing machines. Delmont and Eldora are small towns, very small, oriented to the marsh and marsh activities: haying, trapping, hunting, etc. Delmont, particularly, is somewhat involved with logging to the north, but currently and historically these are high land settlements oriented out to the bay. Eldora lies between East and West Creeks and was originally an outgrowth of settlement on Stipson's Island, a tongue of high land that sticks out into the marshes and is the home of several old and influential families. One of the, the Campbells, operate the private West Creek Gunning Preserve, hay the surrounding meadows, and stock a pond with crabs for the tourist trade. They also own and operate 9+50 Homes in Ocean View, subdividers and builders of FHA houses for the local families in Dennis Township. They also invest in oil wells in Kentucky because, aside from the tax advantages, George Campbell believes that "recreation and resources" are the way to go.

Dennisville, North Dennis, and South Dennis form the historical center of power and influence in Dennis township and, at one point, were the center for almost the whole county. This used to be a very active town center because it is situated between the Great Cedar Swamp and the bay; almost everything going into or out of the northern part of Cape May County went through Dennisville during the coastal schooner days. It was a very prosperous town and was the site of an active ship-building industry. Its historic architecture has resulted in the town of Dennisville being placed on the State historic register. There is some animosity between the residents of Dennisville and the rest of the township, because the Dennisville residents are working hard to keep the township rural and "in character" at a time when there is a real need for rateables to pay for the school expansion necessitated by the casino housing boom to the east. The Dennisville fire company used to be very active, but it has slowed down recently in part because many new people have moved into the area to live in the old houses and they are not interested in joining. Goshen, like Dennisville, was very important historically as a ship-building and shipping town. With that role relegated to the past, the town is no longer much of anything; all that is left of its former glory are a few large brick 'plantation houses'. There is scattered strip residential development between the settlements of Delmont, Eldora, the Dennis's and Goshen, which is where you find the so-called "piney settlement pattern". The money is and was in Goshen and the Dennis's, and things generally get poorer as you move west towards Maurice River township.

The Effect of Pinelands Planning

If the moratorium continues, little will change in this sub-region. There are no new campgrounds going in, and the fuel crisis is hitting the roadside businesses pretty hard. If the moratorium is lifted and people could do what they want, then there would probably be an influx of residential development as the eastern part of the County gets built up. Bohm would subdivide his land and then perhaps others would follow suit as this area becomes more desirable. By and large, there seems to be little development pressure in the sub-region at this time; it is too far from the ocean and there are too many bugs, even in the face of the best efforts of the Mosquito Control Commission and their helicopter patrols.

This is one of many areas in the Pinelands in which people "do a little bit of everything". While local planning regulations will have to be changed to meet the regional standards, technical and marketing assistance for the current seasonal economies would be of great benefit. If the Commission wants to help the small operations so characteristic of the Pinelands, this area, like the Blueberry Region of New Lisbon and portions of the Tidal Navigation Corridor, will benefit greatly. Sound planning of the National Reserve will conserve Pinelands character by providing ideas and assistance on ways of helping these family operations to prosper. If this can be mixed with some compatible forms of development, then a real planning solution can emerge.

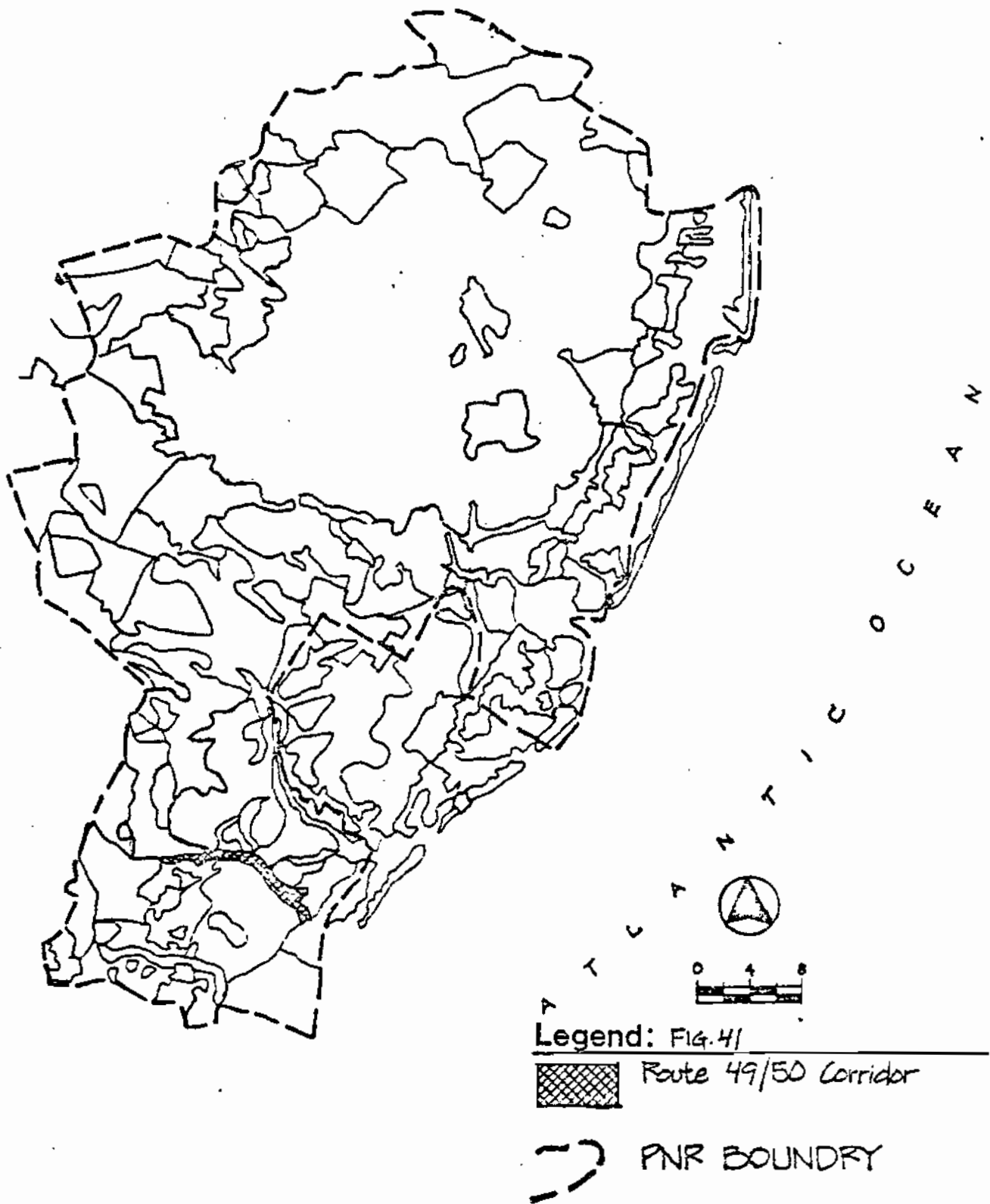
Regional Contacts:

George Brewer
George Campbell
Marshall Hand
Lawrence Bohm
Frank Murphy

Route 49/50 Corridor

This sub-region, like the Route 47 corridor to the south, is a transportation corridor which runs along the boundary between wooded uplands and wet lowlands (here the Tuckahoe River and its marshes), connecting several settlements which were sited on this ecotone. This sub-region ends in the Upper Route 9 region. Its connection to that corridor is of some significance, for development pressures coming down into Upper Route 9 from Atlantic City are strong enough to hop across the Cedar Swamp and flow into this region. That once-formidable barrier is now a thing of the past.

Again like Route 47, one of the most significant uses of this region is the conveying of visitors to and from the Ocean City beaches and the hunting and trapping grounds owned by the State. Were it not for the location of Upper Township town hall in Tuckahoe and its proximity to the Route 9 corridor, this sub-region would consist of very little indeed. Head-of-the-River, once the home of the Aetna furnace (which is actually in Atlantic County), is now little more than a well-maintained cemetery and an historic church, used twice a year (midnight mass at Christmas draws people from all over). Marshallville consists of a string of homes on the bank of the Tuckahoe River. Tuckahoe and Petersburg are the most significant settlements today, although they attained their prime in the days of the coastal schooners



Cultural Subregions of the Pinelands

A Human Ecological Study by Jonathan Berger, et al, 1980

and cedar mining from the swamp. Since that period they have generally been quiet. These towns have existed for over 200 years, and the descendants of the original settlers (Corsons, Youngs, Baileys, Baners, Van Vorsts, and Van Gilders) form a social network of old-time residents within the region. They have ties to Belleplain in the west and to the settlements on Route 9 in the east. While the town hall is located in Tuckahoe, the impression one gets is that the prevailing influence in the township comes for the most part, from outside this region, in particular from Upper Route 9.

In addition to its use as a transportation corridor, there are smatterings of other uses. Most important is the expanding residential use, which is attracted to this area by Upper Township's very low taxes, convenient location off the 'main drag' of Route 9 yet close to Atlantic City, and charming, historic character. There had been extensive building in this region prior to the moratorium, orchestrated both by larger firms coming down from Atlantic City and by smaller, local businesses like the Tuckahoe Construction Company. These homes are being built either for the children of the old residents or for new residents coming from the barrier beaches, Atlantic City, or in from Route 9. In some cases there are 'casino people' who are taking advantage of the tax rate to move into very nice and expensive homes.

There are still a couple of farms left on the western side of the region: DiLuzio's vegetable farm is right on the banks of the Tuckahoe River between Head-of-the-River and Marshallville (he also owns a campground there and drives a school bus); and in Atlantic County just past the Head-of-the-River is the Bett's Tuckahoe Turf Farms, the largest and most successful sod farm in the area. They got out of lima beans and into sod before Seabrook left Cape May County, and as a result are big enough that half of their market is out-of-state.

