

NEW JERSEY STATE LIBRARY  
NJD 974.90 G191, 1980a c. 3  
Review of the probable impact of Atlanti



3 3009 00373 9564

974.90 G191 1980A COPY 3

PROBABLE IMPACT OF ATLANTIC  
CITY CASINO DEVELOPMENT

**New Jersey State Library  
Department of Education  
Trenton, New Jersey 08625**

REVIEW OF THE PROBABLE IMPACT OF  
ATLANTIC CITY CASINO DEVELOPMENT

A REPORT OF THE  
NEW JERSEY DEPARTMENT OF COMMUNITY AFFAIRS

JOSEPH A. LEFANTE  
COMMISSIONER

January, 1980

974,90

6-111

1980a

copy 3

Review of the Probable Impact of  
Atlantic City Casino Development

A Report of the  
New Jersey Department of Community Affairs

9-14-10

G141

1980a

copy 3 to 101

Prepared by:

Bureau of Regional Planning  
Division of Planning

January, 1980

## C O N T E N T S

	Page
EXECUTIVE SUMMARY. . . . .	1
SECTION I	
Economic Trends. . . . .	10
SECTION II	
Population, Housing and Land Use . . .	20
SECTION III	
Public Facilities and Impact . . . . .	42
SECTION IV	
Environmental Impact . . . . .	77
BIBLIOGRAPHY . . . . .	79

## EXECUTIVE SUMMARY

## INTRODUCTION

When the staff began researching this casino impact study, the documents available indicated that there would be no more than 12 casinos in Atlantic City by 1990. These documents published by Rutgers University and Economics Research Associates based their projections on the assumption that the casino hotels would employ three people per hotel room. Conversations with representatives of the Casino Control Commission, Atlantic County Planning Board, and Atlantic City Planning Board indicated that these very basic assumptions were questionable. Two days later the Atlantic City newspapers were publishing news that Economics Research Associates were now projecting 26 casinos by 1990. As a result of this accelerated development, the consultant group had raised its projection of yearly Atlantic City visitors from its 1977 projections of 9.72 million to 24.8 million. Thus, even as the staff began this report, the basic factors influencing projections for Atlantic City appeared to be changing dramatically.

As of this writing, there are twelve casinos containing about 6,700 rooms which have received or are about to receive CAFRA approval or are not regulated under CAFRA. Of these casinos, two are operating and the remainder are in some state of construction (five being well underway).

Conversations with Atlantic County officials indicated a fear that no state governmental unit was studying the overall impact of casino development on Atlantic City and Atlantic County. Representatives of the county planning board were concerned about the effects casino development would have on housing, land use patterns, transportation, water supply, water and air quality, as well as sewer and solid waste facilities.

Recently, the Chairman of the Casino Control Commission announced that the Commission will develop a "mini-master plan" for future casino development. On October 25, 1979, the Atlantic City Press reported Mr. Lordi as saying that "it would be possible for the Commission to license too many casinos too soon without giving the city enough time to develop the necessary support services at the same time." The same article summarized Mr. Lordi's comments as follows:

...it would be impractical to license a number of new casinos if there was not growth in other areas such as enough other housing for employees, adequate transportation networks to bring people to and from the casino, sufficient water and sewerage facilities to support the casino hotel complexes and enough social services to meet the human needs of the increased number of residents and visitors to the city.

Obviously, there is already concern at the local, county and state level at the accelerated rate of casino growth. The report that follows emphasizes the significance of this growth, describes some of the effects of casino development, and examines the natural, private and public resources available to accommodate this growth. The highlights of this report are summarized below:

#### Economic Findings

- The two existing casino hotels contain 1,280 rooms and have hired about 8,500 persons. This ratio of 6.5 employees per room is more than twice as high as was expected, based on the Las Vegas experience of three persons per hotel room. This ratio should be investigated to determine its long-range validity.
- Casino hotel employment is increasing far more rapidly than government or the industry anticipated. Using the 6.5 employees per room ratio,

the 1977 ERA estimate of 73,000 new jobs in 1990 will be exceeded with six casinos. If there are 12 casinos in 1982, we can expect 148,000 new jobs in three years, rather than 73,000 in 11 years.

- This rapid increase, if it continues, will frustrate efforts to create a stable, diversified economy.
- ⊖ Seasonal tourism will increase due to casino gambling. Summer jobs are expected to double from 16,000 (pre-casino gambling) to 33,200 by the time 12 casinos are opened.
- The summer seasonal employment peak will be superimposed upon the new year-round resort economy. The absolute number of seasonal workers will aggravate housing problems, even though the percentage of seasonality in the Atlantic County economy will decline from 25% (pre-casino,  $16,000 \text{ seasonal jobs} \div 63,400 \text{ average annual employment}$ ) to 15% ( $33,228 \div 212,712$ ) with 12 casinos in operation.
- ⊖ The local economy will become more one-dimensional and casino-dependent (not more diversified, stable and balanced, as casino advocates had hoped) because casino-related tourist investment will outbid other sectors of the economy for labor and land. Similarly low-income and retired workers will be outbid for residential housing, causing residential dislocations. Also, it is likely that family tourism will be displaced due to the high prices and inconveniences they will encounter.

#### Population and Housing

- ⊖ In 1978, there was an estimated 190,000 residents in Atlantic County. The development of 12 casinos is expected to generate an additional 340,000 persons totaling approximately 530,000. Such rapid growth is appreciably above the state's policy projection of 311,900 for Atlantic County for the year 2000.



- ⊖ As a result of this growth, there will be a need for about 130,000 new housing units by the end of 1982. This would necessitate the construction of over 43,000 units for each of the next three years. This rate of construction is in marked contrast to the total of 2,843 building permits which were issued in Atlantic County during 1977 and 1978. As of October 31, 1979, the Pinelands Commission had approved 586 units in Atlantic County.
- From data derived from the 1977 Economics Research Associates report and the Las Vegas Planning Department, a Rutgers University study indicates that large numbers of lower income households will be supported through jobs at the casino hotels or businesses generated by casino development. If one applies the Rutgers' estimates of lower income households to the anticipated demand for housing units generated by 12 casinos employing 6.5 people/hotel room, the resulting projection indicates that almost 59,000 of these households will be eligible for HUD housing assistance. To appreciate the magnitude of this, HUD Section 8 funds for 1979 for the entire State of New Jersey were used to finance 10,964 units. In addition, the Section 235 mortgage assistance accounted for 342 units.
  - Since the inception of HUD and HFA programs, HFA's Division of Research indicates that HUD and HFA had subsidized a total of approximately 2500 rental units in Atlantic County, as of July, 1979. Despite the obvious urgency of the housing demand, HUD officials indicate that substantial increases in rental assistance money will not be available until that need is documented by the 1980 census.
- ⊖ The rising cost of land will also force housing prices beyond the reach of many households that do not qualify for public housing programs.

### Land Use

- Based on the methodology outlined in Casino Impacts: Atlantic County, New Jersey, there will be a demand to develop 95,076 - 117,088 acres of vacant land in Atlantic County and in surrounding counties. Development of this magnitude is potentially inconsistent with the preservation of the Pinelands.
- The vast majority of Atlantic County is either covered by the Coastal Area Facility Review Act (CAFRA) or the Pinelands Protection Act. While the DEP reviews permit applications in the context of a coastal management program, there is no system to review cumulative impacts and none is expected to be operating within the current fiscal year.
- During the interim period of comprehensive management planning, the Pinelands Commission reviews applications for development on the basis of its Interim Rules and Regulations. The staff has prepared an extensive work program but it is not expected that any of these plan elements will be completed prior to the legislated date of August 1980. It has been reported that Atlantic County officials are urging the completion of an interim plan for Atlantic County because of accelerated casino development. Since the mandated time to complete the plan is a relatively short period, it is questionable as to whether it is prudent to further rush the planning for this complex valuable resource.

### Public Facilities

- The primary cause for traffic congestion occurring during the peak vacation season is the inability of the Atlantic City street network to absorb the automobiles entering from the regional highways.

- According to the Atlantic City Expressway Authority and the Atlantic County Planning Division, the regional highway network would reach capacity by the time 12-15 casinos are completed in 1982.
- The funding available under the New Jersey Transportation Improvement Program and the recently passed transportation bond issue are only for minor improvements of existing roads and facilities and not for any new construction.
- Unless intercept parking is provided in the Atlantic City area serious traffic congestion will occur. The Atlantic City Expressway Authority has plans to build a major intercept facility on expressway lands. Construction could commence as soon as decisions to build are made by appropriate state and local authorities.
- Rail travel in the Atlantic City region is limited to minimal commuter service at the present time; no major upgrading or expansion is expected.
- Charter bus service has expanded considerably since the advent of casino gambling in Atlantic City. Current regularly scheduled bus service for commuters and others will be inadequate for the anticipated influx of additional workers.
- Air travel constitutes a small percentage of the total travel volume to Atlantic City and is estimated to be about five percent of future volume. Presently master plans are being developed for the two Atlantic City oriented air facilities -- Bader Field and the Naval Air Facilities Experimental Center. Final plans are expected to be released by Spring of 1980.
- The Atlantic County regional treatment plant has an available capacity of 40 million gallons per day (MGD) of which 28 MGD (which includes the

neak summer flow) is presently used. Based on information obtained from the New Jersey Division of Water Resources, the estimated use of 12 casinos will be about 2.4 MGD leaving 9.6 MGD for other users. The existing plant can be expanded an additional 15 MGD; beyond that a new treatment plant would be required.

- The Atlantic City Water Department treatment facility has a capacity of 20 MGD. It is expected that this capacity will be reached with the completion of all major projects presently approved by CAFRA for Atlantic City. Major developers are expected to contribute toward the funding of an expanded water treatment plant in Atlantic City.
- The Atlantic County draft Solid Waste Management Plan, which suggests substantial capital investment, is designed for a target population of 335,000 persons in the County by 1990. Due to the accelerated pace of casino development this population level is expected to be reached within the next few years.
- Since the plan's primary method of solid waste disposal is through landfills, it is unknown whether the expansion of landfill operations will be consistent with the Pinelands Commission's management plan.
- There will be a substantial need for additional hospital bed capacity in Atlantic County. According to the August 1979 draft Medical Facilities Plan of the New Jersey Department of Health, over two hundred beds will be needed by the time the county population reaches a level of 270,000 people (based on New Jersey Department of Labor and Industry's population projections for Atlantic County by 1985). Assuming a much faster population growth the projected bed needs will have to be met much sooner. Because of the expected dramatic increase in visitors

to Atlantic City it is important that these needs be considered when planning for medical facilities in Atlantic County.

- There is an immediate need in Atlantic City for a new senior high school, related athletic facilities and the relocation of a junior high school.

#### Air and Water Quality

- Continued high volumes of automobile traffic into Atlantic City will cause an increase in carbon monoxide (CO) in contravention of the National Ambient Air Quality Standards. Atlantic City is currently classified as a non-attainment area because it is not meeting the federal standards for 8-hour average carbon monoxide concentrations.
- The current DEP strategy is to keep automobile traffic out of the city. To date no intercept parking areas have been built and alternate transit systems are not operating with the exception of a few employee shuttle systems.
- Brigantine National Wildlife Refuge is the only area in the state classified as a Class I air quality area; it is the only area in the state with this highest of Federal air quality standards. A monitoring station has been set up within the refuge this year to monitor sulfur dioxide being emitted from boiler stacks in the city.
- Groundwater from the Cohansey and Kirkwood formations is the primary source of water in Atlantic County. Salt water intrusion has occurred in the Kirkwood due to overpumping in the coastal communities. No one has analyzed the cumulative impacts of continuous withdrawals from the Kirkwood or the collective effects of development over the recharge area of the Cohansey.

- Due to the uncertainty of casino induced growth and the pending Pinelands Commission management plans, it is difficult to assess the adequacy of water quality management plans for the county.
- In the Lower Great Egg Harbor and Mullica/Upper Great Egg Harbor regions facilities are outdated and have reached capacity. Development in these areas is only being allowed on septic systems or package plants. There is a possibility that the Pinelands Commission resource assessment and plan could call for low density development largely on septic systems. If this occurs, very little of the casino induced housing demand could be accommodated.

SECTION I:  
ECONOMIC TRENDS

## ECONOMIC TRENDS

The rapid growth of the casino hotel industry in Atlantic City has exceeded the state's expectations in terms of stopping the deterioration of the City's economy and providing revenues to the state for support of the elderly. This growth is accelerating. Ominous clouds in this sunny outlook are that the casino industry may hamper other segments of the region's economy by 1) skimming off the cream of the local workforce, 2) boosting land prices beyond the ability of other essential uses thereby preventing the region from developing a more diverse stable economy, and 3) attracting unemployed workers into the area. If the rapid pace of casino development continues at the pace of the first eighteen months of operation, the area's economy can expect an unprecedented boom during the 1980's, but also experience unprecedented economic dislocations, such as rapid employee turn-over, inability to acquire suitable sites for non-resort uses, bottlenecks in the free flow of vital traffic, rapid escalation of pay scales, and hiring of unskilled workers for skilled jobs, due to the inability to compete with the casino for skilled workers.

### Total Employment

The heating up of the Atlantic County economy is indicated by the net increase of 8,700 wage and salary jobs from July 1978 to July 1979, a growth of 10% in one year. In contrast, statewide employment increased only 1% during the same period. Casino employees accounted for 4,900 of these new jobs, or 56% of the increase.\* Other increases consisted of 3,400 construction jobs (71% casino-related), 300 transportation\*\* jobs, 400 finance\*\*\* jobs, and

---

\*The second casino hotel, Caesar's Boardwalk Regency, opened during this period.

\*\* Such as taxi drivers, bus drivers, etc.

\*\*\* Such as bank tellers, loan officers, etc.



200 government jobs. An additional 2,600 permanent jobs are expected to be created in November when Bally Manufacturing Corporation's Park Place casino hotel opens. Each additional casino hotel is expected to provide a similar number of new job opportunities.

At the same time that opportunities are expanding for service employment and casino construction employment, other sectors of the Atlantic County economy are stagnant or declining. For example, 600 jobs in retail trade disappeared as five supermarkets and a department store closed. Manufacturing employment declined by 500 during this same period reflecting the contraction of the apparel industry. As a result, manufacturing now accounts for only 9.2% of the area's jobs (see chart below), compared to over 26% statewide.

	Jul 1979	Jun 1979	Jul 1978
<u>LABOR FORCE DATA (000)</u>			
Civilian Labor Force	104.9	100.3	95.0
Employment	94.4	91.6	87.0
Unemployment	10.5	8.7	8.0
Unemployment Rate (%)	10.0	8.7	8.4
<u>NONFARM WAGE AND SALARY EMPLOYMENT (000)</u>			
Total	89.9	87.0	81.2
Manufacturing	8.3	8.3	8.8
Durable Goods	3.4	3.3	3.1
Nondurable Goods	4.9	5.0	5.7
Apparel	1.5	1.5	2.0
Other	3.4	3.5	3.7
Nonmanufacturing	81.6	78.7	72.4
Construction	7.2	7.2	3.8
Transport./Pub. Util.	3.9	3.9	3.6
Trade	22.8	21.3	23.4
Fin./Insur./Real Est.	4.9	4.8	4.5
Services	26.4	25.6	20.5
Government	16.4	15.9	16.6

Source: New Jersey Department of Labor & Industry, 1979.

### Casino Employment

The two casino hotels now in operation, Resorts International (762 rooms) and Regency Corporation (520 rooms) have approximately 5000 and 3500 employees, respectively, or about 6.5 employees per room. This ratio substantially exceeds the ratio of 3:1 expected on the basis of the Las Vegas experience.\* The high ratio indicates that casino hotel employment may boost the region's economy twice as much as originally expected. Most of these jobs are expected to be service worker, administrative, financial, government or transportation jobs.

Assuming 6.5 employees per casino hotel room (including room service, food and beverage, casino operations and administrative positions), the increase in employment over 1975 (base year) will be:

<u># of Casinos</u>	<u>Rooms**</u>	<u>Employees</u>
0	0	0
2	1,262	8,203***
4	2,588	16,822
8	4,828	31,382
12	7,068	45,942
16	9,308	60,502
(20)	(11,548)	(75,062)
(24)	(13,788)	(89,622)

---

\*Rutgers Design Studio group based on a study of the Las Vegas conomy.

\*\* The first four casino hotel development are identified as Resorts International (762 rooms), Regency Corporation (520 rooms), Playboy, Inc. (576 rooms), and Bally Manufacturing (750 rooms). The average size of additional casino hotels is estimated at 560 rooms, based on CAFRA applications.

\*\*\* Actual figure of approximately 8500 employees includes an unknown number of non-casino hotel jobs, such as tram operators, etc. Also, an unknown number of these jobs are part-time rather than full-time jobs.

The paychecks of this large number of new casino hotel employees are expected to support an even larger number of new jobs in local service (that is, non-manufacturing) industries. This multiplier effect has been estimated at 2.25 secondary employees for each casino hotel job.\* Secondary employment is thus projected as follows:

---

<u># of Casinos</u>	<u># of secondary jobs*</u>
0	0
2	18,457
4	37,850
8	70,610
12	103,370
16	136,130
(20)	(168,890)
(24)	(201,650)

---

Average employment in the Atlantic County Market Area in 1975 (before construction of casinos) was estimated at 63,400 employees. Unless hiring ratios change, the figure of permanent employees can be projected to rise to the following levels:

---

\*The Division uses this 2.25 multiplier for the purpose of this report, but recommends that a new multiplier be calculated during 1980 based on an actual count of jobs in Atlantic County. This 2.25 figure is plausible but multipliers vary from 1.4 to 3.0 depending on local factors.

<u># of casinos</u>	<u># of employees</u> **
0	63,400
2	90,060
4	118,072
8	165,392
12	212,712
16	260,032
(20)	(307,352)
(24)	(354,672)

This table is derived by adding casino hotel employees to secondary jobs, plus base employment of 63,400.

The magnitude of these figures indicates 1) the difficulty, if not the impossibility of relocating 212,712 workers and their families into Atlantic County in only three years if 12 casino hotels are opened by 1982, and 2) the need to further monitor, analyze and refine the assumptions and variables in this projection model. Specifically, statistics are needed to 1) subdivide "employees" into job categories to help determine why so many more workers were hired than had been anticipated using Las Vegas as a guide, 2) ascertain the extent by which casino hotel workers are seeking to relocate into the County and into the City, and in what types of housing. If workers are commuting from outside the labor market area rather than relocating, the number of secondary service jobs will be less than projected.

---

\*\*Note: These figures dwarf the 1977 ERA projections (which forecast 73,000 new jobs by 1990) due to the rapid pace of casino hotel activity and the unusually high ratio of employees to casino hotel rooms. The 1977 ERA projection of visitors -- 9.7 million by 1990 -- will be achieved in 1980 or 1981.

The hiring of extraordinary numbers of employees may point to inefficient operations. Even if this is not yet the case, it must be anticipated that the difficulty of hiring experienced and competent workers will be exacerbated as more casinos open.

#### Seasonal Employment

The influx of jobseekers during the summer is expected to increase during the coming years. During 1978, at least 60,000 (and perhaps nearly 100,000\*) seasonal jobs were filled along the Jersey Shore. At least 16,000 of these seasonal jobs are located in Atlantic County. According to the Rutgers Design Studio Study, seasonal employment will increase at a rate of one seasonal worker for each 6.67 permanent casino-related jobs and one for each ten secondary service jobs.\*\* If this relationship holds true, seasonal employment can be projected to increase at the following rate.

<u># casino hotels</u>	<u># seasonal jobs</u>
0	16,000
2	19,076
4	22,308
8	27,768
12	33,228
16	38,688
(20)	(44,148)
(24)	(49,608)

The year-round nature of the casino hotel industry and the projected rebirth of the Atlantic City convention industry are seen by the Department of

---

\*The uncertainty is due to the impossibility of separating seasonal expansion from the underlying growth of the region.

\*\*The Division uses these ratios in lieu of actual statistics concerning the Jersey Shore summer economy. The numbers generated using this ratio do not appear to be excessive.

Labor and Industry as "positive developments" toward reducing "the drain on New Jersey's unemployment insurance trust fund" caused by "seasonality of employment at the Shore." On the contrary, this analysis here indicates an upsurge in seasonal jobs proportional to the boom in permanent employment, due to the increased attractiveness of Atlantic City as a mecca for seasonal visitors.

The summer seasonal peak at the Atlantic City casino resort is indicated by the record of average daily wins at Resorts International since its opening. July 1979 is the best month to date, August 1979 second best, and August 1978 third best. The average daily win during the 1979 summer seasonal peak was \$785,518 (July \$802,477, August \$768,558), which is 23.1% higher than the average daily win (\$638,000) from Resorts International's opening day to the end of September 1979. This 23% seasonality approximates our estimate of the local economy's overall seasonality. These statistics indicate that a seasonal peak will be superimposed on top of the booming year-round casino resort economy. The problem is that the absolute number of seasonal workers is projected to increase, even though the ratio of seasonal jobs to average year-round employment is projected to drop from 25% to 15%. What we should expect, therefore, is not a more stable situation, but a less stable situation as increasing numbers of seasonal workers add pressure to an area whose resources are already stretched to capacity by the year-round casino hotel boom.

#### Unemployment

The goal of revitalizing Atlantic City advanced by supporters of casino gambling during the 1976 referendum included lowering the rate of unemployment. Unfortunately, this has not occurred. On the contrary, unemployment has increased since the opening of the first casino and welfare rolls remain crowded.

Despite the increase in number of jobs, the unemployment rate has increased from 8.4% in July 1978 to 10.0% in July 1979. This fact has given rise to the creation of a Governor's Task Force to study the problem.

Many explanations have been advanced for the increased rate of unemployment which is 13% when seasonally adjusted versus a state average of about 7%. According to Heather L. Ruth, labor consultant to Resorts International cited in the Atlantic City Press (4/10/79), a large segment of the Atlantic City (area) workforce has become accustomed to part-time employment, supplemented by unemployment insurance in off-season times. Other theories blaming the workers invoke the specter of an influx of thousands of jobseekers joining the local labor force, the retention of large numbers of summer workers who normally leave after labor day, and the registration of phony local addresses. Still other theories suggest that many workers have already been hired, and are in the area awaiting the opening of the next casino hotel or the receipt of their licenses, or that the new unemployed include spouses of new casino hotel resident-employees who worked at their previous residence, but cannot yet find jobs in Atlantic County. Resorts International has been accused of recruiting outside the Atlantic County Labor Market Area, thereby bringing in new workers while leaving locals unemployed.

The Governor's new Task Force on Unemployment in Atlantic City, headed by Chairman E. Belvin Williams of Princeton, will seek to evaluate these and other theories before its reporting date of February 1, 1980. But the absence of reliable data will hamstring the Task Force in its effort to make recommendations to Governor Byrne in only three months. Our own finding is that the Atlantic City economy will remain seasonal despite year-round economic boom, in part because of the attractiveness of casinos to summer day visitors, and that winter unemployment levels will remain much higher than the state average -- because these seasonal workers will be laid off after Labor Day.

## Revenues

It is difficult to predict revenues from casino gambling. The Casino Control Commission has avoided making or releasing such projections, because of the great uncertainty and because no full-year cycle of casino operation has been analyzed, due to the overlap of the casinos' calendar-year filing system and the State's fiscal year system. During the first 16 months of operation, however, the Commission reported that \$33.4 million in revenues had been deposited in the State's fund to aid disabled persons and senior citizens. Daily "gross" winnings by the casinos averaged about \$1,120,000 per day during the period when two casinos were operating. Using the current figure of 12% for daily revenue to the State, this amounts to approximately \$134,000 per day increase in the fund.

Future State revenues are dependent on the number of casinos and the amount of casino floor space as well as on the number of annual visitors and the proportion of those visitors who bet. The 1979 ERA report projects 24.8 million visitors in 1990, 86% gamblers, a gross annual win of \$3.43 billion, and therefore State revenues of \$272 million (8%), or \$700,000 per day, which is more than five times the current revenue rate.

## Dislocation of Retirees, Low-income Families, and Businesses

As the casino boom benefits jobseekers, it will probably adversely affect retirees and poor people who reside in Atlantic County. This is ironic in that the elderly were targeted for the benefits of casino gambling revenues.

Atlantic County has an unusually large elderly and unemployed population. This fact is reflected in the unusually high percentage of the County's income attributable to transfer payments, 21.2% versus 12.9% statewide. The retirees were attracted by the area's lower housing costs and leisure-oriented lifestyle.



The influx of new workers is rapidly boosting rents in the County. A recent survey of average rental costs by the N.J. Department of Community Affairs indicates that rents have tripled since the onset of casino gambling. The squeeze on housing is reflected in reports that Richard Stockton State College students have had increasing difficulty locating short-term rental units since the inception of casino gambling. Other sources of dislocation for the elderly are the demolition of existing rental units on prime development sites, the conversion of rental units to owner-occupied units, and the upward revision of tax burdens necessitated by redevelopment and rezoning of Atlantic City. On this latter point, revaluation by the City Tax Assessor has already brought howls of protest from residents of the beach-block casino zone. Their property taxes have increased up to 500% owing to the increase in the market value of their land. These property taxes will force many of these residents to sell their homes. While their situation is especially dramatic, it will likely be repeated by other property-rich but income-poor elderly and poor residents throughout the County. Skyrocketing land values and tax increases can also be expected to dislocate area businesses and prevent new retail businesses from locating.

SECTION II:  
POPULATION HOUSING AND LAND USE

## POPULATION, HOUSING AND LAND USE

In researching this section, the staff discovered two major studies that attempted to measure the impact of casino development on Atlantic County. Neither study quantified the impact of casino development on any areas outside Atlantic County. The two studies referenced above are: An Analysis of the Impact of Casino Gambling On the Housing Needs of the Atlantic City Market Area, by Economics Research Associates, 1977; and Casino Impacts: Atlantic County, N.J. by Rutgers University, 1978.

The two studies make similar assumptions and utilize similar methodologies. In fact, the Rutgers study has used the ERA study as one of its sources. Thus, it is not surprising that the employment, population and household projections offered by each research group are very similar. The table below illustrates each group's employment, population and household projections for 12 casinos.

### Impact of 12 Casinos

<u>Projections</u>	<u>ERA Study</u>	<u>Rutgers Study</u>
Total Employment	158,600	150,343
Total Population	396,500	388,694
Total Households	135,300	136,629

It was not possible for the staff to develop a third methodology within

the time constraints of this study. Thus, the approach adopted assumes that the methodologies referenced above are basically sound. However, it does appear that two basic assumptions of each study are now questionable. Both studies assume that there will not be 12 casinos in Atlantic City until 1990 and that each casino will employ approximately three people/hotel room. It now appears likely that there will be 12 casinos in Atlantic City by 1982 and that they may employ substantially more people than originally thought.

Thus, the staff decided to utilize an existing projection methodology to test the significance of these possible errors in assumption. The Rutgers study was used because its methodology was set forth in sufficient detail to duplicate.

For the purposes of this report, we will assume that there will be twelve casinos in Atlantic County by 1982 and that each casino hotel will employ 6.5 people per room. The ratio of employees/room has been documented in a previous section.

## POPULATION

The Atlantic County population has grown from 160,880 in 1960 to 175,043 in 1970 to an estimated 190,000 in 1978.\* The population, in 1979, was marked by a high percentage of elderly and minorities. Indeed, in 1970, 28,008 people (16.0 percent) were 65 or over and 34,912 (19.9 percent) were black or hispanic. The elderly and minority statistics were most striking in Atlantic City where 24.8 percent of the population were over 65 and 45.4 percent were non-white.\*

The 1970 median family income for Atlantic County was relatively low at \$8,775 when compared to the State figure of \$11,407. This rather low figure seems to reflect the large numbers of elderly and minorities residing within the County. It also may be a result of the seasonal nature of resort employment. For example, Atlantic County's 1970 unemployment rate varied from a low of 3.8 percent in June to a high of 9.2 percent in December. In comparison, the state's 1970 unemployment rate was much less volatile; ranging from a low of 3.8 percent to a high of 6.2 percent. In 1978, Atlantic County's unemployment rate climbed 7.1 percentage points during the colder months while the state's rate varied by only 2.2 percentage points during the entire year.\*

There have been a number of population projections involving Atlantic County. The Department of Labor and Industry's Office of Business Economics has issued a preferred set of projections which predicts that Atlantic County's population will reach 274,800 by 1985, 306,200 by 1990 and 326,500 by the end of the century. The State has also issued a set of policy projections which establish population goals for each county within the State. The policy projection for Atlantic County is 311,900 by the year 2000. This projection is consistent with "the State

\*Office of Demographic and Economic Analysis, October 1979, U.S. Census, 1970.

\*Population Report for Atlantic County, November 1978, Div. of Planning and Research, Department of Labor and Industry.

policy of discouraging growth in exurban areas, and conservation of the Pine Barrens.\*

Yet, if there is any merit to the projections developed by Rutgers University and Economic Research Associates, it would appear that the State projections seriously understate the demographic realities of Atlantic County. The two studies referenced above use very similar methodologies deriving population projections as a function of projected increases in employment. Each uses an employment to population ratio of approximately .40 to calculate population increases. The population projections displayed below are the result of applying this ratio to the revised employment projections.

Population Projections - Atlantic County

<u># of Casinos</u>	<u># of Employees</u>	<u>Population Projection</u>
4	118,072	295,180
8	165,392	413,480
12	212,712	531,780

These numbers may seem extravagant yet they do not include Atlantic County's historic growth trend without casinos and the probability that a certain number of construction workers are likely to move to Atlantic County.