There is also a little industry which changes its character in an interesting way as you go from west to east. Furthest west is the Eat-Moor Cranberry canning plant, which is on Route 548 just past Route 49. This is a substantial operation which used to can berries from a string of bogs (now abandoned and bought by the State) for supermarket chains in the Delaware Valley and now imports all of their berries from New England. There are two boat repair and storage marinas - a smaller one, Holz's, on Cedar Swamp Creek at the crossing with Tuckahoe Road, and the larger one, Yank's, at Tuckahoe. Both of these cater to large pleasure boats (mostly owned by out-of-the-area or out-of-state people) who put the boats in the water, take them elsewhere on the coast for the season to moor, and then return here at the end of the season for maintenance and storage. Finally, there is the Wheaton Candle factory, a small, brand new and very clean (in keeping with the town fathers' feelings about industry) operation on Route 50 east of Tuckahoe.

Tuckahoe itself provides a deli/market and Pee Wee's hunting supply store and not much else. Shopping is done at Millville or on the islands. Work is also found there. In addition to Pee Wee's there are other commercial establishments which cater to the hunters and trappers (local and out-of-town) who come to use the Lester G. MacNamara Fish and Game Reserve. They include

Sam's Country Store (official deer check-in station and coffee joint) and the Central Inn (a hunter's bar), both in Middletown. Petersburg is all residential.

Throughout the region the older residents are involved in the churches (primarily Methodist) and the fire companies. New residents are still new.

This region is unique by virtue of its persisting social separation from other social networks within the area and by being an island of population surrounded by uninhabited marshes and woodlands. It may sound odd that this area is still that separate from the other areas, but we were told, for example, by a resident of Petersburg that a hunter from Tuckahoe would be welcome to hunt wherever he wanted on his property without asking permission, but that someone from Belleplain was "an outsider, a stranger" and for the most part would know better than to try to hunt around this area.

The Effect of Pinelands Planning

If the moratorium continues in effect, then this sub-region will be in the fascinating position of having the moratorium boundary running right through the middle of it. The protection area is southwest of Routes 49/50. Thus whatever development can clear CAFRA regulations will be located on the wet side of the border by the Tuckahoe River and meadows - that is, on the areas least suited for development in this region. If the moratorium is lifted, then construction will take place on both sides of the highway. What is needed for this area are site-specific regulation which match the variation in wet/dry in this region, not blanket regulations that will treat a piece of swamp and a piece of ground with 15 feet to groundwater as the same planning problem. If regulations are not site-specific, the builders will be furious, as they will be if the moratorium is not lifted. Walter Betts has a number of units he is waiting to find out if he can finish developing, as are other small and large developers. If the regulations are very expensive to comply with, that could price out smaller developers, make homes even more expensive than they already are due to the low tax rate, and either price them out of the range of the target market or else adversely affect the size and quality of the homes which are built.

This region is representative of a commonly held view of Pinelands areas - that of an area under pressure. This pressure presents opportunities for planning based on standard forms of growth management. The General Pinelands Issues must be understood if this process is applied, especially the issues relating to standards and enforcement.

Regional Contacts:

Walter Betts
George Betts
McCloud
Dave Van Vorst, Jr.
John Langley

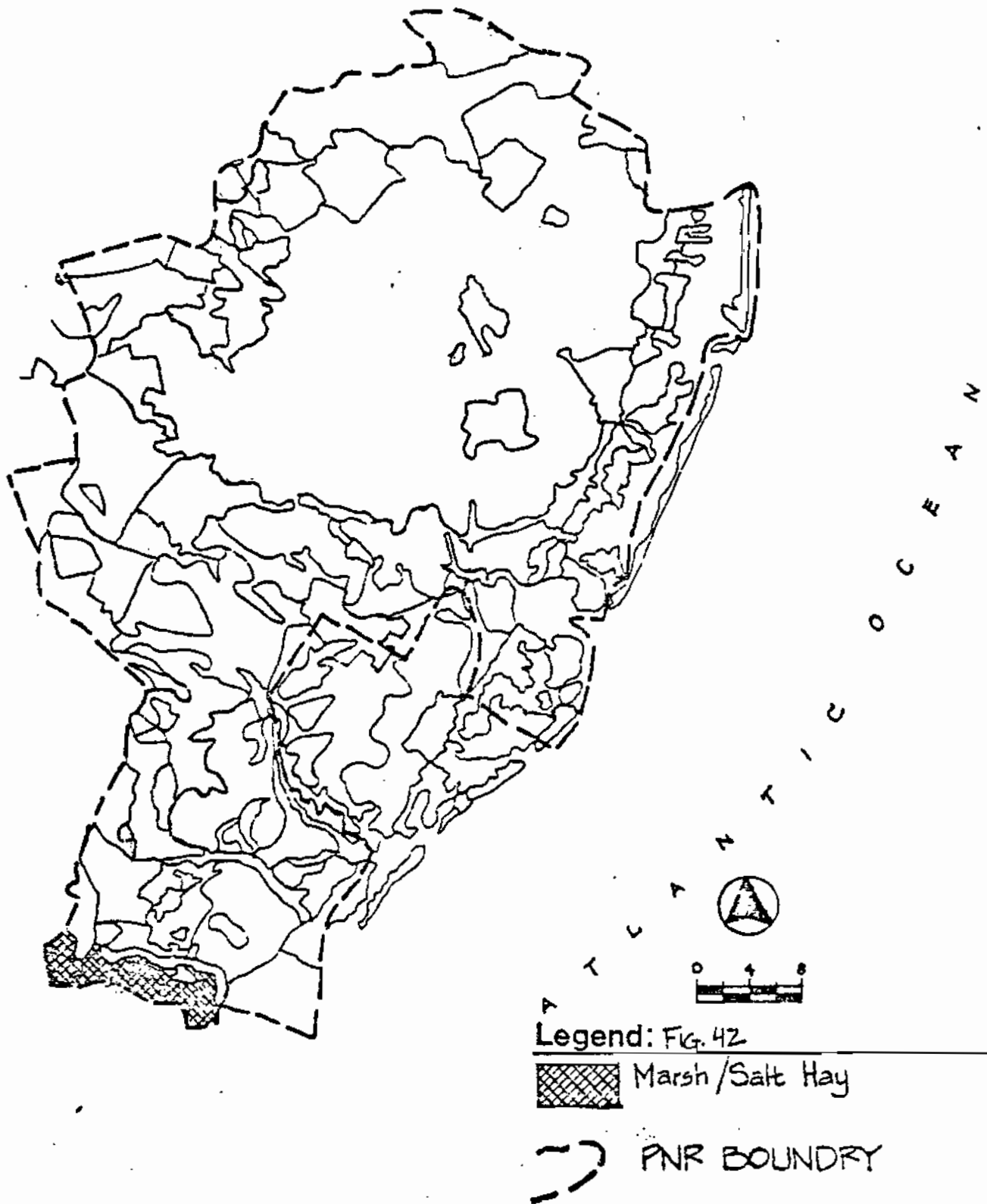
As one moves from the Atlantic side of the coastal corridor to Delaware Bay, the bay system, the land, and the people all change. The Marsh/Salt Hay Region and the Maurice River Township Core are two interconnected areas intimately linked to the Bay. The Route 47 Corridor, previously described as part of the southern coastal strip, is obviously also connected to the Bay and to these sub-regions.

Marsh/Salt Hay

The Marsh/Salt Hay sub-region is comprised of the salt marshes which run along the Delaware Bay. This biome is beautiful, complex, and incredibly productive - it is capable of sustaining a number of uses, uses which are not always in harmony with the biome or each other. This is an area which is under intense local scrutiny, for all of the users are personally familiar with all of the other competing uses and users. There is apparently an on-going and often vigorous debate over these land use issues by the involved parties. The public hearings held in the recent past on the Wetlands Act, CAFRA, CZM, etc. have all served to provide forums for this debate. Unfortunately it seems that this has only intensified antagonisms and deepened existing rifts. Since the sub-region lies outside of the Pinelands moratorium boundary, this situation has been affected little by this most recent piece of legislation.

The primary land uses in the region are ones which have been practiced for hundreds of years: hunting, trapping, salt hay farming and mosquito control are the most significant uses. Also important are marinas located on marsh rivers or man-made ditches (e.g. 'Bidwell's Ditch'), and the use of the area for bird-watching and other 'environmental' concerns. Finally, an interest in historic preservation is focused on the East Point Lighthouse.

The distribution of these land uses as well as their patterns of organization and interaction are best seen in the context of ownership. There are two major ownership forms in the region: public, i.e. State Division of Fish and Game Wildlife Management Areas, and private. The state-owned areas are denoted on the cultural sub-region map by dashed lines. There are two major ones: Heislerville (Veech is the Game Warden) and Dennis Creek (Ferigno is the Warden), as well as three smaller parcels. Their existence is relatively new, and has been attained by the loss of acreage from the previously dominant land use of salt hay farming. Over the past 3 or 4 decades there has apparently been a severe contraction of salt hay farming and a reduction in the number of salt hay farmers (like every other type of farming in the county). The costs of mechanization, more difficult business situation and declining profits, lack of recruitment of young people, and the temptation of State money led to the folding smaller, older, and less efficient operations. In the region there are four remaining salt hay farmers of consequence: the Cox's, Thompson's Campbell's and Hand's. It seems that at this time a new equilibrium has been reached, with these farmers holding their own due to reasonably stable markets despite very low (or even negative) profit margins and continually rising costs (machinery, baling wire, fuel).