In a recent meeting with the Atlantic County Planning Board, the staff indicated that they estimated that the county may already be housing 300,000 people. Their staff felt that such growth was possible because vacant (6,697) and seasonal (6,435) units were now being utilized. Motels are also being converted into permanent housing.

\*Executive Office Inter-Communication regarding population projections, July 1979.

## HOUSING

Before discussing the impact of casino development on the housing market, it is important to mention certain facts regarding the current housing stock. In 1970, there were 67,413 year-round units and 6,435 seasonal housing units, representing 91.3 and 8.7 percent of the housing stock respectively. Of the 73,848 total housing units, 44,272 (65.7 percent) were single-family homes and 23,141 (34.3 percent) were multi-family units. The largest number of multi-family units (18,823 or 81.3 percent) were located within Atlantic County's urban region which includes Atlantic City, Brigantine, Longport, Margate City and Ventnor City. This is not surprising when one considers Atlantic City's large percentage of elderly and minorities.

In 1970, the U.S. Census calculated that 1,613 units (2.3 percent) lacked plumbing; 3,403 units (5.0 percent) were overcrowded; and 6,697 of the units (9.9 percent) were vacant. In 1975, the Department of Community Affairs estimated that 10,660 units (15.8 percent) were deteriorated or dilapidated and calculated a need for 5,682 low and moderate-income housing units.

The average household consisted of 2.84 people in 1970. By 1977, the Atlantic County Planning Board estimates that the average household size was 2.81. In 1970, 37,723 (62.1 percent) were owner-occupied and 22,993 (37.9 percent) were rental properties. By 1977, the County Planning Board estimates that of the 70,426 year-round units, 54.9 percent were owner-occupied and 45.1 percent were renter occupied. As of 1977, 3,471, or 79.8 percent of Atlantic County's 4,352 publicly assisted housing units were within the County's urban region.

---

\*Source: "A Revised Statewide Housing Allocation Report for New Jersey," Department of Community Affairs, May 1978.

At this point, let us translate the population estimates displayed earlier into housing units. The methodology used is the same as described in the Rutgers study. The methodology assumes an average household size of 2.8 people, a 5.0 percent\* vacancy rate and the replacement of only the 3,517 units listed in the census as dilapidated (an admittedly conservative assumption). The projections that result from these assumptions are displayed below:

<u>Casinos</u>	<u>Projected Population</u>	<u>Housing Demand</u>		<u>Replacement of Dilapidated Units</u>	<u>Total</u>
		<u>Households</u>	<u>Vacancies</u>		
4	295,180	105,421	5,271	1,172	111,864
8	413,480	147,671	7,384	1,172	156,227
12	531,780	189,921	9,496	1,173	200,590

As mentioned earlier, the Atlantic County Planning Board estimated that, as of 1977, there were 70,426 year-round units. Thus, the construction of 12 casinos would necessitate a total of 130,164 new housing units. Projected to 1990, this would require the construction of 11,833 units per year over the next 11 years. Given the real possibility of 12 casinos by 1982, the possibilities for intensive development become even more overwhelming.

In order to put these numbers into perspective we learned from Labor and Industry's Office of Business Economics that in 1977 and 1978 a total of 2,843 building permits were issued in Atlantic County. Of these permits, 2,292 were for single-family homes. Thus far in 1979, the Pinelands Commission has approved 586 units in Atlantic County.\*\*

Based on census data, and research performed by Economics Research Associates in Las Vegas, the Rutgers study estimates a household income distribution in 1975 dollars. This income distribution is presented below. The Bureau of the Census

\*The 5.0 percent figure is somewhat arbitrary but it is a widely used standard used to define a sufficient supply of vacant housing in a given area to maintain a reasonable freedom of housing choice.

\*\*Conversation with Pinelands Commission official.



performed a survey in the spring of 1976. The data resulting from their sample

illustrate an income distribution for the State far different from the one anticipated in Atlantic County. The comparison of income distributions indicates that many lower income people will migrate to Atlantic County due to development generated by the casino industry. If large numbers of low income households move to employment centers in Atlantic County, there will be a tremendous demand for publicly assisted housing.

Percentage Household Income Distribution (1975 dollars) - Atlantic County

<u># of Casinos</u>	<u>\$ 0-4999</u>	<u>\$5-9999</u>	<u>\$10-14,999</u>	<u>\$15-24,999</u>	<u>25+</u>
0	18.3	19.9	18.2	24.5	19.1
4	15.1	24.6	21.7	21.5	17.1
8	13.5	23.4	21.9	23.0	18.2
12	11.0	21.6	22.0	25.5	19.9

Percentage Family Income Distribution (1975 dollars) - New Jersey

<u>\$0-4999</u>	<u>\$5-9999</u>	<u>\$10-14,999</u>	<u>\$15-24,999</u>	<u>25+</u>
8.0	16.2	20.0	33.9	21.9

HUD does not distinguish between low and moderate income households, but it has created a sliding definition of low income based on household size. The low income level for a household of two in 1975 was \$7,700 while a household of three could earn up to \$8,650 and qualify as a low income household. Since an average household size of 2.8 has been established, the staff will assume that a household earning less than \$8,650 1975 dollars would qualify for low and moderate income housing.

If one assumes an even distribution within these income distributions, it is possible to determine crude projections of low income households. Under this assumption, the projected percentages of household income distribution are applied to projected households to determine a total of 58,929 households eligible for HUD programs.

---

There is public housing being built. The great majority of it is in Atlantic City. However, conversations with an Atlantic City Housing Authority representative indicate that due to the lack of vacant land, the Housing Authority has been forced to destroy existing housing in order to construct new housing at higher densities. The Housing Authority representative also indicated that families have been affected much more by relocation than the elderly. The list and map below represents the proposed and existing public housing available through the Atlantic City Housing Authority.

# HOUSING AUTHORITY AND URBAN REDEVELOPMENT AGENCY

OF THE

## CITY OF ATLANTIC CITY, NEW JERSEY

14 SOUTH CALIFORNIA AVENUE  
ATLANTIC CITY, N. J. 08404  
P. O. BOX 1258

### COMMISSIONERS

Elwood G. Davis, Chairman  
Robert Cericola  
Edmund J. Colanzi  
William Lewis  
Oscar E. McClinton, Jr.  
Thomas O. Mills  
Laurice C. Walker



Atlantic City 344-1111  
Area Code (609)

W. OSCAR HARRIS, Jr.  
Executive Director

BERTRAM M. SAXE  
Counsel

September 1979

### HOUSING INVENTORY

#### EXISTING SUBSIDIZED PUBLIC HOUSING PROJECTS #OF UNITS

1. Altman Terrace (Elderly)	190
2. Buzby Homes (Family)	122
3. Inlet Tower (Elderly)	156
4. Pitney Village (Family)	333
5. Shore Park (Family)	360
6. Shore Terrace (Family)	44
7. Stanley S. Holmes Village & Extension (Family)	443

Total 1,648

#### EXISTING SUBSIDIZED PRIVATE HOUSING PROJECTS

8. Atlantic City Apartments (Family)	106
9. Atlantic Villas (Family)	127
10. Bacharach Village (Family)	113
11. Barlinvas Apartments (Family)	68
12. Berkley Gardens (Family)	72
13. Best of Life Park (Elderly)	208
14. Brights Villa North (Family)	84
15. Brights Villa South (Family)	56
16. Carver Hall (Family)	292
17. Community Haven (Elderly)	266
18. Elliott House (Elderly)	104
19. Madison House (Elderly)	215
20. Magellan Manor (Family)	77
21. Si Hy (Family)	68
22. Townhouse Terrace East One (Family)	82
23. Townhouse Terrace East Two (Family)	68
24. Townhouse Terrace West (Family)	100

Total 1,891

#### EXISTING NON-SUBSIDIZED LARGE APARTMENT BUILDINGS (over 200 units)

25. Ocean Manor	348
26. Mayfair Apartments	220

HOUSING INVENTORY (Continued)

EXISTING NON-SUBSIDIZED LARGE APARTMENT BUILDINGS #OF UNITS

27. Warwick Apartments	275
28. Ritz Apartments	314
29. President Towers	252
Total	1,409

PROPOSED SUBSIDIZED PUBLIC HOUSING PROJECTS

30. Elderly High-Rise Apartment Building	300
--	-----

PROPOSED SUBSIDIZED PRIVATE HOUSING PROJECTS

31. Family Townhouse Complex (Gurwicz & Son, Co.)	75
32. Elderly High-Rise Apartment Building (Sencit Corp.)	175
33. Elderly High-Rise Apartment Building (Sencit Corp.)	150
34. Liberty Hotel Rehabilitation Project (Sencit Corp.)	67
35. Atlantic City Vo-Tech School Rehabilitation (Sencit Corp.)	66
36. Diston Apartments (Sencit Corp.)	20
37. Low and Moderate Income Family Units (Brigantine Homes, Inc.)	160
38. 15-Block Rehabilitation Project (N.S.A.)	471
Total	1,184

PROPOSED NON-SUBSIDIZED HOUSING PROJECTS

39. Family Townhouses (Atlantic City Housing Authority)	34
40. Luxury Apartment Complex (Sencit Corp.)	445
41. Townhouse Complex (Bally)	40
42. Market Towers Condominiums	826
43. Family Cooperative Townhouses	91
	1,436

* Section 8 Existing Housing Payments Program - Units not yet targeted	80
--	----

*Joseph J. Ferraro*  
CITY ENGINEER

*Joseph J. Ferraro*  
CITY ENGINEER



125578  
R44 9-19-79



According to statistics prepared by the New Jersey Housing Authority, as of July 1979, HUD and HFA had financed a total of 2,446 rental assistance units in Atlantic County. If the development of 12 casinos generates as many as 58,929 households eligible for assistance, it is doubtful that there would be nearly enough federal money available. For example, in fiscal year 1979, HUD allocated the entire State enough money to subsidize 10,964 units. In fact, from FY 1974 through FY 1979, HUD's major rental subsidy program, Section 8, has financed only 52,376 units throughout the State.

The amount of rental assistance money available to Atlantic County in the future is not clear. HUD officials indicated that the County's allocations will not increase substantially until the data warrants such an increase. These officials indicated that the data supporting such an increase will not be available until the 1980 census is released. Thus, the HUD formulas that dictate funding are not flexible enough to accommodate a growth problem which has not been documented by a decennial census.

Speculation also presents a possible impediment to public housing. The price of land is rising so fast that it may well become increasingly more difficult to develop housing units that qualify under HUD's fair market rents. This problem of rising land prices could well jeopardize other housing assistance programs.

The rising value of land in Atlantic County would ordinarily encourage banks to invest in the County. Yet, high interest rates and the state usury ceiling that places a cap on mortgage rates discourages investment by private banks.

There is money available to subsidize single family and townhouse development; but this money is also extremely limited. Officials representing the Mortgage Finance Agency, Farmers Home Administration, and HUD's Section 235 program could not indicate how many units would be allocated to Atlantic County. MFA did indicate that it had financed a total of 106 mortgages in Atlantic County. Farmers Home Officials indicated they had subsidized 79

mortgages during 1979. HUD officials could not estimate how many Atlantic County units had been financed under their Section 235 program. They did say that during 1979, 342 units had been allocated to all of South Jersey.



## LAND USE

The scenario described above has obvious land use implications to Atlantic County. How much of this development can Atlantic County accommodate? Given the time constraints on this study, the staff was unable to calculate an independent estimate. However, the Atlantic County Planning Board staff has estimated that the county could accommodate an additional quarter million people based on the current zoning on remaining developable land. This may be a conservative estimate but the County Planning Board staff is quick to emphasize that much of Atlantic County lies within the Pinelands and that the Pineland Commission's regulations are more restrictive than local zoning.

When examining an existing land use map of Atlantic County, one first notices that much of the county's development lies within the few areas of Atlantic County that presently have sewers. The rest of the County is rather sparsely developed. The following maps and table are illustrative of Atlantic County development.

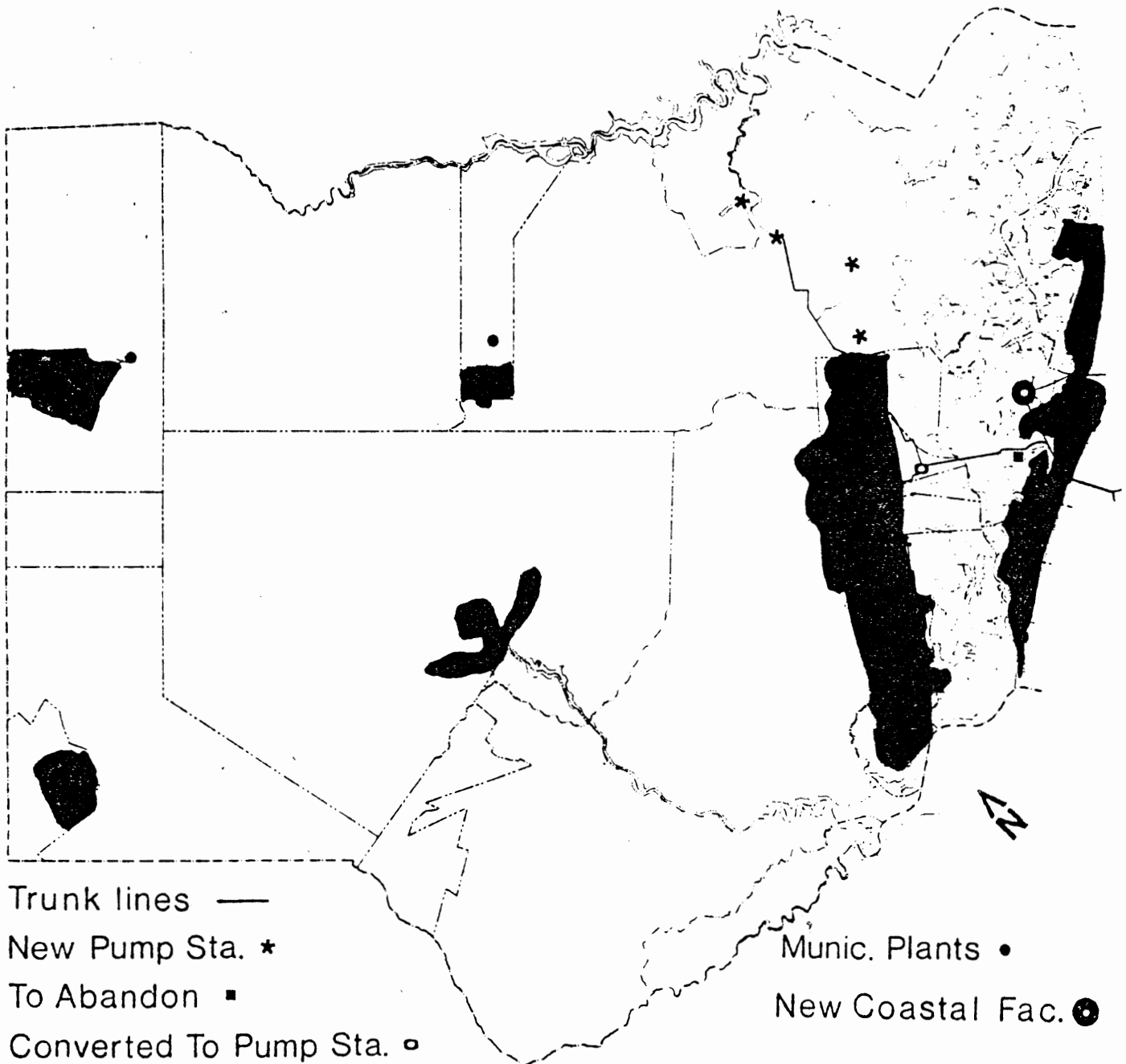
## Existing Development



Source: Casino Impacts: Atlantic County, New Jersey,  
Rutgers University, 1978.

Figure 2-15 Shaded Areas Currently Have Sewer Service

# Sewerage



Source: Casino Impacts: Atlantic County, New Jersey,  
Rutgers University, 1978.

# ATLANTIC COUNTY MUNICIPAL PROFILE

<u>Municipality</u>	<u>Distance to A.C. (minutes)</u>	<u>Sewerage</u>	<u>Density 1970 (pop/acre)</u>
Absecon City	8-10	yes	1.86
Atlantic City	-	yes	5.72
Brigantine City	5	yes	1.96
Buena Borough	50	partial	.63
Buena Vista Township	45	no	.18
Corbin City	35	no	.04
Egg Harbor City	25	partial	.63
Egg Harbor Township	10-25	no	.30
Estell Manor	35-40	no	.02
Folsom Borough	45	no	.36
Galloway Township	10-20	partial	.17
Hamilton Township	20-35	partial	.12
Hammonton Township	45	partial	.48
Linwood City	12	yes	2.66
Longport Borough	18	yes	5.24
Margate City	15	yes	10.89
Mullica Township	30-40	no	.11
Northfield City	8	yes	3.65
Pleasantville City	5	yes	3.91
Port Republic City	20	no	.41
Somers Point City	15-20	yes	3.85
Ventnor City	10	yes	8.86
Weymouth Township	35-40	no	.15

Source: Casino Impacts: Atlantic County, New Jersey,  
Rutgers University, 1978.

The 1977 ERA study asserts that most of the communities within the Coastal Planning Region have either adequate collection systems or systems capable of any needed expansion. However, the regional sewerage system's trunk lines do not extend to many of Atlantic County's communities (see map on page 26). Since the impact of the casinos is expected to be so great and come so rapidly, it is unlikely that sewer service could be extended to these communities fast enough to accommodate the anticipated growth.

Thus, the natural constraints of the land become even more important when considering the location and intensity of development. The Rutgers study describes a methodology of locating and quantifying the most developable areas of land. Nine land use factors were mapped including: surface hydrology; tidal marshes; high water; flood zones; existing development; aquifer recharge zones; erodability; vegetation; and state and public lands. These factors were weighted and used in preparing two maps.

The first map describes the land's suitability for development based on surface hydrology, tidal marsh, high water, flood hazard zones and existing development. The second map, using all nine constraints, shows very little developable land. The staff did not feel that this map was realistic, and therefore did not include its findings in the report.

Based on the five constraint map, the Rutgers study quantifies the amount of developable land available in each municipality. These data are presented below. When reviewing this information, one should be aware that this method of quantifying developable land has two limitations. First it ignores man's ability to develop package treatment plants, lagoon systems and other strategies dictated by land constraints. The other factor which the Rutgers study could not possibly measure is the impact of the Pinelands Commission. Any restrictions enforced in the Pinelands will affect the amount of developable land in Atlantic County.

DEVELOPMENT SUITABILITY MATRIX - 5 constraints - Acres/class/Twp.

<u>Twp.</u>	<u>Slight</u>	<u>Moderate</u>	<u>Severe</u>
Absecon	0	800	200
Atlantic City	400	2600	2100
Brigantine	1300	1200	1300
Buena Borough	0	3200	300
Buena Vista Twp.	500	15200	2000
Corbin City	100	400	100
Egg Harbor City	100	300	1100
Egg Harbor Twp.	2250	18250	5250
Estell Manor	3900	8400	700
Folsom Borough	0	1250	600
Galloway Twp.	5800	14100	6650
Hamilton Twp.	2700	22600	7200
Hammonton	400	4350	3800
Linwood	50	550	1250
Longport Borough	0	100	150
Margate	0	100	900
Northfield	0	100	200
Pleasantville	0	600	400
Port Republic	100	300	0
Somers Point	500	700	750
Ventnor	0	100	700
Weymouth	1950	2900	100
Mullica Twp.	200	7600	4800
TOTALS	20150	105700	40500

Source: Casino Impacts: Atlantic County, New Jersey,  
Rutgers University, 1978.

Another interesting aspect of the Rutgers study is the attempt to translate the impact of casino development into acreage required for development and open space. Obviously, all this development will not occur in Atlantic County, but it is fair to say that development forced out of Atlantic County will have a significant impact on the land use patterns and roadways of surrounding counties.

The Rutgers' land use projections are functions of their employment and population projections. Thus, as employment and population increase, one can expect an increase in development. The Rutgers employment and population projections for 12 casinos, (based on 3 employees per hotel room) are 150,343 and 388,694 respectively. The Rutgers Study claims that the development of 12 casinos will require 60,402 acres of land to be devoted to residential, commercial and industrial uses, open space and roads.

In developing this projection, Rutgers utilized the following standards or assumptions:

- 1) The average gross density of single family homes used is two to an acre; and the average gross densities of townhouses and garden apartments used are 3.3 and five to an acre respectively.\*
- 2) The commercial and industrial acreage was projected using the ratio of .23 acres per employee. \*\*
- 3) Six acres of public open space were allotted per 1000 people. \*\*\*
- 4) Land designated for highways and roads equalled 25 percent of the total land consumed by homes, apartments, commercial and industrial uses and open space. \*\*\*\*

---

\* These densities were derived from a survey conducted by the Real Estate Research Corporation.

\*\* This standard was derived from Potential on Shore Effects of Deepwater Oil Terminal and Related Industrial Development, A.D. Little, 1973.

\*\*\* This standard was derived from A Guide for Residential Design Review, 1974.

\*\*\*\* The 25 percent figure was not supported by documentation.

We have seen that if the hotels employ 6.5 people per room, as has been the case thus far, one might expect 12 casinos to result in 212,712 total employees and 531,780 people. These figures, when applied to the formulas presented by Rutgers University, indicate a demand for 117,088 acres. However, it appears that Rutgers' gross densities for townhouses (3.3) and garden apartments (5.0) may be low. The Department of Community Affairs' publication, A Guide for Residential Design Review, suggests gross densities of 6-8 units for townhouses and 10-18 units for garden apartments. If we set the gross densities for townhouses and garden apartments at 7 and 14 respectively, we calculate a need for 95,076 acres. The demand for 95,076-117,088 acres of land would consume most, if not all, of Atlantic County's remaining developable land (see page 29). Even if the casino induced development spread into surrounding market areas (such as Cape May, Cumberland, Gloucester, Camden, Burlington, and Ocean Counties), the demand for 95,076-117,088 acres of land raises questions regarding compatibility with the preservation of the Pinelands.



SECTION III:  
PUBLIC FACILITIES AND IMPACT

## PUBLIC FACILITIES AND IMPACT

### TRANSPORTATION

Transportation is considered to be one of the most critical factors associated with the rate of casino development and regional growth in Atlantic County. Highway congestion and lack of parking are problems facing the City and its environs today. According to the 1977 ERA study, over 92 percent of trips to Atlantic City are by car. It is feared that the large influx of casino generated traffic will increase an already serious problem to staggering proportions. The unrestricted flow of automobiles into Atlantic City will greatly increase congestion and air pollution. Transportation to and from Atlantic City is presently provided by the following means:

#### Highway Access

Three regional highways - the U.S. Route 30, the U.S. Route 40, and the Atlantic City Expressway - provide the major means of access from the mainland portion of the County to Atlantic City. All are 4-lane highways linking the City to the Philadelphia Metropolitan Area and also the New York Metropolitan Area via the Garden State Parkway. The most critical points are at the entrance to the City on the causeways. The current traffic characteristics of these highways at the entry point are as follows:

	<u>U.S. Route 30</u>	<u>Atlantic City Expressway</u>	<u>U.S. Route 40</u>
Design capacity one-way inbound (vehicles on 24-hour basis)	20,060	16,510 (39,600 on mainline)	18,670
1979 Average summer weekly daily traffic (vehicles on 24-hour basis)	14,000	7,166	10,000
Type of Access of highway in Atlantic County	Some control of access in Atlantic County	Limited access at interchanges only Toll road	Little or no control of access

Source: Atlantic County Planning Division, 1979.

Even though additional capacity is available on these arteries if viewed in the context of average daily traffic volumes, serious traffic congestion occurs during certain peak hours on summer weekends. According to transportation planners, the congestion problem is caused mainly by the inadequacy of Atlantic City's street system to absorb vehicles from the regional arteries at a sufficient rate. In other words, fast moving vehicles must be funneled into an inadequate city street system.

According to the preliminary studies conducted by the New Jersey Expressway Authority and the Atlantic County Planning Division, the regional highway system leading into Atlantic City may reach capacity before the opening of 12 casinos. The New Jersey Department of Transportation is presently working on a computer based model to refine the volume capacity relationships in more detail. Further refinements are also being prepared by the Atlantic County Planning Division and the New Jersey Expressway Authority.

#### Present Parking

According to a recent compilation by Coastal Plains,\* consultants to the City, there are presently close to 12,000 recordable parking spaces in the City. This total does not include free curb spaces along the Atlantic City streets. (Some estimates put the total number of spaces in the City at 20,000.) According to the study, the parking inventory is made up as follows:

---

\*Coastal Plains - Statistical Inventory and Projections for Atlantic City - 1978.

	<u>Spaces</u>
Private Lots	6,531
Urban Renewal Area	2,803
Parking Authority	423
Convention Hall	1,000
On - Street Metered	1,100
	<u>11,867*</u>

### Bus

Bus service is generally regarded as the most responsive to demand of all modes of public transportation. According to New Jersey DOT bus travel at the present time, however, accounts only for about eight percent of all trips to Atlantic City. Presently Atlantic City has express bus service to New York City, Philadelphia and suburbs, Camden, Newark and Trenton.

Since the advent of casino gambling in Atlantic City, there has been an upsurge of charter bus service to Atlantic City as can be seen from T.V. and newspaper advertisements. According to newspaper reports, Atlantic City receipts from luxury tax from charter bus service have increased significantly, providing \$800,000 annually to the City.

Most of the regularly scheduled bus trips terminate at the Atlantic City bus station located near the rail depot. According to the New Jersey DOT the bus station contains 22 loading docks and a garage consisting of 44 bays.

The newly created New Jersey Transit Corporation which becomes the operator of the large segment of the bus industry January 1, 1980 will also be responsible for large segments of the bus service to Atlantic City. It is expected that specific plans for bus service expansion in the Atlantic City area will be prepared by the New corporation when it becomes operational.

### Rail Travel

Railroads have historically played an important role in the growth and development of Atlantic City. In recent decades, however, passenger rail travel to Atlantic City has declined to an all time low. Such travel is presently only a fraction of a percent of the total Atlantic City passenger travel volume.

---

\*According to transit officials, some 45,000 - 60,000 new spaces would be needed in the next decade to accommodate casino growth. (Atlantic City Press, Nov. 21, 1979.)

The main Atlantic City oriented rail facility, the Pennsylvania-Reading Seashore line, operates mainly as a commuter line. It runs between Lindenwold in Camden County where it connects with the PATCO speed-line, to Philadelphia, and Atlantic City, Ocean City and other shore points.

According to the New Jersey Department of Transportation, only three trains in the morning and three at night operate on weekdays between Lindenwold and Atlantic City. Only about 300 commuters use this service daily.

Rail service to and from Atlantic City is heavily subsidized by the State. New Jersey recently spend approximately \$1 million to repair the railroad and keep it in operating condition.

According to the New Jersey DOT, the State intends to upgrade and rehabilitate the line, however, it does not presently have any plans to convert it into a major transportation link between Atlantic City and the Philadelphia metropolitan area. Present upgrading and rehabilitation efforts subsidized by the State include cleaning and repairing of all rail cars and providing for more effective security arrangements at the Atlantic City station.

The New Jersey DOT is considering the possibility of introducing limited weekend service on the line and is presently conducting a technical study of the rail potentials in the entire Camden-Atlantic City corridor. The study will also focus on the demands for bus transportation and interactions of buses with the rail system.

The results of the study investigating the improvements necessary on the rail stations (16 in total) on the Pennsylvania-Reading Seashore Line would be available by the end of the year. There is no estimate available at this time as to when the results of the overall Atlantic City-Philadelphia corridor study will be available.

Since the passage of the casino referendum, various interest groups have advocated the upgrading of the Pennsylvania-Reading Seashore Line into a major transportation link between the Philadelphia metropolitan area and Atlantic City. Claims are made that if the rail operations were expanded to provide services for the expanding regional labor force, added tourist volumes, and the gamblers, the operations would become financially profitable. One of the advocates of the expanded service is New Jersey Congressman William Hughes who predicts that the line would eventually be used by 12,000 riders daily (Atlantic City Press, Oct.22). The Amtrak officials, however, claim that the high cost of improvements necessary on the old deteriorating system, makes the project unfeasible.

Last year, a French firm, Compagnie Generale D'Electric, announced for the purchase of the line for hi-speed rail service. At this point, no concrete offers have been made; discussions, however are continuing with New Jersey DOT.

Since the Pennsylvania-Reading Seashore Line traverses the Pinelands area, the Pinelands Commission's plans and policies will have an effect on the rail upgrading proposals, especially in relation to new automobile parking areas near the stations along the line.

#### Air Facilities

There are two air facilities in and near Atlantic City. The city owned Bader Field located near the entrance to the resort community on U.S. Route 40 and the federally owned Naval Aviation Facilities Experimental Center (NAFEC) in Pomona, a distance of about 10 miles from the city.

The Bader Field is a 142 acre site serving general aviation needs with daily flights by the Allegheny Commuter and the New Jersey Airways.

The 500-acre NAFEC facility includes the municipally owned Atlantic City Municipal Terminal providing limited air service at this time. This facility, however, has potential to assume an active role in providing passenger air service to Atlantic City.

According to the data contained in a preliminary reevaluation study of the Bader Field (May, 1978 prepared for the City of Atlantic City under a grant from N.J. DOT), the current total one-directional daily (peak summer) trips taken to Atlantic City via the two airport facilities amounted to only .2% of the total travel volume. Master plans are in progress for both airports at the present time. These are prepared jointly by the FAA, N.J. DOT and the City of Atlantic City. Drafts of the preliminary findings are presently being reviewed by appropriate agencies. These master plans take into consideration the possible casino impacts on air travel volumes, but are not expected to be released until the spring of 1980.