Cultural Subregions of the Pinelands

A Human Ecological Study by Jonathan Berger, et al, 1980

In general, salt hay farming is confined to the privately-owned land and excluded from the public lands, although there are some recently required state lands still being hayed under grandfather clauses. Future threats to these farmers arise from declining production resulting from the encroachment of the bay due to rising sea levels, regulations preventing the burning off of reeds which compete with the hay, dependence on leased land, rising costs, and declining profits. The major markets for the salt hay are the construction uses for curing concrete (especially in road construction) and for septic fields, and the truck farmers who use it as mulch in hot houses for sweet potatoes (especially in the Hammonton area). Anything depressing these markets will be of concern to these farmers - road construction, in particular Route 55, is of tremendous interest.

The organization of the other major uses of hunting, trapping, and mosquito control all respond to this ownership pattern dichotomy. The nuisance of mosquitos (and even worse the 'greenheads') long kept the population in and near the marshes very low. This was fine with those "old timers (who) would rather have mosquitos than people (for neighbors)". However, for those with a stake in the tourist trade or development (as well as public health officials), the goal has been to control these pests, if not to eradicate them. The mosquito commission of Cape May County implements such control in this entire sub-region (including Maurice River; Cumberland County is not known for its mosquito control program) under enabling legislation in the chapter on public health. The commission is in the process of replacing their helicopter and fixed-wing spraying program with the "Open Marsh Water Management" (OMWM) technique wherever possible. In this sub-region that means everywhere but the salt hay farms. The machinery the farmers use creates depressions which are too numerous, too small, and too transitory for OMWM, but which are ideal breeding ponds. Existing salt hay farms stand out on the Commission's management map as the only areas which will forever have to be sprayed.

The land uses of hunting and trapping also show differences as a result of the ownership pattern of the sub-region. Publicly-owned marshes may be trapped or hunted by anyone with a license. On private meadows the hunting and trapping rights are leased or given out, and are exclusive. (One farmer, Campbell, has even created his own "members only" (dues-paying hunting club - the West Creek Gunning Club - on his land which caters to wealthy out-of-town clientele.) As a consequence, the hunting and trapping on private land is much more carefully managed and productive. One fur dealer noted that 95% of the furs he handled were trapped on private meadows. There is a particular relationship between the trapper and the salt hay farmer, in that the farmer will want muskrats in the vicinity of his dikes trapped out to prevent them from doing damage to the dikes.

With the rise of prices for furs in recent years (and its publicity), more and more out-of-towners are coming into the State land to trap muskrats. These areas are over-trapped, thieving of traps and animals is a considerable problem, and the destruction by migratory snow geese of the root systems of the muskrats' food plants are making the State lands a mess in the eyes of the local people. If they do not own their own land, local trappers will try and arrange trapping rights with a landowner and avoid the State land. Another problem arises because the trapping season extends into the breeding season.

The economic importance of trapping cannot be overstated. While many trappers are kids who are earning some extra pocket money, trapping is often ranked along with fishing and sand mining as being one of the three major economic activities in this region. We know of at least a half dozen fur buyers in the area, one of whom told us that he handles between 18,000 and 20,000 muskrat furs per year. At an average of \$8 per fur, the economic significance of trapping becomes apparent. However, while trapping is an important component of many household economies, virtually none depends solely on trapping for a livelihood - it is more often practiced as one of a constellation of activities.

Conservationists from the local area have an intense interest in this region and in all of the other land use activities. In general, two types of environmentalists can be identified - those who are strict preservationists, and those who are in favor of increased productivity through environmentally-sound intensive land use management. The preservationists in particular are outraged at the uses in the meadows. They are especially opposed to the Mosquito Commission, for they are appalled by the spraying program and see the OMWM tool as destructive to the marsh at best and at worst as a political tool of the ruling elite for development projects. One example cited as representative of this kind of political link was the Campbells crab impoundment which was dug by the Mosquito Commission. The preservationists are also opposed to hunting, horrified by trapping, and opposed to the management of marshes and swamps to increase trapping productivity, especially if it alters the marsh ecosystem. They are in open and direct conflict with the Mosquito Commission and Fish and Game officials on an on-going basis, and sporadically with the farmers.

The settlement in the Marsh/Salt Hay Region is so sparse as to be practically non-existent. The only real settlements are the delapidated beach communities of East Point, Thompsons Beach, and Moores Beach. It is interesting to note that these settlements were once summer resorts (there used to be a huge hotel for honeymooners and other resort-seekers at East Point), and have little if any association with any of the land uses in the region. They are being destroyed by the erosion of the beach, and the few year-round residents are mostly retirees. Aside from these, the only other settlements are scattered farmsteads close to or within the meadows which are farmed, and an occasional cabin.

This sub-region is unique by virtue of its unique ecology, associated constellation of interlocking land uses and users, and by its lack of settlement. In terms of uses and users it is truly an integrated unit. Furthermore, this area, artificially defined on the east and west by the borders of the National Reserve, is but a part of a larger marsh community spreading across the bay and identified as a region by the local land users. This area is also characterized by its high degree of public ownership.

The Effect of Pinelands Planning

This region is outside of the moratorium area, so there has been little impact associated with the development restrictions. The farmers and the Mosquito Commission have blanket exemptions to pertinent provisions of the

Wetlands Act and CAFRA which will carry over to any future legislation. The area is not suited for extensive development, and as such is closely watched by conservationists. It would thus seem that, although the salt hay meadows are unique in the State, there is no need to spend public funds on purchases in this area.

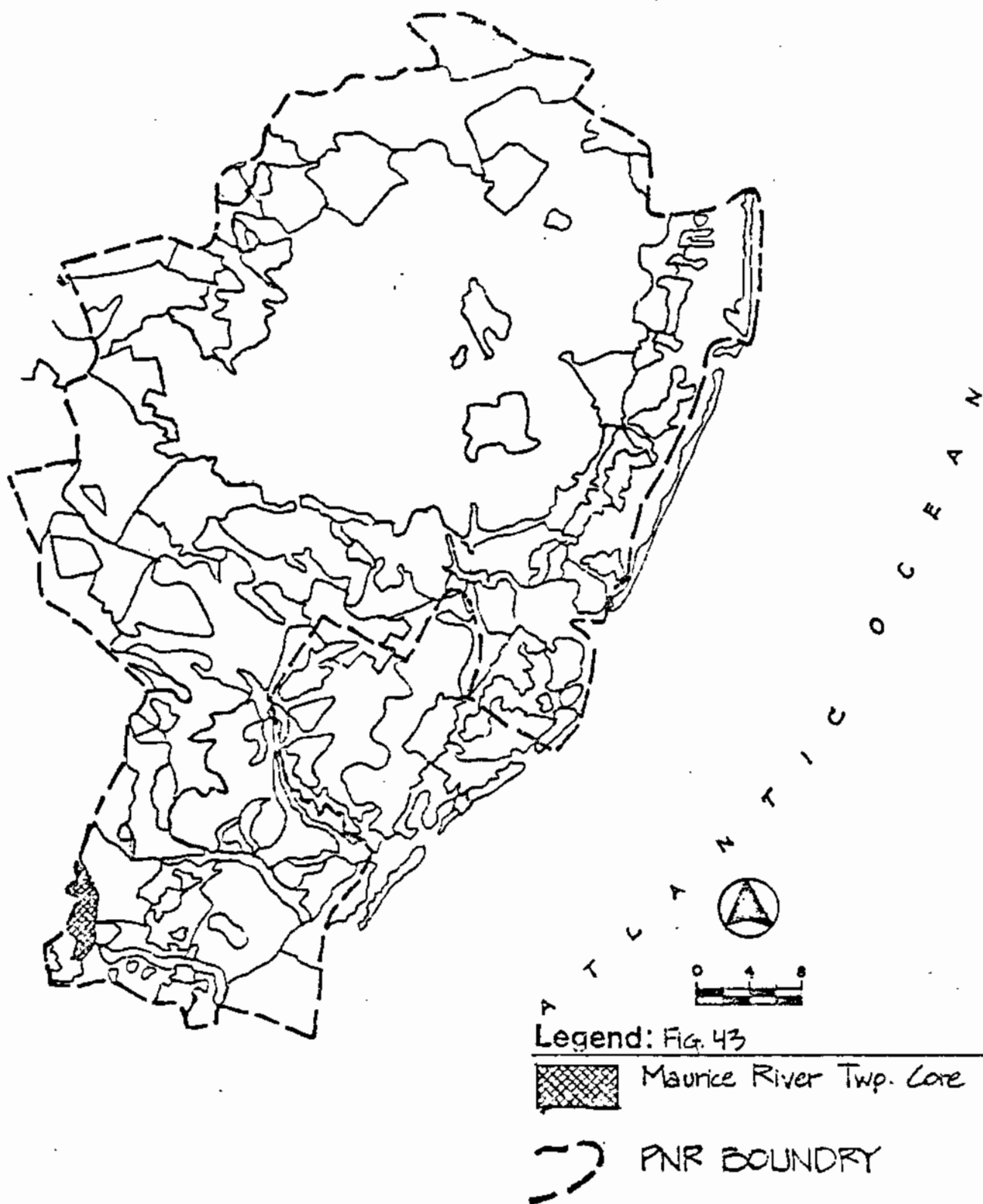
Regional Contacts:

Judy Hansen
Ezra Cox
George Campbell
Ruth Fisher
Al Nicholson
Fred Ferrigno

Maurice River Township Core

This subregion is comprised of the historic Maurice River settlements of Port Elizabeth, Brickboro, Dorchester, Leesburg and Heislerville, thus forming the population, economic, political, and social heart of Maurice River Township. However, it is very depressed economically. These towns, in intimate association with the river, have had their peaks and declines in the past. Born of the coastal schooner trade, they were reborn by the oyster business and government ship contracts during World War II. After the war, the oyster business sustained the area economically until the MSX blight of 1957 wiped out the oyster beds. At about that same time the railroad stopped service down into these towns except for hauling sand from the sand pits, thus nailing the lid on the area's economic coffin. With the collapse of the oyster industry this region entered the depressed state it is still in today.