According to the Aeronautical Division of N.J. DOT the future air travel volumes are expected to remain a minimal portion of the total volume (probably less than five percent). According to the aviation officials, the situation in Atlantic City is drastically different from Las Vegas where air transportation constitutes a major travel mode. Atlantic City is located close to major metropolitan areas and population concentrations and future travel is expected to continue to be primarily by automobile and bus.

#### PROPOSED TRANSPORTATION IMPROVEMENTS - ATLANTIC CITY AND ENVIRONS

The following is a compilation of the major transportation improvements recommended for Atlantic City and its surrounding area. The major sources for this data are the following: The Atlantic City Master Plan, Transportation Improvement Program 1980-1984 (TIP), of the Atlantic City Urban Area Transportation Study and the 1979 Transportation Bond Issue, of the New Jersey Department of Transportation.

## 1) The Atlantic City Master Plan

The Atlantic City Master Plan, prepared by the office of Angelos C. Demetriou, consultants in Washington, D.C., was made public in November, 1978. The Master Plan sets forth a series of recommendations concerning general movement systems, pedestrian circulation, people movers and skyways and also parking design standards. The master plan transportation improvement proposals are based on a optimum development level by 1990 of 8-12 casinos, a population of 52,000-70,000 and total visitors of 2.05 million to 3.8 million per year.

Since the ultimate number of casinos and visitors to the City is expected to be much higher than considered in the master plan, these proposals will have to be viewed as the minimum improvements necessary. It is indeed possible that the levels of improvements and funding outlined for 1990 will have to be achieved in the 1982-1985 period. Implementation achieved of these improvements seems unlikely in such short period of time.

The Atlantic City movement system in its general configuration is composed of four types of channels as follows: tourist access; main city network; subsidiary city network; and pedestrian, bikeway and people-mover channels. The principal characteristics of this system as described in the master plan are the following:

1. Regional accessibility will continue to be performed by the already existing routes U.S. 40, Atlantic City Expressway and U.S. 30 with such improvements as required and prescribed in the transportation element of the Master Plan:
  - a. Route 40 is introduced into the City through Albany Avenue -- an avenue necessitating correction at the point of the Monument.
  - b. The Atlantic City Expressway is linked to the local street system by Missouri and Michigan Avenues acting as a pair. It is recommended that an expanded transportation terminal be located here.



- c. The introduction of Route 30 into the City is proposed through three penetration channels: Illinois Avenue, Tennessee and Carolina Avenues, and Virginia and Maryland Avenues. Each of these needs certain improvements.
- 2. The transversal requirements of movement along the north-south axis of the City, from Ventnor to the Inlet, are proposed to be served by:
  - a. Pacific Avenue -- the traffic importance of which will be diminished.
  - b. Atlantic Avenue -- a facility to provide an additional channel of tourist movements in support of the less capable Pacific Avenue; and
  - c. Arctic and Fairmont Avenues, acting as a pair.
- 3. Pedestrian/bikeway and special movement channels have been created as extensions and completions of the primary transportation and parking system, and they consist of the following components:
  - a. The beach
  - b. The Boardwalk
  - c. A proposed circumferential bikeway path.
  - d. A set of cross ties of movement interconnecting the Bay with the Ocean.
  - e. A skyway system above the ground level to interconnect all major hotels between the Boardwalk and Pacific Avenue.
- 4. Special transportation modes in the form of terminals and metro parking resources are proposed by the plan as follows:
  - a. The NAFEC super-modern airport at Pomona;
  - b. A general aviation facility and heliport located within the City;
  - c. An expanded state marina;
  - d. A small craft harbor;
  - e. Parking resources for short-term and long-term needs.

The following table from the Atlantic City Master Plan summarizes all the proposed City projects and the anticipated sources of revenue. As can be seen most of the funding is expected to be provided by federal government. The availability of such funding is highly uncertain.

The master plan is only a year old and its recommendations are still in a formation stage. It is incumbent on the City to determine the policies and priorities for the implementation of the transportation projects and to seek State and federal funding and also possible private contributions.

Proposed Transportation Improvements for Atlantic City

PROJECT	TOTAL COST (thousand \$)	POSSIBLE FINANCING SOURCES OTHER THAN CITY	
		SOURCE	ANTICIPATED CITY SHARE (thousand \$)
1. Existing Transportation Center Immediate Action Program	500 - 600	UMTA NJDOT	--
2. Comprehensive Signing System	500 - 600	Casino Hotels	--
3. Intersection Improvements:	1600 - 2075	FHWA NJDOT	160 - 208
4. General Upgrading of Traffic Control Devices	100 - 150	FHWA NJDOT	--
5. Street Renovation, Resurfacing, Patching, Etc.	800 - 1000	NJDOT	--
6. Rail Station Improvements	100 - 150	N.J. State FRA	--
7. a. Heliport	150 - 200	FAA NJDOT	30 - 40 (or less)
b. Helistops	10 (each)	Private Sector	--
3. Atlantic City Travel Information Bureau	(to be included in new Transportation Center)		--

POSSIBLE FINANCING SOURCES  
OTHER THAN CITY

PROJECT	TOTAL COST (thousand \$)	SOURCE	ANTICIPATED CITY SHARE (thousand \$)
3. Arterial Street Widening:			
a. Interim	50 - 75	FHWA NJDOT	--
b. Illinois Avenue	500		
c. New Hampshire Avenue	1500		
3. Neighborhood Protection from through traffic	1500 - 2000	HUD	
1. Parking			
a. Premium (3,000 spaces @ \$10,000)	30,000	Depending on City policy, private sector may participate in major way.	To be decided later.
b. Consolidated 4,000 - 6,000 spaces \$6,000	24,000 - 36,000		
c. Intercept 8,000 - 11,000 spaces @ \$5,000)	40,000 - 55,000	Depending on final City policy, private sector may participate in major way; balance through revenue bonds	To be decided later.
Total (15,000 - 20,000 spaces)	94,000 - 121,000		
2. Shuttle Bus Service	4,000 - 5,000	Hotels and/or UMTA	--
3. New Transportation Center	20,000 - 30,000	UMTA Tenants	--
4. People Mover System	10,000 - 15,000	UMTA Private Sector	--
5. Air Terminal Facilities			
a. Bader Field	5,000	FAA/NJDOT	--
b. Pomona	?		
6. Boardwalk Blocks	750 - 1,000	Private Developers	75 - 100

2) Transportation Improvement Program, (TIP) 1980-1984

The Transportation Improvement Program (TIP) was developed cooperatively by the member governments of the Atlantic City Urban Area Transportation Study (ACUATS) and the New Jersey Department of Transportation. The TIP, required by the U.S. Department of Transportation, is a "multi-year, staged program of transportation improvement projects consistent with the transportation plan of the region." The long-range plan for the Atlantic City urban area was adopted by the ACUATS Policy Committee in 1973. In light of the advent of casino gambling in Atlantic City and the accompanying changes in growth patterns, ACUATS is presently re-examining and updating the plan. According to the New Jersey DOT, the revised long-range plan should be completed within the next year. The New Jersey DOT is devising a computer model to enable the ACUATS to determine more accurately the impacts of casino development on travel origins and destinations.

The ACUATS calls for relatively low cost implementable transportation strategies which will make more efficient use of the existing system, e.g., intersection improvements, roadway reconstruction, better transit systems, etc.

According to New Jersey DOT, the U.S. Department of Transportation presently allocates approximately \$1 million a year each, for highway and public transportation oriented projects in the Atlantic City Urban Area. The remaining monies are allocated on a discretionary basis, which means that the Atlantic City Urban Area is viewed in competition with other areas of the State. The amounts of federal discretionary funds available to the Atlantic City Urban Area will also depend on the availability of State and local matching funds.

The projects are broken down as follows:

- 1.) Category "A" includes projects for which there is a State or local match available. This category also includes projects which are 100% federally funded.

- 2.) Category "B" includes those projects for which there is federal funding available but no State or local match. It is, however, possible that certain category "B" projects will advance to category "A" during a planning period.
- 3.) Consolidated primary projects which include intersection improvements, resurfacing, traffic control devices and similar projects, are deemed to be within reasonable funding levels.
- 4.) Bridge replacement program involving facilities on routes US 9, US 30 and NJ 152 is considered to be within funding levels of present TIP.
- 5.) Public transportation funding (UMTA-Section 5) is allocated for county-wide transit operating assistance and county-wide transportation for elderly and handicapped. Out of the county-wide transit assistance, \$1.5 million is allocated for operating subsidy for local bus service - Atlantic City Transportation Company - which provides service in Atlantic City and surrounding communities - and \$1.6 million for operating subsidy for rail - Pennsylvania-Reading Seashore Line.

In total, thirty-four federal aid projects for a total cost of \$32,993,000 are included in the Atlantic City urbanized portion for 1980. The amounts for the subsequent years are being determined now by New Jersey DOT and other related agencies. Some \$28 million is called for projects outside of the urbanized area in Atlantic and Cape May counties.

The availability of discretionary federal funds and State and local matching funds will largely determine the actual program which can be achieved over the next five year period.

### 3) The 1979 - New Jersey Transportation Bond Issue

The voters of New Jersey have approved a \$475 million bond issue - \$150 million for public transportation, \$80 million in State aid for county and municipal roads, and \$245 million for State highways - to pay for critically needed capital improvements to New Jersey's transportation network over the next four years.

The bond money, when combined with federal funds, some State appropriations and funds from the Port Authority of New York and New Jersey will generate \$2.1 billion for projects in New Jersey.

The four-year plan was developed as part of a seven-year transportation capital plan with an additional \$2.5 billion expenditure proposal slated for 1984 to 1986.

Most of the funds for the State highways would be for repair and improvement of existing roads and bridges, such as road widening, dualization, bridge repair and replacement, traffic signals and intersection improvements, road construction, resurfacing and safety improvements.

#### Highway Proposals

The following tables summarize the highway projects to be supported by the bond issue and state appropriations in the first four years of the seven-year capital program in Atlantic County by major and minor projects:

#### MAJOR PROJECTS ( Non-Interstate )

ROUTE	DESCRIPTION	Supported by Bond Issue, State Appropri. & Fed. Aid			
		'80	'81	'82	'83
9 40/322	Realignment of "S" Curve, Doughty Road Intersection	535,000 R 535,000 C			
9	Bridge over Nacote Creek; Bridge Replacement	535,000 E		245,000 R	12,108,000 C
30	Bridge Re- placement Over Garrets Ditch			300,000 C	
152	Somers Point to Longport; Atlantic Bridge Replacement	1,070,000 R	25,187,000 C		
	Sub-Total	2,675,000	25,187,000	545,000	12,108,000
	4-Year Total, Major Projects - <u>\$41,515,000</u>				

R - Right of Way

C - Construction

E - Engineering

As can be seen from the table, none of the projects involve the major east-west highways providing access to Atlantic City. Bridge replacements would essentially not provide additional capacity for casino bound traffic.

DESCRIPTION	MINOR PROJECTS (Non-Interstate) Supported by Bond Issue, State Approp. & Fed. Aid			
	'80	'81	'82	'83
Intersection and drainage improvements and resurfacing projects on Routes 9, 30,40 and 322				
Sub-Total	576,000	892,000		
4-year Total, Minor Projects	<u>\$1,468,000</u>			

The above minor highway projects would have little effect in increasing the capacity of regional highways leading to Atlantic City.

The 4-year total of all highway improvement projects for Atlantic County is \$42,983,000.

#### Public Transportation Proposals

There are no major new projects which have been proposed for Atlantic City or the County. Some funds, however, will be available for improvements to the Atlantic City rail station and the Pennsylvania-Reading Seashore Line system. The exact funding limits, for these projects, have yet to be determined. Overall, Atlantic City stands to gain from many of the statewide funding allocations in the bond issue, such as the system-wide rail track rehabilitation, bus replacement proposal, short-wave bus radios, bus and rail parking facilities and joint private/public development urban initiative projects. The latter relating to improvements of facilities which encourage urban redevelopment and mass transit assumes especially significant role in Atlantic City as the newly constructed casinos could provide much of the needed private capital. The casino industry should be brought immediately into the planning process for possible joint private/public development urban initiative projects in Atlantic City.

In light of the accelerated pace of casino development taking place, the State, County and local agencies involved in public transportation planning and operations in the Atlantic City area, should determine their critical needs.

Even though there are no major allocations of monies directly slated for Atlantic City public transportation systems, the City could benefit in the long-run from the improvements proposed for the PATCO line in Camden County. This heavily used modern mass transit line is an important component in the Atlantic City-Philadelphia metropolitan area travel corridor. Improvements of service on PATCO coupled with increase in service on the Pennsylvania-Reading Seashore Line would improve the overall accessibility to Atlantic City for the work force as well as visitors. According to New Jersey DOT, the transportation bond issue combined with federal funding will provide almost four million dollars in 1980 for possible improvements on the existing PATCO line -- these include repairs to trackage, improving access to stations through more efficient bus connections, and the possibility for new stops on the line. By 1982 \$6 million will be available to conduct preliminary engineering studies relative to potential service extensions, including the possibility for an extension to Atlantic City. In 1984, some \$200 million would be available for the implementation of a selected route extension.

The casino generated travel forecasts are an integral part of the overall program of PATCO improvements and extensions.



### INTERCEPT PARKING AND PEOPLE MOVERS

It is obvious that Atlantic City is physically constrained from absorbing the projected traffic volumes and providing sufficient parking spaces for the volume of vehicles that will be generated by the casino industry.

According to the Atlantic City Master Plan the parking system consists of three parts: premium, consolidated and intercept. These are described as follows: Premium parking along the Boardwalk, not to exceed 15 percent of the parking need in that area; consolidated parking explicitly designed to assist the Central Business District of the City and to support certain other special purpose activities, such as those relating to conventions; and intercept parking, which is designed explicitly to capture traffic outside of the City and thus reduce traffic and parking pressures within the City.

The Atlantic City master plan calls for the following distribution of spaces by category.

Distribution of Parking Forecast for 1990

Space Category	Existing Spaces	Employers	Visitors	Shoppers and Other	Total
Premium	4,200 38%	-0- 0%	3,800 15%	-0- 0%	8,000
Consolidated	7,000 62%	3,000 38%	-0- 0%	7,000 100%	17,000
Intercept	-0- 0%	4,800 62%	21,200 85%	-0- 0%	26,000
	11,200	7,800	25,000	7,000	51,000

Source: The Atlantic City Master Plan, November, 1978.

The above parking needs are based on 8-12 casinos by the Year 1990. Because of the expected faster pace of casino development, these parking spaces may be needed already by 1982.

It is clear that such numbers of spaces cannot be provided in such a short time span, at least, not in the City. Much more emphasis must be given to improving regional bus service and the provision of shuttle bus service to outlying intercept parking lots. It is the policy of N.J. DEP to keep the cars out of the City because of air quality problems.

At the present time two major public transportation agencies -- the New Jersey Expressway Authority and the Atlantic City Parking Authority -- have made proposals for the construction of intercept parking facilities at the outskirts of Atlantic City.

The Atlantic City Expressway Authority has proposed a 35,000 car facility to be located on the expressway near Atlantic City. The Authority wants to start a chain of 24 multi-tiered parking garages that would straddle the roadway starting about a mile from the highway's entrance to Atlantic City to the Pleasantville toll plaza. The total cost is estimated to be \$120 million. Shuttle buses would be used to transport people into the City. According to an Authority spokesman, the agency has begun preliminary engineering work on the project and it would float revenue bonds to finance the project. The Authority does not foresee any technical or financial problems that may prevent the project, however, a policy decision has to yet be made.

From the time the project is authorized and the necessary environmental approvals granted, the Authority could proceed with the project within six months. The construction of the intercept facility would take

place in stages related to the pace of development of the casinos. At least two units of 800 spaces each could be put in place as soon as necessary approvals are granted.

The Atlantic City Parking Authority has proposed the construction of three major intercept parking facilities providing some 50,000 spaces. No details are presently available as to the cost, financing, and timing of the proposed project.

At this point in time, there seems to be some uncertainty as to which of the agencies will be proceeding first with their proposal. It will be up to the city commissioners, county freeholders, the New Jersey Expressway Authority, the Atlantic City Urban Area Transportation Study, CAFRA and other state and local agencies to reach a decision of the construction of the critically needed intercept parking facilities.

In addition to the concept of intercept parking and related bus shuttle system the second important component of the proposed casino related transportation scheme is a system of people movers within Atlantic City.

The basic factors of this system are:

1. Vehicles travel on an exclusive guideway, their own permanent right-of-way, and
2. Vehicles operated automatically, there are no drivers on board the vehicle. Operations are managed from a central control system.

People movers are expensive to install and to operate. Massive subsidies would be needed to build the system. The guideways are the most expensive components representing 50 to 70 percent of the total capital cost.

Some estimates have put the construction cost for the system at \$400 million and yearly operation costs at \$20 million. In April, 1979 the city contracted with several consulting firms to conduct a feasibility study on the proposed transportation center and the people movers system. The study is expected to take 18 months.

According to recent newspaper articles, it could be more than a year before a system could be selected and three to four years before a portion of the system could be built.

#### FUTURE TRANSPORTATION OUTLOOK

Transportation could be a serious constraint to casino growth in Atlantic City. The present situation is rather dismal with traffic backing up on major highways leading into the City on summer weekends and only minimal public transportation available to serve the region.

According to the Atlantic City Expressway Authority, traffic on that major expressway has increased 40 percent since the opening of the first casino in Atlantic City. The Authority projects 15 casinos in the City by January 1, 1983, at which time the Authority expects its facility and the other major arteries - U.S. 30 and U.S. 40 - to have reached capacity. To relieve this, the Authority proposes the addition of a third lane to the expressway in the next two year period.

The Atlantic County Division of Planning is also predicting that the regional traffic arteries leading into Atlantic City will have reached capacity at the point when 12 are operating. The adding of extra lanes on the Atlantic City Expressway would add capacity. However, this must be also accompanied by improvements in the public transportation system to provide

service from the outskirts to the city.

The expansion and improvement of the regional bus system will be largely the responsibility of the newly created New Jersey Transit Corporation (will begin functioning January 1, 1980) and the possible upgrading of the Pennsylvania-Reading Seashore Line to a major public transportation facility rests primarily with the private sector. According to New Jersey DOT another company besides the French G.E. Consortium is investigating the feasibility of becoming a rail operator.

The most immediate needs to be faced in Atlantic City and its environs are: the providing of intercept parking lots, improvement of in-town circulation of pedestrians and vehicles, and expanding the public transportation systems. All these improvements will take staggering amounts of money and extensive time. At this time, no agency in the State government seems to have a cost figure which would be needed to achieve an optimum efficient transportation system. It is highly important that the participation of the private sector be sought in the planning and funding process.

According to the Public Information Office of the New Jersey Turnpike Authority there are presently no plans for any major improvements in the central and southern portions of the Turnpike facility. There are no plans to reactivate the proposal for the major connector to the Garden State Parkway in Ocean County. The Authority is presently not involved in specific studies focusing on casino impact.

The major project of the Garden State Parkway Authority which could have some bearing on the Atlantic City destined traffic is the proposed widening of the Parkway between Asbury Park and Toms River.

This project is in the public hearing phase and the estimated completion time is not known at this time.

At the present time, numerous transportation and planning agencies - the N.J. DOT, ACUATS, Atlantic County Division of Planning, Atlantic City Planning and Traffic Departments and others, are updating and revising studies based on the accelerated casino growth rate. The New Jersey DOT has created a special Task Force coordinating the various studies related to the Atlantic City area. It is expected that many of these findings will be available in the near future to the N.J. Casino Control Commission and other agencies concerned with casino development issues in Atlantic City.

#### SEWERAGE FACILITIES

It is widely recognized that there is a direct relationship between the availability of sewers and the rate of an area's growth. Regional sewerage facilities may spawn rapid population growth while the lack of such facilities may effectively impede development and growth.

The planning for regional public sanitary sewerage facilities in Atlantic County began in 1966. An Atlantic County Regional Sewerage Feasibility Study was completed in 1968 and adopted by the county and the State. In 1969, the Atlantic County Board of Freeholders created the Atlantic County Sewerage Authority with the mandate to acquire, construct, maintain and operate sewerage facilities within the geographic limits of Atlantic County. For operational purposes the Authority has divided Atlantic County into three planning regions: the Coastal Region, the Lower Great Egg Harbor River Region, and the Mullica/Upper Great Egg Harbor River

Region. Within each of these planning regions, the Authority ultimately plans to construct sewer treatment plants, force mains, and interceptors. Most of the individual small-scale sewer facilities in Atlantic County were closed in 1978 and consolidated into one major network with a major treatment facility located in Atlantic City. This new facility with a capacity of approximately 40 million gallons per day is the key element in the Atlantic County sewerage system. It is also a key element in determining the possible rate of growth of the casino industry in Atlantic City.

The Atlantic County Sewerage Authority treatment plant in Atlantic City is a secondary level treatment facility. It serves primarily a 10 municipality coastal region with a total population of over 150,000 people.

At the present time, the facility treats approximately 23 million gallons of sewage per day. According to the records of the Atlantic County Sewerage Authority, the recent summer peak load has reached approximately 28 million gallons per day, during the summer tourist season. During heavy rain storms and resultant inflows, volumes higher than the current design capacity have been recorded. The facility has a capacity to retain peak flows equivalent to 54 million gallons per day for a period of four hours.

Based on the information obtained from the N.J. Division of Water Resources, the estimated total generation by the twelve casinos would amount to approximately 2.4 m.g.d. This would leave an excess capacity of about 9.6 m.g.d. The anticipated growth of business, industry and population generated by 12 casinos may demand the expansion of the existing Atlantic County Sewerage Authority treatment plant.

The recently released draft of the Atlantic County 208 Water Quality

Management Plan indicates that the Atlantic County Sewerage Authority treatment plant in Atlantic City is estimated to provide adequate capacity to accommodate projected sewage flows to 1985. These projections, however, were based on a much slower rate of growth of the casino industry than used in this report.

According to the Atlantic County Sewerage Authority, the regional treatment plant has a built-in design capacity of 55 million gallons per day. According to the Authority's spokesman, this added capacity can be achieved through the installation of two major tanks adjacent to the existing plant. The cost of installation is estimated to be approximately one million dollars each.

Due to the accelerated pace of casino development, planning for the additional facilities should begin now.

Although the Atlantic County Sewerage Authority provides treatment and force mains in the Coastal Planning Region, construction and operation of a collection system (i.e., pumping stations, collector lines, etc.) are the responsibility of each entity or municipality affiliated with the regional sewerage facilities. In Atlantic City, the Atlantic City Sewerage Company provides sanitary sewer services and pays the Authority for treatment on an annual basis for its proportional share of use of the Authority's facilities. Similarly, eleven other communities in the Coastal Planning Region have direct responsibility for their existing collection systems and pay the Authority for treatment on a sewage flow basis.

According to the 1977 ERA study, in most of the communities that comprise the Coastal Planning Region, the collection systems are either adequate or



capable of expansion to accommodate some of the growth which will be generated by casinos/hotels. Since regional trunk lines exist in the Coastal region, collection lines can be constructed and connected to the regional system by developers, as necessary. However, the major exception is Atlantic City. According to the 1977 ERA report the Atlantic City Sewerage Company operates a collection system which is currently inadequate for the level of casino and related development expected in Atlantic City. These problems have been recognized and the agency is presently addressing the following areas:

1. The main pumping station at Baltic and North Carolina Avenues is over 50 years old. In essence, the station's equipment is obsolete, labor intensive, and subject to failure. The Atlantic City Sewerage Company plans to upgrade the main pumping station, but the estimated costs (some \$2 million) of the renovation may inhibit the company's financial ability to make several other necessary improvements to the collection system. The company is now looking to new ways to finance these improvements.
2. The area at the north end of Atlantic City and west of Gardner's Basin, has no sewer. For development to occur in this area, a pumping station and force main will be required.
3. Although the present collection lines will permit development of many of the proposed casino hotels, larger collection lines will be necessary to service major clusters of hotels. Until these difficulties can be resolved, they must be regarded as

potential impediments to those types of development in Atlantic City.

Thus, while some additional capacity is available at the major regional sewerage facility in Atlantic City, major problems are inherent in the collection systems. Public funds are limited and the degree to which the casino industry is willing to contribute to the construction of needed facilities has yet to be determined. The New Jersey Department of Environmental Protection, however, has made it a condition that new casinos contribute their share toward the rehabilitation and upgrading of the sewer facilities in Atlantic City.

In summary, we are including the following tables which depict the existing sewerage service systems and the prepared projects and projects under construction in Atlantic County.

#### WATER SYSTEM

According to the Rutgers University studio study and the 1977 ERA study, water supply is not considered to be a severe constraint on future growth in Atlantic County. There are three formations in Atlantic County from which potable water is acquired; those are the Cape May, the Cohansey, and the Kirkwood formation. The Cohansey formation consists of two aquifers mainly in the Atlantic City area. The Kirkwood underlying the greater portion of the County, contributes most of the water to County residents. In general, the ground water level is high throughout the County and many municipalities depend on private wells for their water supply. Most of the public supplies in the County are dependent on municipally owned wells. The present total yield of the public's water systems in Atlantic County is

TABLE NO. 1

EFFECTUATING AGENCY	SEWERAGE SERVICE	TREATMENT PLANT* AND RECEIVING STREAM	DESIGN CAPACITY (mgd's)	AVERAGE DAILY FLOW	LEVEL OF TREATMENT	EST'D POP. SERVED
COASTAL REGION						
Atlantic County Sewerage Authority	(Treatment) T-(only) is provided for 100% of the following municipal systems, except where noted.	City Island STP Atlantic Ocean (Via Baltic Ave. Inlet)	40	23	Secondary	151,070
1) Absecon City	(Collection) C-for 100% of municipality	T(ACSA STP)				
2) Atlantic City Sewage Co.	C-for 100% of municipality	T(ACSA STP)				
3) Brigantine City	C-for 100% of municipality	T(ACSA STP)				
4) Egg Harbor Township MUA	C-for approximately 10% of the Township	T(ACSA STP)				
5) Linwood City	C-for 100% of municipality	T(ACSA STP)				
6) Longport Boro	C-for 100% of municipality	T(ACSA STP)				
7) Northfield City	C-for 100% of municipality	T(ACSA STP)				
8) Pleasantville City	C-for 100% of municipality	T(ACSA STP)				
9) Somers Point City S.A.	C-for 100% of municipality	T(ACSA STP)				
10) Ventnor/Margate Joing Sewer Commission	C-for 100% of Ventnor and Margate	T(ACSA STP)				

TABLE NO. 1 (Cont'd.)

EFFECTUATING AGENCY	SEWERAGE SERVICE	TREATMENT PLANT* AND RECEIVING STREAM	DESIGN CAPACITY (mgd's)	AVERAGE DAILY FLOW	LEVEL OF TREATMENT	EST'D POP. SERVED
LOWER GREAT EGG HARBOR RIVER REGION						
Hamilton Twp. MUA	T & C for portions of Mays Landing, Harding Lakes and Cloverleaf are provided for Shulton Inc., Wheaton Plastics and Wheaton Plasticote Inc. T-only is provided for Belcoville in Weymouth Twp.	Mays Landing STP Great Egg Harbor River	.625	.56	Secondary	4,400
Weymouth Twp. MUA	C-for 100% of Belcoville	T(Mays Landing STP)				
MULLICA AND UPPER GREAT EGG HARBOR RIVER REGION						
Buena Boro MUA	T & C for approximately 35% of the Boro	Buena Boro STP Great Egg Harbor River	.4	.32	Secondary	2,880
Egg Harbor City MUA	T & C for approximately 10% of the Municipality	Egg Harbor City STP Mullica River	.34	.4	Secondary	4,000
Hammonton Town	T & C for approximately 20% of the Town	Hammonton STP Mullica River	1.6	1.2	Secondary	8,400

Source: Data obtained from State and local agencies responsible for sewerage systems planning and operations by New Jersey Division of State and Regional Planning, 1979.

PROPOSED PROJECTS AND PROJECTS UNDER CONSTRUCTION IN ATLANTIC COUNTY

EFFECTUATING AGENCY	PROJECT DESCRIPTION	EST'D COST	EST'D POPULATION TO BE SERVED	A-95 FILE*	STATUS
<u>COASTAL REGION</u>					
Galloway Twp. MUA	Construction of a collection system for approximately 10% of Galloway Twp.	5,404,750	4,000	79-696	Step 3 approved
<u>LOWER GREAT EGG HARBOR RIVER REGION</u>					
Atlantic County Sewage Authority	Design proposal for 8 regional interceptors, 20 pumping stations, and 1 regional treatment facility for the entire LGEHRR	12,312,600			Step 2 Design
Weymouth Twp. MUA	Rehabilitate and/or replace sewers in the Belcoville area of Weymouth Twp.	200,000	300	79-596	Step 1 Planning
<u>MULLICA AND UPPER EGG HARBOR RIVER REGION</u>					
Egg Harbor City MUA	proposal for the installation of a package disposal plant at the existing plant site. Also, the collection system will be repaired or replaced to combat high infiltration	1,250,000	4,000	79-601	Step 1 Planning
Hammonton Town	Proposal for extension of sanitary sewers to the Lakeview Garden Section of Hammonton	600,000	90 homes	79-498	Step 1 Planning

Source: New Jersey Division of State and Regional Planning, A-95 files.

approximately 54 million gallons per day.

While water supplies and facilities, if viewed from a regional perspective, may seem to be ample, the situation in Atlantic City is reaching a critical stage. Atlantic City's water is supplied and treated by the Atlantic City Water Department facility. According to the New Jersey Division of Water Resources, Bureau of Potable Water, this treatment plant has an approximate capacity of 20 million gallons per day. Water is drawn from both underground and surface sources. The Atlantic City Water Department has diversion rights amounting to 30 million gallons per day. The average daily demand in 1978 was about 10.9 m.g.d.