The area is now a self-described "bedroom township" or "bedroom community" of Millville, and as such the major land use is residential. There is also institutional use - the Maurice River town hall is in "Leechester" (the rebusious region where Dorchester fades into Leesburg) - and there are elementary schools, churches (Methodist), fire companies, and community halls. There is a little bit of commercial use catering to the residents, e.g. Dot & Bud's Luncheonette, Lee's Hardware, and an antique store in Heislerville for the tourists going to visit the historic towns as well as East Point. Residents travel to Millville to do shopping and also to find employment. There are also several marinas along the river (Matt's Landing) which cater to summer pleasure boaters and fishermen, and there are two charter boats going out to these marinas as well. These boaters are out-of-town summer weekenders from the urban areas of the Delaware Valley. Most of the commercial fishing boats are on the other side of the river in Port Norris. On the other side of the river there are only two commercial fishermen, Bailey and Sachleban. However, practically that entire fleet, as well as commercial fishing, oyster, and clamming boats from all up and down this part of the east coast, are worked on at the ship yard in Dorchester, now owned by Frank Wheaton. (Wheaton also owns the biggest fleet of oyster boats and shucking houses in Port Norris, Wheaton Candles in the Route 49/50 sub-region, and is affiliated with Wheaton Glass.) The Dorchester Yard also



Cultural Subregions of the Pinelands

A Human Ecological Study by Jonathan Berger, et al, 1980

has license for military work and they overhaul ships for the Navy, Coast Guard and Army. The shipyard provides skilled jobs for a lucky few who are not necessarily residents of the region.

The region shows many characteristics of economic depression. Most people have to depend on a variety of activities to get by. The residents, besides finding work in Millville (usually in the glass factories) or in what few jobs there are in the highly mechanized sand pits in Dorchester and Port Elizabeth, seek employment at the Leesburg State Prison. Most have small vegetable gardens, hunt, trap, fish, crab, clam, gather laurel, and do whatever else will help out. Education is not taken seriously: there is a great deal of truancy (only about a third of the township has a high school education) and there is concern over youth with nothing to do and nowhere to go.

There had been a thriving black community during the oyster days when there was a large shucking house located at the town of Maurice River (now gone). When the oyster business collapsed this community split up with some residents going to Port Norris where there is a large black community, others back down to Maryland where they were from originally, and still others to Woodbine looking for the factory jobs. Today there are only two black families left, a small enough number to be accepted by this otherwise totally white community.

Socially, the region is extremely tightly knit. There are families here who trace their ancestors back 300 years. (The Dare's, we are told, rented a room to William Penn for the night as he was on his way to Philadelphia for the first time.) Everyone knows everyone else, and in fact is related to just about everyone else. It is a very closed community. "New-comers" who have only been here for 10 or 15 years still feel like they are outside the in-group. The church (Methodist) is the most regular social activity in the region. One "outsider's" impression was that "the church runs Dorchester" and therefore the township, since it is this region which runs the township. This is so if for no other reason than that all the old families belong to the church and are the township political leaders. The older segment of the 'church crowd' actively maintains the dry status of the township. It is an issue in every election, and the door-to-door lobbying of these church members has always prevailed. At one time there was a speakeasy in Haislerville, but we are told that it was finally shut down by the ABC after repeated raids. (There are still active speakeasies on the other side of the river and, in the tradition of the old rum runners, the Maurice River is apparently being used today to smuggle in dope to the Delaware Valley.)

One of the few other social events which is regularly scheduled is the Leesburg auction. The auction draws residents from both within and beyond this region. Apparently this constituency is not from the same network as the one which runs the town. Instead, they are the poorer, unlanded residents: the gatherers, the people who were really hurt when the Whitehead Brothers' attempt to operate a yacht building firm failed and a dozen jobs were lost. This network harbors no small resentment against the ruling clique of wealthier residents and the sand companies who are involved in local politics. It is

no doubt significant that one sand company official said that he only has time for "sand and politics". It is these poorer residents who suffer most from the high taxes which result when no taxes are paid for the sand removed from the township. (The response from the sand companies to this complaint is that they will move out.)

There is also a third, newer network of people in this region consisting of younger, educated people leaving the cities and buying and fixing up old homes. They are organized through the Cumberland County Conservation League and many have a common interest in goat keeping.

A fourth network consists of senior citizens. Many of them are not local people but are individuals who had summer homes in the area, or visited here in the summers, and retired here. Many of them are being badly squeezed by inflation. This group, along with long-time resident senior citizens, are accessible through the county-run SCAMP lung program.

Each town has a fire company and a community hall which are more or less active, and there are scout programs and Little Leagues. Dances are held occasionally for the youngsters, but the lack of locally-available entertainment or social clubs and the increasing expense of traveling for entertainment, keeps most of the community socializing in friends' homes. There are also two hunt clubs in this region: the Camp gang, run by Kenny Camp out of Port Elizabeth; and the Riggins gang, run by Leon Riggins out of Delmont (he is an employee at the Dorchester Yard but his club is separate from that).

There is some hope for better economic times among these people. The continuation of Route 55 is a major issue. The oyster business is picking up, and there is a study being prepared now on dredging the Maurice River from its current depth of four feet to six feet. There are residents who feel that the support facilities needed for Atlantic City could eventually be located in the township.

It is important to note that this region is not an island. In particular there are farmers or ex-farmers (mostly salt hay) from Heislerville who are as much a part of that region as they are of this. There is a network of families and communication which runs up and down the bay marshes, and turns up the river into this region. This region also has strong ties with the Millville area. Notwithstanding these links, this region is a distinct sub-region by virtue of its historic and on-going economic association with the river and the bay, and by the particularly strong connections between the families in the towns which make up this region. It is also distinct in that it is the repository of the control mechanism for the township and is the locus of all development and population of the township.

In addition to what has already been said, an issue which bears repeating is the dominant political position of the sand companies and the unfair tax burden which they place on the residents by virtue of their tax exempt mining. Aside from that, the economic straits of the region should also be reemphasized.

The effect of Pinelands Planning

There is very little development pressure in this region, so the moratorium is more an issue of principle than one of substance for the residents of this area. However, there is concern that if the moratorium stays in effect or if very rigorous restrictions are introduced, these might foreclose some future opportunities for economic betterment induced by Atlantic City, an Oyster Boom, dredging the river, or completing Route 55. These people will be adamantly opposed to anyone or anything which might try to stand in the way of economic improvement. Unless there is a radical shift, however, the residents will never seek residential development. They like the open, empty, rural atmosphere; their privacy; and they don't want an invasion of new residents. They are also terrified of potential financial consequences (schools, police, roads) should the township population increase greatly.

This region could benefit from advice on planning for redevelopment or on economic planning in general. If the families in charge of the area like it the way it is, then the Commission has only to bring the township plan in line with regional standards. If they have ideas for the future, the Commission could contribute expertise towards helping them to realize these goals.

Regional Contacts:

Jack Feltes
Herbert Vanaman
Ezra Cox
Jean Curnow

GENERAL PINELANDS ISSUES

The interaction over time of capability, control, and ideas has led not only to the formation of distinctive regions but also to the expression by users and residents of general principles for Pinelands planning. I have grouped these issues into five general categories: Financial; Distrust of Government; Preservation of a Culture; Land Management; Plan Goals; Plan Flexibility; and Plan Administration.

A quote from an interview introduces each issue, which represents a recurring idea or concern that was clearly identifiable from a synthesis of all of the interviews. A short explanation of the quote from the respondents' viewpoint and from the overview of the analyst follows. Finally, a recommendation for Commission action concludes each discussion. These issues cut across all the regions of the Pinelands, although I have indicated when a particular issue relates more to one sub-region than to the others. The extent to which the Commission and the staff can convert these ideas into actual land management tools will be the extent to which they can succeed in their planning task in the minds of the people.

It will not, however, be sufficient to make these issues the basis of office-generated management plans. The issues themselves and the varied users in their distinct regions all call for participatory planning. This plan will not work unless the Pinelands staff gets out of their offices and into the regions of the Pines. Once they are there, they will waste their time if they give a slide show about what the Pine Barrens are. They are talking to people who have made the Pines what they are today. In the field, the staff should take the set of general and specific issues and begin the discussion about how these might fit into a management system.

Financial

- "Must compensate municipalities for removal of State land from the tax rolls." "Purchases in many different areas will spread the tax burden around."

In areas like Washington, Woodland, and Bass River townships the State already holds significant acreage. The private owners are speculators and long-time resident cranberry farmers. These long-time farmers are few, and due to the necessity for "headland" areas they own many thousand acres. Thus a small population will bear the brunt of the increased tax burden for the entire state of New Jersey and the nation.

Recommendation: The Commission must be able to suggest new types of legislation to deal with tax burdened areas. They must offer a variety of land management techniques that keep land on the tax rolls while fulfilling the needs of the Reserve concept. Lands which are acquired should be kept open for resource harvest and production.

- "The State takes it and taxes it at the same time."

Many landowners believe that if land is so regulated that it cannot be developed, there should at least be a reduction in the taxes from the development potential and assessment. The landowners argue that the taxes remain high, but when the purchase offer comes, it is very low. For example, marshes still have a high value to the food chain even if they cannot be developed.

This again raises the problem of landowner relationships with the polity. Food values and trapping values must be considered in any realistic assessment of land value.

Recommendation: The Commission should have an open and explicit assessment process. A careful analysis of the reasons for failure of the State pilot project for conservation easement purchase on agricultural lands should help the Commission in designing a more equitable assessment process (See next issue discussion also).

- "There must be consistent assessment of the good ground. You have to go down the road and look at how the land changes..."