According to the Division of Water Resources, over twenty major projects have been presently approved by CAFRA for Atlantic City. These projects when completed are expected to add a demand of 3.9 m.g.d. to the existing demand of 10.9 for an average total demand of 14.8 m.g.d. The average demand in peak month is expected to reach 18.8 m.g.d. Thus the existing capacity of the Atlantic City water treatment plant would thus be reached with the completion of currently approved CAFRA projects in Atlantic City. In light of this, the Division of Water Resources has recommended the denial of a recent casino application. Concurrently, the Division of Water Resources has recommended that the capacity of the Atlantic City Water Department facility be expanded to meet future development needs. If further recommends that funding for the needed additional facilities be partially obtained from the developers wishing to locate projects in the City.

Among other factors which must be further analyzed is the degree of

salt water intrusion resulting from rapid casino development. It is hoped that this consideration will become an integral part of the casino development review process.

Furthermore, since future developments in Atlantic County are mainly dependent on water supplies located within the Pinelands region, the Pinelands Commission's water resources management plan will have a direct bearing on the rate of development in the County. It is expected that preliminary findings from the Pinelands Study will be available within a year.

#### SOLID WASTE

Solid waste disposal is one of the environmental concerns which has captured increased attention in recent years. Solid waste generation, handling and disposal can act as a constraint to population growth and development.

The Solid Waste Management Act (P.L. 1975, c. 326) requires that the Department of Environmental Protection develop a Statewide Management Plan for solid waste collection, disposal and reuse. The Act also requires that each county must develop, either alone or jointly with one or more counties a ten-year plan designed to meet the solid waste management needs of every municipality within the county.

In August, 1979, the Atlantic County Board of Freeholders released a draft report - Atlantic County Solid Waste Management Plan. The plan calls for monitoring and regulating the generation, collection, transportation, processing and final disposal of solid waste in accordance with current and future constraints of cost and environmental impact.

The Atlantic County Solid Waste Management Plan is designed for a ten-year period: 1980 to 1990. The plan is based on a ten-year population increase from 203,542 in 1980 to 335,821 in 1990. This projection is based on the assumption that only 12 casinos will be in operation by 1990 and that the number of visitors will only be 9.7 million at that point. This is obviously a very low-growth prediction and it is quite possible that the ten-year solid waste management plan will actually become a 2-3 year plan.

The total amount of solid waste generated at the present time in Atlantic County amounts to about 600 tons per day, and about 56% or 330 tons of this is generated by the Atlantic City urban region. The average county-wide per capita generation rate is about six pounds per person per day.

Solid waste collection is provided in 17 municipalities: 7 municipalities have public collection systems and 10 municipalities contract collection out to private haulers. Atlantic City has a public collection system with solid waste collected to a transfer station and then trucked to the landfills on the mainland. Most of the existing landfills in Atlantic County are within the Pinelands region and all applications for upgrading and expansion of these landfills will have to be reviewed by the Pinelands Commission.

At the present time, there are in Atlantic County 32 solid waste disposal facilities, 15 of which are operating landfills. Landfill areas in the county are slated either to be abandoned or improved at great costs over the next ten-year period.

According to the draft Solid Waste Management Plan the amount of solid waste generated in Atlantic County is expected to increase dramatically over



the next 10 years, 600 tons per day now to 1,158 tons in 1990 (based on a projected population of 335,821 and 12 casinos only). This increase will result from the normal population growth, the development of casino industry, and the construction activity, which will be prevalent in Atlantic City during the casinos development period.

In total, six alternative management concepts were developed in the plan. The selected ten-year plan for Atlantic County calls for upgrading and expanding of the district landfills and the construction of several modular heat recovery systems. One of the planned heat recovery plants (100 tons per day) is designed to meet the year-round energy requirements of the planned casino development in the Marina Area of Atlantic City. If, however, casino development in that section of the City will be more intense the capacity of the proposed energy recovery unit may have to be enlarged. The capital cost of the recommended plan is as follows:

Upgrade County landfills	\$8.8 million
Expansion of land fills	13.5 million
Energy recovery system	<u>4.4 million</u>
Total	<u>\$26.7 million</u>

The average annual total cost of implementing the selected Atlantic County Solid Waste Management Plan over the next ten-year period is about 8.8 million. The costs will be shared by public and private sector which the latter expected to assume the greater share. The exact details, however, are not available at this time.

Since casino development and resultant growth is expected to occur at the much faster rate than assumed in this plan, the city and county may not

be in a position to provide the needed facilities in a shorter time frame. Administrative, financial and technological constraints would be experienced. Moreover, the Pinelands Commission's environmental regulations may effectively restrict the proposed expansion of landfill facilities in the mainland area.

It is strongly recommended that the State and county's solid waste management planning agencies consider the accelerated pace of casino development, the higher rate of population growth and the possible effects of Pinelands regulations on the currently recommended plan. New cost figures and target dates would become necessary.

Moreover, it is recommended that discussion be initiated with the casino industry to determine the financial and technological feasibility of the proposed modular heat recovery systems which would serve the casinos.

Since the presently available County Plan is a draft plan only, major changes could be incorporated before formal adoption by appropriate county and State agencies.

#### HOSPITALS AND HEALTH CARE

Hospitals and health care facilities are vital community services which should be taken into account in determining growth impacts.

The New Jersey Department of Health has prepared a preliminary study of the medical facilities needs in the State. According to the draft New Jersey State Medical Plan, there are presently four general hospitals in the County - Atlantic City Medical Center - Atlantic City Division, Atlantic City Medical Center - Mainland Division, Shore Memorial Hospital in Somers Point, and William B. Kessler Memorial Hospital in Hammonton; the existing bed capacities are 397, 110,279 and 126 respectively. In addition there are

1,778 long-term care beds and 1,060 sheltered care beds presently existing, under construction or committed in Atlantic County.

The Department of Health in the draft Medical Facilities Plan projects a need for 238 additional hospital beds by the year 1985 and 378 beds in long-term care and 188 beds in sheltered care. These needs are based on the target population of 274,800 in Atlantic County by 1985 (projections by New Jersey Department of Labor and Industry, April, 1979)

In addition, the Southern Region Office of New Jersey Department of Health has pointed to the inadequacy of the present health services available in Atlantic City, mainly in the area of behavioral health services, mental health facilities and alcohol abuse control.

Since it is expected that the rate of casino development will be much higher than assumed in the draft New Jersey Medical Plan, the demand for additional bed capacity must be faced at an earlier date. According to health officials, future expansion plans are being developed for the Atlantic City Medical Center - Atlantic City Division and possibly for the Kessler Memorial Hospital. No details about the plans are available at this time. It should be emphasized however that because of the large influx of visitors to Atlantic City, the hospitals should be designed to handle in addition to the permanent residents, the large numbers of visitors present in the city throughout the year. This may require planning for special out-patient facilities.

#### SCHOOLS

Only limited data is available at this time concerning the school and

educational needs in Atlantic City and throughout the County. The Atlantic County Planning Division has not yet studied this issue and the Atlantic City Master Plan merely touches upon the existing situation. According to the data contained in the City Master Plan, there are nine elementary schools, two junior high schools and one high school in Atlantic City. The 1978 enrollment figures were 4,240, 1,195 and 2,826 respectively. In the period from 1977 to 1978, the City's enrollment declined by 2.5 percent.

Apparently, the most pressing problem confronting the Atlantic City Board of Education is the need for the construction of a new high school. The existing high school facility is overcrowded and outmoded. In addition, the high school will lose its existing athletic facilities at Bader Field to the relocation of runways at the airport facility. The finding of an adequate parcel of land for the construction of a new senior high school and related sports facilities is a rather difficult task facing Atlantic City. In addition, the City is faced with the possible need to relocate one of the junior high schools since construction of casino facilities in the immediate vicinity of the school has resulted in a use conflict and hazardous traffic conditions.

According to the New Jersey Department of Education, the City Board of Education was mandated to produce an educational facilities Master Plan this year. Further assessments can be made when these findings have been analyzed.

SECTION IV:  
ENVIRONMENTAL IMPACT

## ENVIRONMENTAL IMPACT

If the current, rapid rate of casino development continues, major environmental impacts are foreseen, including (1) an increase in air pollution, especially carbon monoxide from automobiles, (2) an increase in water pollution from point and non-point sources, (3) the availability acceptable solid waste disposal facilities, and (4) increasing pressures to ease environmental protection regulations, including the coastal, wetlands and pinelands programs.

### Air Quality

Air pollutants resulting from casino hotel development are indirect.  
or  
There are no state/federal regulations covering indirect sources. The Department of Environmental Protection's Bureau of Air Pollution Control, however, analyzes impacts of casinos and other facilities by participating in the CAFRA permit application review process.

Vehicular traffic into Atlantic City is still considered to be the largest cause of air pollution (carbon monoxide) generated by the hotel casino industry. Therefore the DEP strategy is to keep traffic outside the city by promoting remote intercept parking areas and reducing vehicle miles of travel, e.g., shuttle systems, van pools, etc.

To carry out the objectives of the Air Quality State Implementation Plan the DEP will continue to work with the Atlantic City Urban Area Transportation Study agency representatives to deal with air quality problems in and around Atlantic City. While various public and private efforts are being made to construct intercept parking areas and alternate transit systems, to date no intercept parking or transportation system exists with the exception of the Boardwalk Regency employee shuttle system. Instead parking areas for casino motels are still being allowed in the central business district (CBD) of the City. According to the DEP's Division of Environmental Quality, "in the long term... the further issuance of revocable CAFRA permits for CBD parking facilities may create irreversible and uncontrollable roadway congestion and air quality degradation." (See DEP Opinion No. 67 granting<sup>a</sup> CAFRA permit to Resorts International for a temporary parking lot in the CBD for 2,512 vehicles.)

Two monitoring stations are located in Atlantic City and a recent station has been set up in the Brigantine Wildlife Management Area. Carbon monoxide, sulphur dioxide and smoke shade to measure particulates are continuously monitored. During past years air quality violations were recorded in Atlantic City, however, the National Ambient Air Quality Standards for carbon monoxide have not been exceeded during 1979 to date. Although there were no air quality violations recorded this year it does not mean that conditions are improving because there are many localized variables which affect air quality, e.g., wind, temperature, open vs. built-up areas, etc. In fact, Atlantic City has a non-attainment status for carbon monoxide as per the federal standards.

In order to obtain more reliable data to analyze air emissions, the Bureau of Air Pollution Control is working jointly with the Division of Coastal Resources to establish a comprehensive monitoring system in Atlantic City. This system is being set up by a private consultant according to the specifications prepared by the Bureau of Air Pollution Control. Under this system there are fourteen location monitoring stations distributed throughout Atlantic City. Currently, as a condition of a CAFRA permit, casino developers are required to provide a monitoring station as designated by the consultant on these predetermined sites. The financing of this comprehensive monitoring system is divided equally among the casino developers; the more casinos there are the less they pay. The consultant is responsible for monitoring carbon monoxide and traffic according to standards established by the DEP's Division of Environmental Quality.

---

\* NJDEP - Bureau of Air Pollution Control, telephone conversation 10/29/79.

\*\* Ibid.



Air quality degradation as it affects the Brigantine National Wildlife Refuge is a special case. Based on national standards Brigantine is designated a Class I area, the only area so classified in the State. In a Class I area the national standard for "prevention of significant deterioration" under the Clean Air Act becomes more critical because the range of allowable increments of pollutants is less than for Class II and III. As mentioned previously the DEP has recently set up a monitoring station in Brigantine to monitor air emissions (sulphur dioxide) from the boiler stacks in the city including casino hotels which could have a significant impact on air quality in the Refuge.

## Water Supply and Quality

Groundwater is the major source of potable water for Atlantic County. The two aquifers which supply most of the potable water are the Cohansey and Kirkwood formations. The Cohansey has surface outcroppings throughout

The Atlantic City Water Department is a municipal utility. The Department operates the Atlantic City Reservoir and thirteen wells.\* There are eleven water departments currently serving the county. According to Economic Research Associates many municipalities would have to expand their storage capacity to accommodate the anticipated population but expansion appears feasible. Generally, water is regarded as so abundant that water supply is seldom considered a constraint to development.

Nevertheless, it seems that the impact of water supply is only being considered on a case-by-case basis. For example, it is known that salt water intrusion is occurring in certain areas of Atlantic County from overpumping of the Kirkwood formation.\*\* Although this is a potential problem, no one has analyzed the cumulative impacts of continuous groundwater withdrawal from the Kirkwood or the effects of developing over the aquifer recharge area of the Cohansey. Therefore, while supply is not a problem for most individual development proposals, the collective effects of urbanization on water availability are not really known.

The 208 Areawide Wastewater Management Program was instituted to achieve fishable and swimmable waters by 1983. Atlantic County is a designated 208 area. The county planning board has recently completed its draft 208 plan which identifies point and non-point sources of water pollution and recommends implementation measures to alleviate or eliminate it to achieve the water quality goals. The basis for the plan is the effects of existing and future landcover and population

---

\* Economic Research Associates, An Analysis of the Impact of Casino Gambling in the Housing Needs of the Atlantic City Market Area, December 1977

\*\* Atlantic County 208 Agency - 208 Water Quality Management Plan, September 1979 (draft report)

on water quality. As a result of the current rate of casino hotel development, the county 208 agency expects that the population will double to about 400,000 people by the Year 2000. This projection differs slightly from the County Planning Division projections of 382,340 and significantly from the State's policy population target of 311,900 people. The uncertainty of casino-induced growth therefore becomes critical in developing solutions to mitigate point and non-point source pollution to attain the federal and state water quality goals.

The Atlantic County Regional Sewerage Authority has divided the county into three planning regions for sewer planning. These regions are: the Coastal Region, the Lower Great Egg Harbor River Region and the Mullica/Upper Great Egg Harbor River Region. Currently, the Coastal Region encompasses all or part of fourteen municipalities which includes Atlantic City and other shore front communities that are served by a 40 MGD treatment plant. So for these communities secondary treatment of sewerage is being provided and at this point in time the capacity (excess capacity of about 12 MGD including of the plant appears to be adequate.\* As of this time, most of the communities peak flows in the Coastal Region have collection facilities which are either adequate or capable of expansion. In Atlantic City, however, the local sewerage collection line and a pumping station are found to be inadequate and may soon result in service -- but not necessarily pollution -- problems\*\* In the Lower Great Egg Harbor and Mullica/Upper Great Egg Harbor Regions, facilities are outdated and have reached capacity. In most of the communities in these regions development is only being allowed on septic systems where soil conditions are favorable and the design standards are met. Unless development generated by the casino hotel industry will be concentrated in the Coastal Planning Region or adequate facilities in the other two planning regions are provided, sewer capacity in Atlantic County is limited. This could result in additional temporary private treatment systems, i.e., package plants and septic systems in the remaining two planning regions which

\* Atlantic County 208 Agency - 208 Water Quality Management Plan, August 1979 (draft report)

\*\* Economic Research Associates - An Analysis of the Impact of Casino Gambling on the Housing Needs of the Atlantic City Market Area, December 1977

could spawn unplanned sprawl development and its attendant water quality management problems.