Any State purchase program of land or development rights must be consistent and site-specific. Assessors should interview local farmers and land users to get their criteria. The Division of Rural Resources of the State Department of Agriculture has put together an assessors manual for farmlands. The State utilized these procedures in the Burlington County pilot project and the results were unsuccessful. Were the assessors at fault or the procedures? This issue must be dealt with before any future projects of this sort are undertaken. There has to be close coordination between assessors, farmers, planners, other landowners and commissioners.

Recommendation: Any program of agricultural preservation must be carried out with the consent and approval of the farmers. There must be a detailed ownership and land use analysis that will make clear who gets the offers for land or development rights purchase and who is left to purchase the farmland after the subtraction of the development value. The value of this 'non-developable' land must be in the range of that deemed affordable by those who will purchase it. If this is not done, there will be little or no participation in the program.

- "Equity...Be Fair...People who want to stay in will get hurt and the speculators will get the money..."

Many life-long landholders who are conservation-minded have no intention of selling their land. They feel that they need some kind of financial relief. It angers them to know that absentee landowners and out-right speculators who have lost money in the past because they did not care about the land or their operations are going to get bailed out with public funds. If a plan helps them, it should also help the people who stay in.

Recommendation: The Commission must understand that the people closest to the land are the ones who will have the most to lose in implementation of any plan. The Commission must use the sub-region descriptions that identify distinct constituencies of local residents and users, and work with these people to formulate equitable procedures for the future management of the land. Examples mentioned in the main report include the "Cranberry Strategy" and the "Village Strategy."

- A suffer-benefit analysis must be prepared along with the Plan.

No plan should be presented without an explicit, detailed, suffer-benefit analysis that shows how local taxes and revenues will be affected by the plan. The work should be of sufficient explicitness that large and small landowners can be shown the effect of any proposal. Such forecasts must be compared with other areas of the state - specifically with North Jersey.

The emotional impact of the tax ratable issue cannot be over-estimated. Everyone has mentioned it, with some even saying that it is a privilege to pay taxes on land held for conservation. Each alternative should have a printout which shows by land users, property size, and geographic local area the effect on their taxes and municipal revenues.

Recommendation: The Commission and the planning staff have not yet developed even a conceptual model for impact prediction. They have asked their consultants to predict the impact of urbanization on particular aspects of the Pinelands environment, and in one case have asked for an assessment of the impact of planning on the

socio-cultural environment. These are piecemeal responses to a major problem of synthesis. No one consultant with his or her limited data base can adequately do the job. Someone on the staff must have the responsibility of developing a qualitative model that links all of the data sets and makes an explicit impact assessment of any policy by place and user group.

Distrust of the Government

- "Credibility of the process will be judged by the Pinelands Commission performance...There is considerable doubt and distrust of the Pinelands Commission's attitude about public participation. Will they really listen or act on recommendations?"

Among both developers and conservationists, there is a belief that nobody will listen. Developers feel they tried as hard as they could to fight the moratorium, had no impact whatsoever, and are now completely frustrated. Environmentalists are worried about the lack of aesthetic considerations and input from local people, and the inability or lack of desire on the part of the Commission to respond to repeated requests. Many people object to the newsletter format of information dissemination. They never hear about things until they are over. Some people never hear about anything at all, and they are the long-time residents and users.

Recommendation: The Commission must undertake an aggressive and sensitive program of public participation, linking policy formation with public involvement. The public participation program must include the testing of alternative planning strategies.

- "The State wrecked Atsion Lake."

The State has a bad track record for the management of public lands. Houses become dilapidated and destroyed. Dams fall into disrepair. This is part of the suspicion under which the people of the Pines hold the State. The Commission will have to work with this problem in the implementation phases. yes

Recommendation: The Commission should consider a rural housing program that gets people into historic homes and structures. This will provide a viable use of these homes and protect them from arson and vandalism. It will also help dispel fears of a "preservation without people" approach and increase the use of the environment. This type of strategy should develop in a style appropriate to the Pinelands. In no instance should State-owned land be subject to less stringent environmental regulations than privately-owned land, an occurrence which several residents noted in referring to Atsion Lake.

- "We built this house. We planted these trees. We built the labor house. Everything you see we put here."

The preparation of a plan and management system must not underestimate the emotional attachment to land and structures on the part of long-time landowners, and the image of place this conveys to newer residents. The data set must include a sensitive visual analysis to help regulate development. Sinton's article as well as the detailed conclusions of this final draft should be consulted. No planning consultant should attempt a visual analysis without consultation with the social, cultural, and historical consultants.

Recommendation: The Commission and staff must perform the visual analysis described above after compiling the necessary data set. A conceptual and operational model should be developed that links forest management with the various images of the place. This model should have the capability to assess over time the management implications of maintenance or change of landscape images.

- Small-scale, family-run operations are important to the area and typical of many of the traditional land uses practiced in the Pines.

For every kind of operation and land use, small-scale, family-run operations are common in the Pines. Excellent examples of this are blueberry farms and sawmills. Any plan should not in any way stress the viability of these operations, and staff work and time might be very well spent in pulling together expertise on how best to stabilize and aid the family-run operations.

Recommendation: The State bureaus of Fisheries, Forests and Parks, and Agriculture (including the USDA) should develop with the Commission an interactive program of technical assistance for the varied users. For example, timber sales from State-owned lands should involve tracts which are small enough to allow small sawmill operators to successfully bid for cutting rights. Other areas for this kind of coordination include fire management, seeding of the Bays, and investigation of developing off-season work for small part-time farmers. Such a program should be an integral part of the management plans.

- "Highest and best use"

In many areas of the Pines, ecology and economics are intimately combined. This is true especially in areas where people "do a little bit of everything" for a living. Here people practice extractive resource use. They harvest off the land. Conservation to them means "management of the resources" in such a way that they can get the best possible yield without stressing the system. They want the most they can get from the renewable environment. These people are afraid of the word "preservation". They feel they are being preserved as a showcase of "17th century life". What they want is a better understanding of the environment combined with

research on appropriate technology so they can lead a better life. ✓
Should the Pinelands Commission develop ideas and strategies for this constituency, they will considerably broaden their basis of support.

Recommendation: The Commission should investigate ways to accommodate outside visitors within a region in which is functioning a viable economy based on a clear understanding of the ecosystem. Progressive forestry techniques that increase yield should be coupled with an adequate marketing structure for forest products. Other suggestions include increased long-term leasing of State-owned bogs and introduction of public bus service from urban areas to Pinelands recreational areas. The Commission and the state legislature should cooperate on the support of innovative research on management of Pinelands ecosystems with the goal of increasing their potential to meet regional (Pennsylvania and New Jersey) resource needs.

Land Management

- Non-transportation of water

Agriculturalists fear that North Jersey, Atlantic City, Philadelphia, or New York City will get the water which is to be so carefully protected in the Pinelands Plan. This belief is shared by many other residents and users whose livelihood is not so intimately tied to pure and adequate water but who nonetheless highly value the resource. From their perspective, an effective plan would not allow any transportation of water from the Pinelands region.

Recommendation: Amend the state legislation to specifically prohibit transportation of water. Promulgate management plans and procedures that protect the current ground and surface water flow regimes.

- "Private ownership of the Pines has kept it open, undeveloped, clean, and unpolluted..."

This is a widely-held belief among many kinds of people. It is a lead-in for the "now we have a right to develop what we want" people or for the people who really want to conserve but don't want their right of tenure violated. Thus private ownership should continue to play a major role in the preservation process. Innovative techniques of land management must deal with this concept.

Recommendation: The Commission should investigate a full range of voluntary programs which provide incentives for private landowners to enter into conservation agreements. This is vital to the reserve concept. The Commission should fund a separate study to determine the spectrum of private landowners and their predisposition towards a variety of programs and incentives. The same study could also elicit other ideas for attaining conservation of resource goals through the vehicle of private ownership.

Plan Goals

- "The Pinelands Plan is to be a plan for preservation, not one to see how many houses can be accommodated without significant environmental degradation."

Many environmentalists believe this is the intent of the federal legislation.

Recommendation: The Commission and staff should utilize the "Green-line Parks" principle as outlined by the Heritage Conservation and Recreation Service of the Department of the Interior as a conceptual basis for the establishment of the National Reserve. The federal and state legislation may very well give the Commission some impunity when dealing with the development community. The legal consultants should be asked to review this concept as a basis for planning.

- "It is important to preserve the Pine Barrens for the use and enjoyment of future generations."

People in shellfishing, duck hunting, and cedar logging, as well as small farmers, all share this feeling. Conservation and environmentalism may come under attack as "city ideas" or "Upper class ideas", but here in the Pinelands the people who really use the land seem to have the greatest care for it.

Recommendation: This information has great educational value, and as such the Commission should see that it becomes common knowledge. As recommended previously, programs of technical assistance should be coordinated for the benefit of these users to enable them to continue in their traditional land use pursuits.

- "We're all in favor of preserving the Pinelands. But the Pinelands aren't here; we shouldn't even be included in the region."

The boundary issue is cited by many people as their first complaint about the Pinelands planning process. The popular conception of the region known as the Pinelands is the Plains or the Pygmy Pines. The process of delineating the designated Pinelands boundary was not made clear, nor are the goals associated with preservation of the enclosed area widely understood. Is it to protect the water? The vegetation? A culture? Until the goals are made explicit, residents will continue to argue about the area itself rather than turn their energies towards constructive participation in the planning process.

Recommendation: The public participation program should be able to demonstrate to people their stake in the larger region. Staff members must themselves understand the link between boundary delineation and attainment of plan goals in order to adequately address this issue in public meetings.

Plan Flexibility

- "Sons and daughters need places to live..."

Even in rural areas where many people are against development, large and small landowners want to build homes for their children. It appears that even in the most preserved areas there will have to be some provisions for minor subdivision for family purposes.

- "The Plan has to have a little bit of everything." "No permitted changes of land use even in the village centers of the core is a real hardship." "We need a mixed community."

People are afraid of complete maintenance of the status quo. This may not be a developers argument. Woodland villages and agricultural centers have changed, expanded, and contracted many times in the memories of the current residents and users. These are areas of intensive use. It appears that there should be provisions for continued intensive use in these areas.

Recommendation: In the Forest Regions, the Commission must formulate a "Village Strategy" which is based on careful analysis of ownership patterns in the villages and forested areas, the goals of the residents, the reserve concept, and the capability of the natural environment. Physical planning to help lay out some of these patterns would be important. The growth management system must be flexible enough to be able to cope with varied levels and kinds of economic activity. Large-lot zoning with provisions for limited subdivision in accordance with solid ecological principles can help fulfill some of this need for development. Should existing villages be expanded to accommodate all of the projected growth or should scattered development be allowed throughout the forests? Will a clustering of houses allow for more extensive use of the woods than a more even spaced pattern of low density development? What will any of these policies mean for the total number of dwellings that can be built in the future? These are the kinds of questions which must be addressed in formulation of the village strategy.

- "The Pinelands Plan should involve a mix of techniques to preserve, protect, and manage the land."

Conservationists feel that a mix of techniques is needed to control growth in areas where purchase cannot occur. Good communication and testing at the local level can lead to mixes of solutions that may work for varied areas. Local residents are looking for good, solid, local expressions of the Plan that fit their specific needs.

Recommendation: The Commission and staff should tailor their plans and recommendations to specific sub-regions. The staff should not let their time constraints obscure the need to respond to the varied social and natural environments of the Pinelands. General principles

of planning are fine as goals and guidelines, but the staff should evolve strategies for sub-regions as units with connections to the whole region. These separate plans and procedures can then be synthesized together. For example, the Commission and staff may deem it essential to preservation of the Pinelands character to have little or no development within the forest regions. Those areas then may not need extensive developer performance requirements. Other areas, however, will need such performance standards. Another cut would be to develop "blocks" of strategies to deal with particular circumstances. There may be a "forest strategy" - large-lot zoning with little or no development allowed, provision of no infrastructure, extensive fire management, purchase of some areas for public use, private ownership of large tracts with covenants, etc. This could occur anywhere the Commission deems it beneficial to preserve extensive land use. There may be a "suburban strategy" - cluster development, open space dedication, performance requirements, aesthetic and historic zoning, and limited commercial development in areas where it is felt that more growth can be accommodated. The staff can work out these general blocks and then tailor them to specific areas. The blocks can even deal with specific constituencies: there may be a general "forest strategy", but attached will be a specific "cranberry strategy", which responds to the needs and circumstances of that unique group of land users.

- "Leave us alone..."

There is a widespread belief that leaving things alone is the best management strategy for the Pines. The moratorium has caused great bitterness among developers, and doubt as to the good intentions of the Commission by long-time resident supporters of conservation. There is an ambivalence felt by many about preservation in that it implies a surrender of what many believe to be inviolable private property rights.

"Leave us alone" also means that people in the Pines do not want to see hordes of visitors descending on the place because it is a national ecological reserve. There is a sense of "to hell with the rest of the State...this is our ground."

Recommendation: Exactly what management strategies can be formulated to meet these objections is hard to say at this time. Ambivalence can be educated or data presented in clear and accurate ways to show the consequences of no action. Respect for private property in the preservation process and even veritable no-growth areas with some minor exceptions may help. It is a complex ~~question~~ ^{issue}, ~~issue~~.

If the Commission responds to the ^{issue} ~~question~~ of culture preservation by attempting to protect traditional use rights, then that will go a long way toward dealing with this problem. There has to be a commitment to really leaving some areas "alone"; these areas should be as contiguous as possible.

Plan Administration

- "Don't be broad about site characteristics for building - be specific." "The Plan must be fool-proof and easy to administer."

This is the standards and specifications issue. Local governments can only regulate growth if they have strict and easy-to-understand standards. Conservationists and developers both raise this issue. Long-time residents know the land and know of special places that can absorb growth. Developers attack on the basis of non-substantiation of harm while environmentalists want strong and defensible performance requirements. These have to be consistent.

If these standards are based on ecological principles and the health and safety of the community, then they can apply to prior approvals in sensitive environments. There are several cases in Medford where the government was forced to live with a prior approval in health and safety problem areas. All prior approvals should be reviewed by the townships with an eye to the new, regionally-consistent standards.

Recommendation: Even in areas where the Commission deems it necessary and desirable to accommodate more growth, no infrastructure should be extended to health and safety problem areas. The regional set of performance standards should supplement and encourage on-going local programs of growth management. In rural suburban areas there should be coordination of water quality policies on a sub-basin basis. Where new construction will be taking place, there should be a uniform inspection system with paid and qualified inspectors.

- Use local expertise and local intimate knowledge about the environment in the management scheme.

People have derived intimate knowledge about the Pines from having dealt with them over time. People who are familiar with the area feel they have been ignored either as volunteers or as paid staff by the Commission. In such diverse fields as fire management and the day-to-day administration of the Plan, many intelligent people are available and eager to contribute their services. A planning and management process should utilize this expertise. Only non-residents of the Pines are on the technical staff of the Commission.

Recommendation: Local experts must be recruited to help set up the plan. Starting immediately, they could aid in setting up a responsive public participation program. In the later work they could help with technical aspects of such issues as historical preservation or fire management. I recommend Judy Palumbi of Medford, Dick Regensberg of Port Republic, and Mary Ann Thompson of Southampton to help with public participation. Jack Cervetto of Warren Grove could help with fire management.

- "We have a local plan that already works..."

This is the home rule issue in relationship to regional planning. Many people believe that their existing local plans protect the environment. In actual fact, some plans do this and some do not. Examples of how the plans don't comply with the new regional standards will be extremely important to show to developers who claim that they are really protecting the environment. In many townships, politics and land use policy are intertwined. Large landowners are both realtors dealing in the turn-over of property, speculators on their own land, and planning board members who vote on proposed developments. For both selfish and idealistic public purposes, they believe their recently-completed plans under the New Jersey Land Use Law are adequate.

Recommendation: This relationship of landowner to approval process means that many people now understand the coordination of development areas with conservation efforts. Amendment of local conservation plans may very well be one of the best ways to implement part of the conservation plan. This can be combined with use of the official township maps to delineate conservation areas. The staff should also choose examples from each sub-region and show explicitly how the local plans do not protect the Pinelands. This will be an important educational tool. A map delineating those "fringe areas" which are truly "critical areas" will go a long way towards muting some of the local objections to this seemingly redundant planning effort.

- "The planning process cannot be adversary. You have to be ready to give and take." "The plan should be regional in scope. Ideally everyone would be dissatisfied - this would indicate that an adequate compromise had been reached."

There should be incentives for developers in the Plan. Local people working in heavily development-impacted areas find it easier to achieve their goals if they give a little and the developer gives a little as well. Usually they trade more houses for more land left as open space.

Recommendation: If the Commission utilizes performance requirements for rural suburban and other areas, they should not limit these to hydrologic and ecological standards. There should be a variety of requirements for not only the natural environment but for the visual aesthetic and social environments as well. These must all be coordinated to produce the desired landscape. What will it look like? How will it perform? The staff must proceed rapidly in trying to forecast the effect of regulations. They must utilize skills of visual analysis as well as technical expertise in this task.

- "Day-to-day enforcement and administration requires constant communication between the Commission, local governments, and residents."

Who is going to enforce the Plan and the standards? Who will make the final decisions? How will the State disburse funds to places with no growth? Who will pay for qualified inspectors with science and land development credentials? Local residents often lack the expertise for enforcement and review. Communities can, however, share personnel.

Recommendation: Many questions will arise on a daily basis. Someone should be available at the Commission offices to answer these questions. This person or people should not be a secretary but someone who has the knowledge and authority to render opinions and to not only take calls but to make calls to key people and thus keep their hand on the pulse of the region. Compilation of a yearly/seasonal calendar of meetings, dinners, and other gatherings for the whole gamut of institutions will greatly aid this communication process.

BIBLIOGRAPHY

Duncan, J.S. 1973. "Landscape Taste as a Symbol of Group Identity: A Westchester, County Village." GEOGRAPHICAL REVIEW, 63 #334-355.

Geertz, C. 1963. Agricultural Involution. University of California Press, Berkeley.

Marsh, E. 1978. "The Southern Pine Barrens: An Ethnic Archipelago" in The Natural and Cultural Resources of the New Jersey Pine Barrens, John W. Sinton, ed. Stockton State College, Rutgers University, N.J. Department of Environmental Protection.

McHarg, I.L. 1969. Design With Nature. Natural History Press, New York.

Steward, J. 1958. A Theory of Culture Change. University of Illinois Press, Urbana, Illinois.

Zelinsky, W. 1973. The Cultural Geography of the United States, Prentice Hall, Englewood Cliffs, New Jersey.

APPENDIX I - LAND USE ISSUES

This appendix provides in outline form a listing of issues by land use. It is useful as a ready reference to land use concerns.

LAND USE ISSUES

AGRICULTURE

Cranberry Agriculture

1. Protection and maintenance of water quality and quantity is critical to cranberry agriculture.
2. Cranberry farmers must continue their purchase of water supply and fire buffer protection lands. These "headland" areas are extremely important to their operations.
3. Pest control, development of pesticides, regulation of pesticide use, and research on cultural methods of pest control are important issues of cranberry agriculture.
4. The following are some of the labor problems facing cranberry growers:
 - a. shortages at harvest time
 - b. quality control of work
 - c. effect of unemployment laws and compensations on labor supply
 - d. debate over piece-rate wages versus the hourly wage
 - e. conflicting federal and state regulations on worker welfare and housing
 - f. child labor laws
5. Land shortages. More people want to get in the cranberry business than want to get out. This problem is further aggravated by State take-over and removal from production of viable bogs.
6. Non-transportation of water. All water must remain in the Pinelands. Farmers are upset that the Merlino Bill did not specifically state that there would be no transportation of water from the area.
7. Growers (through the State Department of Agriculture) have requested the investigation of a proposal for long-term leases of bogs on State land. This could drastically alter the amount of land in production.

Blueberry Agriculture

1. Blueberry farmers have labor problems similar to those of the cranberry farmers, yet their problems may be more acute. Most blueberry operations are small, family-run operations; fifty acres is considered a large operation. (There are, however, some exceptions. Large cranberry growers also grow many acres of blueberries and there are some large blueberry farmers.) Small farmers cannot afford to hire buses or crew chiefs to gather labor. In addition, blueberries require large amounts of hand labor. Despite extensive investment, nobody has yet developed an efficient and effective mechanical picker. This puts a premium on hard-to-find hand labor.

2. Small blueberry farmers must hold other jobs to remain farmers. Many drive for the local school districts or work at Fort Dix or other State institutions. Any cut-off of these employment sources would put the small operators out of business.

3. Development and regulation of pesticides is also an issue.

4. International nurseries are worried about the rising costs of air transportation.

Vegetable Farming

1. "Right-to-Farm". This issue is prevalent in developing areas. The farmers sell some of their land and then face nuisance complaints from newly-arrived residents, made more serious by their increasing presence on local regulatory boards. Given the extensive leasing and renting of land in speculative areas, farmers can feel this effect miles from their farmstead and in different jurisdictions.

2. Farmers expect compensation for any rights taken from them in the Pinelands planning process. They believe agricultural preservation, if it is to occur, will be addressed in specific legislation that provides such funds.

3. Over-regulation. There are already too many regulations arising from federal, state, and local jurisdictions. These frequently overlap and may even be contradictory.

4. Labor. These issues are similar to cranberry and blueberry farming labor problems.

5. "Farmers should speak for farmers, rather than someone in an urban role."

Any plan for farm preservation, according to the State Farm Bureau, must come from the farmers, not the land planners. The agricultural sub-committee for the Pinelands Commission should be an important source of issues and ideas.

6. Tax relief. Preferential assessment is essential to continued viability of agriculture in New Jersey.

7. Development should not occur on prime farmlands. Farmers who want to stay in would rather see development in the woods than on the "good ground". This poses a considerable challenge for the planning process since many historical, archaeological, and hydrologically critical areas are in the woods.

8. Ocean County farmers along Route 9 understand the importance of protecting the watershed. "If you don't have water, what do you have?"

9. Due to high fertilizer requirements on sandy soils, an essential if competitive vegetables are to be grown, the State should raise the allowable nitrate limit to 10 ppm from the present 2 ppm.

10. Tomato transplants are cultivated in California, sent to Florida where they are grown to seedlings, and then shipped to New Jersey. When they arrive in New Jersey they are frequently diseased. The farmers want State inspectors sent to the South to address this problem.

11. The State continues to cut the budget of the State Agricultural Research Stations. This aggravates an existing shortage of continuing research and development for New Jersey agriculture. The farmers need appropriate technology. There are abandoned greenhouses all over Atlantic County and farmers are forced to import tomato seedlings. People need help and advice.

12. There is a shortage of lands to increase production due to speculation and lack of contiguous tracts.

13. New Jersey farmers are not even competitive in the Mid-Atlantic region due to excessive regulation of burning, pesticides, fertilizers, and labor problems.

Field Crops - Grain and Dairy Farming

1. High land requirements for these crops often necessitate the leasing of land from speculators in many areas of the Pines. This is a very unstable form of land use. The family operations can be disrupted at any time by sale of their rental land and its subsequent development. Farmers use land as far away as twenty miles from their homes. Lack of contiguous land increases energy costs as well as time losses due to long-distance transport of equipment.

2. The Burlington County Pilot Project on farmland preservation failed because the appraisals were inconsistent. Land for preservation must be assessed on a per farmable acre dollar cost.

3. In the southern regions of the Pines the moratorium has held off refinancing of farms due to drastically lowered land values.

Turf Farms

1. Pesticide regulation is a major problem for turf farmers, although it is less serious for those farms on a 12 month cycle than for those on an 18-24 month cycle due to the lifecycle of the pests.

2. The moratorium has an adverse impact on the demand for lawns. Laws regulating lawn fertilization on sandy soils will also hurt the turf farms. One possible solution might be a recommendation that a switch be made to native grasses for turf. These would be better adapted to the sandy soils of the region.

3. Farmers need larger plots which they can irrigate economically with in-place irrigation systems.

4. Regulations which limit burning to disease control hurt people who want to clear land for production. South of the Mullica River there are many old

fields and successional forests due to the marginal nature of agriculture in the region. Marginal operations tend to move onto these lands; in order to survive they must be able to clear additional land.

Salt Hay

1. The clearing issue. Farmers have to burn to get rid of the "fox tails" or Phragmites which greatly reduces their cash crop.
2. The rising sea level and water table in Delaware Bay and the scouring of the marshes by storm high tides reduces the farmable area.
3. The agricultural activities of the salt hay farmers produce depressions within which mosquito larvae live. People complain and the Mosquito Commission sprays, an action which pollutes the water. This spraying occurs primarily on the salt hay fields, for in other areas they use canals and fish to control the larvae by predation.

Orchards

1. The clearing issue, and others as above.

Nurseries and Ornamentals

1. The success of nursery owners and ornamentals dealers depends on an active residential. Competition from South America is also a problem.

Swine and Other Livestock

1. "Right-to-farm" in rural and even town areas is a major issue listed by livestock farmers.
2. Competition from the Delmarva area is reducing profits for New Jersey livestock farmers.

EDUCATIONAL-SCIENTIFIC

1. School districts use the Pinelands extensively for field trips and as the basis for local history and environmental studies courses. Rising energy prices have forced schools to curtail long trips, and they are now looking more and more to the local area to meet their field trip needs. There is a sense that many do not know what is available and how to get it. Schools represent a community of teachers, students, administrators, and parents.
2. "Pinelands as a cultural wasteland..."
There is an attitude on the part of many newly-arrived administrators and teachers that they have moved from an urban or college setting to an area with no culture. Such programs as the Folk Artists in the Schools have helped show people the diversity of local culture in relationship to the environment.

3. Colleges in the Pinelands (as Stockton State College) have difficulty in providing faculty and student housing. Students and faculty formerly lived in summer homes, but due to the Atlantic City boom these are now rented in the winter as well. Stockton cannot build new housing on campus due to the moratorium.
4. Some areas need new schools but do not know how to forecast for pupil increase until the building restrictions are lifted.
5. Scientists doing studies in the Pines have had their instruments vandalized.

RECREATION

1. "During deer week we have twenty-thousand trespassers."

Among residents who use the Pines for a variety of recreational activities, there is a consensus that it is accepted practice to use private land if permission is obtained. Many others don't do this, and the general public does not respect private property. Large landowners are concerned with the 5% or so of recreationalists who litter the woods and streams.
2. "We want some people but not too many..."

Locals who ride and hunt do not want competition for space. They feel the sand and gravel roads are already too heavily used. Horse riders feel that if provisions are made for other uses they should also get increased access. For further riding range they would like to use power line rights of way.
3. Canoeing
 - a. Bad conditions and lack of maintenance of sand roads on State lands forces operators to halt some trips.
 - b. There should be more policing to halt vandalism and trash dumping.
 - c. Peak times cause crowding of rivers and services.
 - d. There is anxiety about potential limits on the use of the rivers.
 - e. There is anxiety about the continued viability of operations due to energy costs and shortages.
 - f. Canoeists want clean waters.
 - g. Rest room and trash facilities are needed on some rivers.
 - h. Power boats on the Lower Mullica River cause conflicts with canoeists.
 - i. Put-in and take-out points must be maintained and protected.
 - j. Over-night camping must be expanded.
 - k. Dead falls in headwater areas should be cleared out.
4. General camping
 - a. People use camping areas in a variety of ways, many of which are incompatible with each other (as canoeing and power boating, cross country skiing and snowmobiling, etc.).
 - b. Segregation of land users is difficult due to the flat topography of the Pinelands region.
 - c. It is difficult to convince long-time users that changes in their use would increase the quality of others' experiences.

d. Access to state lands is difficult to control or to close off completely.

5. Recreation in suburban regions

According to township officials, the increased unmet demand for recreation in suburban and shore communities (especially for seniors and teenagers) consumes more time and debate in official meetings than growth management.

6. Private campground owner issues

a. Campground owners cite increased unfair competition with State facilities as the major problem facing them today. Private owners have to increase the number of sites, lower their open space, and increase their price to meet this competition, while State parks can lower the number of sites, lower the price, and use the entire State open space system. These owners subsidize the State facilities with their own taxes and then get run out of business.

b. Pinelands legislation mentions recreation but does not explicitly mention private recreation.

c. Many campgrounds need sewers.

d. Proposed real property tax on stored trailers could adversely effect private campground owners. If the tax on trailers goes into effect, many owners will sell their land to developers.

e. Rising taxes are a large problem for the so-called "Backland camps" - those back away from the beaches which are simply vacant land which is rented out to poorer families for the summer.

HUNTING

Fox hunting. Fox hunters are concerned about the following issues:

1. Dogs caught in the traps of trappers.
2. Trappers trap and kill the fox while most fox hunters only run after the fox.
3. Conflict over "sections", which are the territories for each pack of hounds. Due to competition, fox hunters rarely get together or work in large groups.
4. Loss of fox habitat due to spread development. This is a major problem since a fox will run a long way during the hunt.
5. Over-use and over-crowding of sand roads.
6. Game wardens do not do anything. They allow illegal deer hunting by their inaction.
7. Fox hunting provides recreation for a group of elderly men. Their dogs and their foxes are their lives. Younger people also participate.
8. Power lines conflict with the fox habitat.
9. Dangerous over-crowding of State lands.

Deer hunting. The following issues are central to deer hunting in the Pines:

1. Dangerous over-crowding of State lands.
2. Lack of safety procedures.
3. Cost of permits.
4. Out-of-area hunters force the locals to hunt out of season or go to northern Pennsylvania.
5. Trespassing.
6. Individuals and club or gang drive hunters hunt in incompatible ways.
7. Trash dumping of land by the drives.
8. See the Sinton/Regensberg report for additional issues.

TRAPPING

Issues of importance to trappers include:

1. For part-time people who supplement their income with trapping revenues, the time required for them to tend the trap lines and perform their full-time work is a big issue.
2. Availability of land to the individual. People must renew their leases very early. In the muskrat meadows, there may be a three-generation waiting list for a lease.
3. Anti-hunting, fishing, and trapping efforts of the SPCA and the Humane Society.
4. Loss of habitat.
5. Trapping of domestic and feral animals.
6. Conflicts with coon and fox hunters.
7. Misunderstanding of trappers by bureaucrats. "Trapping is a science, not a haphazard thing..."
8. Under-estimation of the amount of revenue produced by trapping. South Jersey muskrat trapping produces annual revenues totalling \$1.7 million.
9. The season is too long and this leads to over-trapping. On State lands the season extends into the breeding season.
10. Stealing of animals and traps.
11. Snow geese eat the muskrat food.
12. Too many trappers.

GATHERING

The Pinelands Commission must not under-estimate the number of people and income generated on a full- or part-time basis by the gatherers. One gatherer had eight employees and grossed over one million dollars in the manufacture of grave blankets and Christmas wreaths. Some people do gathering to supplement their income while others do it full-time. General gathering issues are:

1. Continued access to sources of supply.
2. Seasonality of market and of materials.
3. Access to State land.
4. Loss of area to spread development.
5. Diminishing supply of firewood.

FORESTRY

1. Cedar cutting is difficult work, especially since heavy machinery cannot be used in the swamps.
2. Property disputes arise from poor marking of trees prior to logging operations.
3. Cedar is available but hard to acquire due to unclear titles of land. Speculator-owned land exacerbates the problem, since speculators frequently do not want a survey because they only want a quick roll-over of their investment.
4. Cedar cutters and mill operators fear that there will not be a forestry program on State-acquired Pinelands.
5. On State lands the State must break up the bids into smaller lots since most cedar operators are very small and cannot afford a lot of money up front.
6. It is necessary to clear-cut cedar during the logging operation since selective cutting only increases stand susceptibility to windthrow. Following clear-cutting, the cedar grows back in two years, although there is a problem of deer eating the young cedars. Most old-timers think the cedar swamp will take care of itself.
7. There is a need for larger fire control areas, a goal which can best be attained by use of regular crews who practice prescribed burning. The forests are in worse shape now than in earlier times when the Conservation Corps supplied such crews.
8. Deadfalls in streams create dams and lower water quality due to algae and particulate build-up as well as by allowing stagnant water. Special crews with special rigs should go in and clear out these dams.

9. Firwood poaching is rapidly increasing due to rising costs of other fuels.
10. The gypsy moth is a problem.
11. Clear-cut pine areas must be fire-managed to keep the oaks out and allow for more efficient pulp production.
12. Commercial operators' crews commute in groups of three and four from Philadelphia. The gas situation could make this a hard system to maintain.
13. Cedar cutters' access to swamps is being cut off by development.
14. People exploit tax-delinquent land for firewood.
15. Woodlots are taxed too high.
16. Spread development makes fire management difficult. Furthermore, newer residents are more likely to start a fire than older ones because they do not understand the fire cycle.

CONSERVATION/PRESERVATION

1. The State should clear up titles on tax lien lands and then foreclose.
2. Purchases should link State lands.
3. Priority areas include: the Plains, the Mullica River watershed, agricultural lands, and stream corridors that protect agriculture. Wetlands, the Great Cedar Swamp, endangered species, the Forked River Mountains, and historical buildings that bear witness to the pre-World War II economy and landscape are also important.
4. The constitutionality of the regulation/taking issue must be explained. Regulation is not necessarily a taking.
5. There should be common standards and priorities for conservation purchases.
6. Competition between farmers and developers for land must be dealt with by the Plan.
7. The Pinelands Commission and the Casino Commission should cooperate to raise densities on the Atlantic City Island, thereby allowing the island to absorb more growth and take pressure off the Pinelands
8. Landscape visual analysis is not dealt with in the work plan. This is an important data link to tie areas together in protection, preservation, and management areas.
9. The State must consolidate holdings on the Wharton tract. Some people believe the State has given away land to speculators in this area.

10. Properties of historic and conservation value must be occupied or they will be vandalized.
11. In local areas there is a lack of understanding about existing historic resources and the ways to protect them. However, there is an intense interest in preservation of such areas by Pinelands residents.
12. Headwater areas must be preserved even in fringe areas which are under heavy development pressures.
13. There are many ways to generate income other than by housing development.
14. There is a strong sentiment in suburban areas and in Burlington County (as shown by votes on referenda) to protect the land.
15. The cross-jurisdictional problem of water quality must be addressed.
16. The planning function in Ocean County is identified with development, not with conservation or historical preservation.
17. The Manahawkin area has a regional sewerage treatment facility that has a tremendous unused capacity. The area could turn into a virtual city if the capacity of the plant is reached. Ocean outfall of the plant pollutes the adjacent sea and decreases fishing potential.
18. Development is a threat to lifestyle. In the Pinelands, a major issue is preservation and survival of a culture or cultures.

FIN FISHING

The following issues are of interest to many people engaged in fin fishing:

1. Continued and expanded access to the fish habitat.
2. Boat access to ramps.
3. Clean water.
4. Summer over-crowding of waterways with power boats. Many people have power boats but do not know how to operate them properly. The marine police are understaffed and therefore not very effective.
5. The nuclear power plant at Oyster Creek continues to cause massive fish kills during the winter due to shutdowns and subsequent cooling of the water.
6. Lack of organization and cooperation among commercial fin fishermen. Due to this situation, catches in areas like the mouth of the Maurice River are either feast or famine.
7. Stripers are disappearing. There is a striper council investigating this problem. Some people say that pollution from pesticides used by Chesapeake farmers is responsible.

8. The price of gas for recreational boaters and fishermen.
9. The price of fishing licenses.
10. Increased State stocking of inland lakes.

SHELLFISHING

General shellfishing issues include:

1. Seasonality. During the winter the baymen cannot work the "wildland", or the unprotected areas away from the shore. In the protected shore areas only leaseholders can take clams. Others must pay the leaseholders to work the lease lots.
2. High susceptibility to environmental fluctuations due to pollution. This necessitates closing of beds for long periods of time or for certain seasons. It also led to the development of a "relay system". In the relay the clams are dug from polluted waters and put into clean waters. Here they clean themselves out, are tested, and if passed by the State, are sold. The relay increases the supply of clams but also increases the work involved. Furthermore, on polluted bays north of our region, baymen will not allow others from our region to relay their shellfish even though they have not harvested for over ten years.
3. Need for State seeding of Barnegat Bay.
4. "The Bay is always somewhere you can make a few dollars."
5. N.J. hard clam resources are declining.
6. There is a lack of enforcement of shellfish regulations.
7. The State should move to improve water quality and thus open up more clamming areas.
8. The State should legalize Sunday clamming.
9. Daily harvest limits should be established.
10. Seasonal demand and rapid changes in the business climate make the work demanding.
11. Traditional long-time resident families dominate the inshore lease lots.
12. The leasing of new areas is limited by the State to keep the bay open for recreational and commercial fishing.
13. There is poaching on leased beds.
14. Predators attack the oyster populations.
15. In the oyster trade there is a fierce competition between big companies and the small operators.

16. Water quality in the Maurice and the Mullica lines must be preserved under any circumstances since these feed the last and best shellfish beds.

17. Atlantic City developers are pushing the Army Corps for a dredging permit to dredge the most fertile bay in production. They wish to dredge Dry Bay for yacht slips.

COMMUNITY SERVICES

1. Ocean County Volunteer Fire Service needs include:
 - a. Standardized training to meet new national and professional standards set by fire insurers and professional associations. This will require a center to deal with major hazards, including gas, oil, and nuclear wastes as well as other volatile chemicals. The center can be made safe for the environment but a permit for building will be necessary.
 - b. A county-wide fire radio network. This will require antennas in the Pines.

TRANSPORTATION

Issues related to transportation include:

1. Lack of public transportation throughout the region. Casino employees are especially hurt by this lack.
2. Road maintenance.
3. Expansion of the Lindenwold high speed line into the Pinelands. The proposed expansion to Atco would induce further leap-frog development into the Pines.
4. Casino people are calling for the reactivation of the existing railroad beds. The beds are now in such bad shape they can hardly accomodate slow freight trains.
5. Casino people want the airport upgraded.

INDUSTRY

1. Extractive Industry
 - a. ASARCO in Manchester mines only one of three economic deposits of illmenite (Titanium dioxide) in the U.S. This is mined and processed for paint. A depressed housing market related to the moratorium caused a decreased demand for illmenite.
 - b. Sand and gravel. Operators of sand and gravel mines are concerned about the following issues.
 1. Road repair for heavy trucks.
 2. Pits cause increased sedimentation and turbidity of the groundwater. Environmentalists have listed pits as major point-source polluters.
 3. Most mines have enough land ownership and in various stages of excavation to maintain their operations for years.
 4. Dirt bikers use mining company property for runs. Injuries have caused the insurance rates to rise and now necessitate patrolling of their lands.