Natural Resource Management - Coastal Area Facility  
Review Act and Pinelands Protection Act

Atlantic County falls under the purview of either the 1973 Coastal Area Facility Review Act (CAFRA) or the 1979 Pinelands Protection Act with minor exception in the western portion of the County (see map). Under these regional land management statutes the DEP's Division of Coastal Resources and the Pinelands Commission are charged with carrying out planning and review functions to guide development while protecting the natural resources of the coast and pinelands.

The DEP reviews permit applications for certain facilities covered by the Act on a case-by-case basis as they relate to the location, use and resource policies contained in the Coastal Management Program Bay and Ocean Shore Segment document adopted in 1978. The Pinelands Commission has only begun to prepare the comprehensive management plan for the Pinelands. The Commission currently reviews virtually almost every type of development primarily on the basis of standards contained in its Interim Rules and Regulations adopted in July of 1979 as amended. During the interim period the Commission is scrutinizing development proposals to avoid preempting the plan and ensuring that the groundwater resource of the Cohansey Aquifer is not contaminated. The quality and quantity of the Pinelands water are closely tied to vegetative patterns and ecosystems of the Pinelands.\*

In order to determine whether the positive findings of Section 10 of the Act are met, applications for a CAFRA permit undergo a fairly sophisticated review process. Even though a wide range of land and water concerns are included in the review system, most applications are approved, generally with conditions to mitigate adverse environmental effects that would directly result from the facility. In reviewing CAFRA permit applications, however, the cumulative impacts are not currently assessed. While the DEP is developing guidelines to assess cumulative impacts, no system is expected to be operating within the current

\* Governors Pinelands Review Committee, Planning and Management of the New Jersey Pinelands, February 1979

fiscal year.\* Nevertheless permit applications for casino hotel development are continuously being approved because they meet the Federal and state adopted policies of the DEP's coastal program.

To date, the DEP's Bureau of Coastal Project Review has approved eight casino hotel applications and one more is expected to be approved before the end of this year. In addition, there are three casino proposals which are not required to obtain a CAFRA permit, i.e., Resorts International Corporation, Penthouse and the Phoenix hotels. As of this date there are twelve casino hotels containing about 6700 rooms which have received CAFRA approval, are about to be approved, or are regulated under CAFRA and includes the two operating casinos (see Chart below). Of these twelve casinos, two are operating and the remainder are presently under some stage of construction; five of these structures are well along in construction. The number of casino hotels approved by the DEP and pending under CAFRA is testimony to the high rate of anticipated demand of this industry. This also illustrates that casino hotel development is now far ahead of the private and public sectors ability to accommodate the necessary housing and services that will be generated.

The staff of the Pinelands Commission has prepared an extensive draft work plan which consists of ten major components; Public Use Involvement, Natural Resources Assessment, Historic, Archaeological and Cultural Assessment, Social Factors Assessment, Physical Resource Assessment, Growth Factors Analysis, Land Management Techniques, Intergovernmental Coordination, Financial and Policies and Programs.\*\*\* Although the staff is proceeding to carry out the activities under the work program, to date it has not been approved by the U.S. Department of the Interior for funding.

\* NJDEP - Bureau of Coastal Planning and Development, telephone conversation 10/31/79.

\*\* Atlantic City, Department of Planning and Development, Telephone conversation 11/2/79.

\*\*\*"Pinelands Commission Work Plan," October 11, 1979 (Draft).

# CASINO/HOTEL PROJECTS

<u>Name</u>	<u>Rooms</u> (CAFRA Approved)	<u>Rooms</u> (Casino Control Com./Status)
Resorts	760*	operating
Boardwalk Regency	500	operating
Bally (Park Place)	750	filed petition for license
Playboy	576	application submitted
Greate Bay	520	application submitted
Golden Nugget	520	application submitted
Claridge	500	application submitted
Holiday Inn	500	application submitted
Dunes	540	application submitted
Penthouse	503*	application submitted
Phoenix	518*	application submitted

<u>Name</u>	<u>Rooms</u> (CAFRA Pending)
Morton Metropole	520
Caesars Traymore	1,008
Plaza	514
Ritz	542
Sahara	520 (completed for review)

\* Facility not regulated under CAFRA.

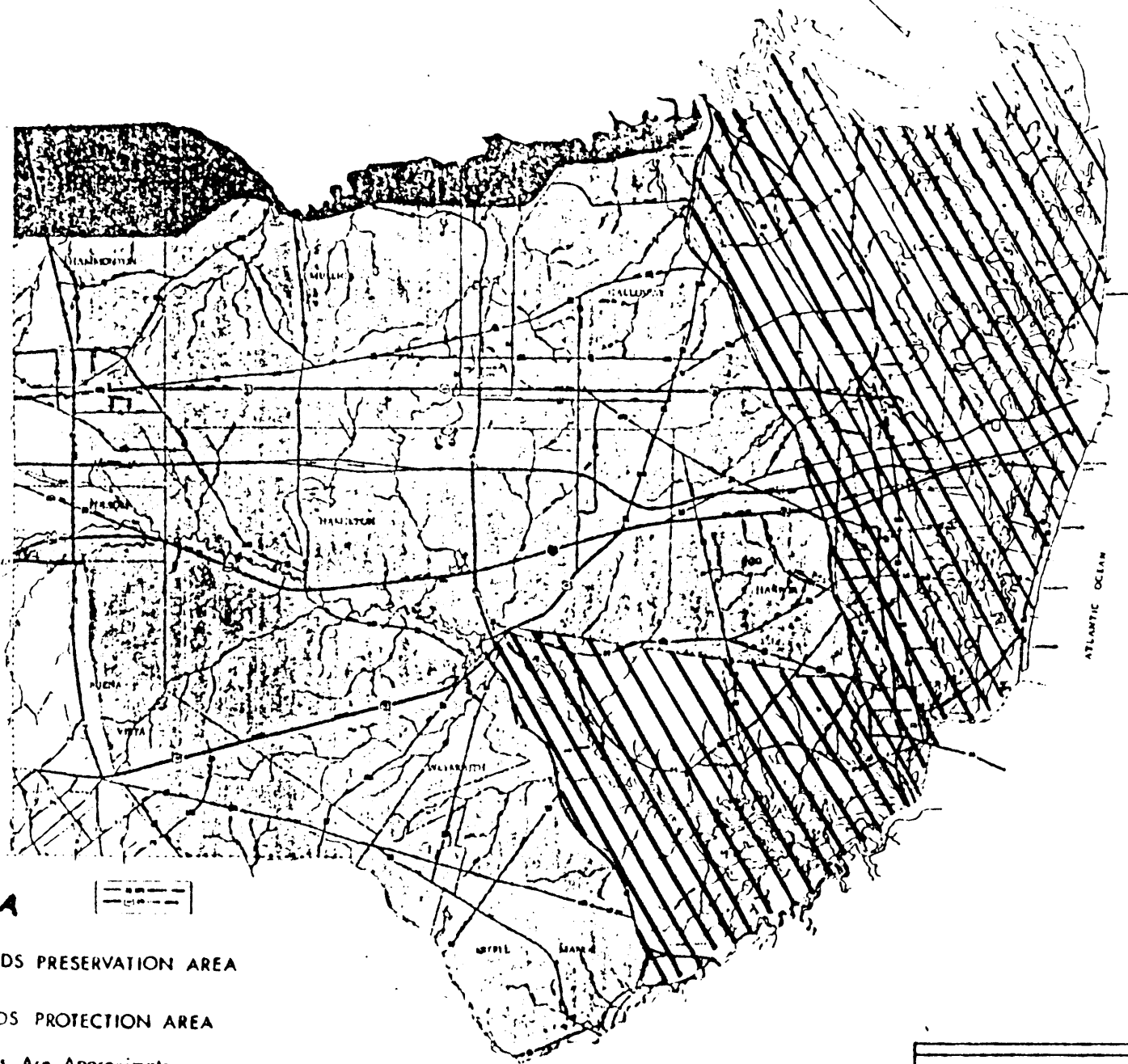
Source: NJDEP Bureau of Coastal Project Review.

October 29, 1979

According to the Pinelands Protection Act the comprehensive plan is to be completed by August of 1980. Given the scope of work it is unlikely if any of the elements of the plan would be completed before that time, In fact, the natural resource assessment which includes a hydrology component, is a huge undertaking in itself. It is doubtful that the hydrology of the Pinelands can be completely evaluated within the legislated time schedule.

In the meantime casino hotel development continues and the ensuing housing development which is generated will soon exert pressure on the Pinelands. A recent news paper article (Star Ledger, October 31) indicated that Atlantic County officials were urging the Commission to acknowledge the area's housing and transportation needs induced by casino development and expedite the development of an interim land-use plan. In view of the complexity of the Pinelands' natural and physical environment it is questionable whether it is prudent to rush planning to accommodate the casino-induced growth in the Pinelands area/ at this time.





-  **CAFRA** 
-  PINELANDS PRESERVATION AREA
-  PINELANDS PROTECTION AREA

Boundaries Are Approximate

## BIBLIOGRAPHY

## BIBLIOGRAPHY

"Atlantic City Housing Authority Fact Sheet," September 1979.

Atlantic County Department of Administration, 208 Atlantic County Water Quality Management Plan, Division of Planning, Atlantic City, New Jersey, September 1979.

Atlantic County Division of Economic Development, "Atlantic County Growth Trends Report, May 1979," Atlantic City, New Jersey, May 1979.

Atlantic County Division of Planning, "Atlantic County Growth Trends Report November 1, 1978," Atlantic City, New Jersey, November 1978.

Atlantic County Division of Planning, "Atlantic County Growth Trends Report, February 1, 1979," Atlantic City, New Jersey, February 1979.

"Atlantic County Housing Plan," Atlantic County Planning Board, November 1978.

Boyd, Frederick V., "Byrne Puts Accent on Renewal and Safe Casinos," The Star Ledger, Newark, New Jersey, October 31, 1979.

"Characteristics of the Population," U.S. Census of Population, 1970.

Conversations with Mr. Chris Kelley of Mortgage Finance Agency.

Conversations with Mr. Monroe Frailegh of the Farmers Home Administration.

Conversations with Mr. Robert Tublitz, Director of the Atlantic County Planning Board.

Conversations with Ms. Fran Torran of Housing Finance Agency,

Conversation with Messrs. Gregory Pikul and Charles Pietarenan of the DEP, Bureau of Air Pollution Control.

Conversation with Messrs. Steven Whitney and Douglas Wehrle of the DEP, Bureau of Coastal Project Review.

Conversation with Mr. John Weingart of the the DEP Bureau of Coastal Planning and Development.

Conversation with Mr. Jay Fiedler, Assistant Director, Atlantic City Department of Planning and Development.

Conversation with Mr. Ben Borowsky, Public Information Office, Casino Control Commission.

Conversation with Mrs. Bernice Paul, Director, Atlantic County Division of Economic Development.

Conversation with Joseph Murray, Director, Cape Atlantic Legal Services.

Conversation with Ms. Joyce Gallagher of the DOT, Bureau of Urban Planning.

Conversation with Mr. John Gideonse of the Atlantic County Planning Division.

Conversation with Mr. Anthony Marino, Atlantic City Expressway Authority.

Conversation with Debbie Lawler, Public Affairs, New Jersey Department of Transportation.

Conversation with Mr. Carpenter, Atlantic County Sewerage Authority.

Conversation with Public Information Office, New Jersey Turnpike Authority.

Conversation with Staff, Aeronautical Programs, New Jersey Department of Transportation.

Conversation with Ann Lyons, Garden State Parkway Authority.

Conversation with T. Khan, Bureau of Potable Water, Division of Water Resources, New Jersey Department of Environmental Protection.

Coastal Plains, Environmental Consultants and Planners, "Statistical Inventory and Projections for Atlantic City, Standard Metropolitan Area."

Demetrio, Angelos C., The Atlantic City Master Plan, Washington, D.C., October 30, 1978.

"Economic Forecasts: Population, Employment and Visitors, 1975-1990," Atlantic City, New Jersey, Gladstone Associates, November 1977.

"Gladstone Associates "Housing Market Resources and Strategies, Atlantic City, New Jersey".

Governor's Pinelands Review Committee, Planning and Management of the New Jersey Pinelands, February 1979.

Heneghan, Daniel, "26 Casinos Expected by 1990." The Press, Atlantic City, October 25, 1979.

Linky, Donald, Memo, "Re: Population Projections," State of New Jersey, Executive Office, July 2, 1979.

New Jersey Department of Community Affairs, "A Revised Statewide Housing Allocation Report for New Jersey," Division of State and Regional Planning, May 1978.

New Jersey Department of Environmental Protection, "Opinion No. 67, CAFRA Application CA #78-0249-5. Resorts International, Inc., Transportation Plan, Atlantic City, Atlantic County," Division of Coastal Resources, Bureau of Coastal Project Review, Trenton, New Jersey, October 1979.

New Jersey Department of Labor and Industry, "Atlantic City Labor Area (Atlantic County) Labor Force Estimates Year 1977-1978," Division of Planning and Research, Office of Labor Statistics, Bureau of Labor Force Statistics, Trenton, New Jersey, May 1979.

New Jersey Department of Labor and Industry, "Employment and the Economy, Atlantic City Labor Market Area," Division of Planning and Research Trenton, New Jersey, August 1979.

New Jersey Department of Labor and Industry, "Labor Force Estimates August Final 1979," Division of Planning and Research, Office of Labor Statistics, Trenton, New Jersey, October 25, 1979.

New Jersey Department of Labor and Industry, "New Jersey Economic Indicators, #192," Division of Planning and Research, Trenton, New Jersey, October 11, 1979.

New Jersey Department of Labor and Industry, "New Jersey Revised Total and Interim Age and Sex Population Projections," Office of Demographic and Economic Analysis, April 1979.

New Jersey Department of Labor and Industry, "Population Estimates for New Jersey, "Office of Demographic and Economic Analysis. July 1978.

New Jersey Department of Transportation, "Meeting New Jersey's Transportation Needs With A Proposed 1979 Transportation Bond Issue," Trenton, New Jersey, May 1979.

New Jersey Department of Transportation, "Transportation Improvement Program 1980-1984, Atlantic City Urban Area Transportation Study," Trenton, New Jersey.

"New Jersey Mortgage Finance Agency, 1978 Annual Report."

New Jersey Pinelands Commission, "Draft, Pinelands Commission Work Plan," Trenton, New Jersey, October 11, 1979.

New Jersey State Department of Health, "New Jersey State Medical Facilities Plan (Draft)", Health Data Services, Trenton, New Jersey, August 10, 1979.

"Profile of Division of Housing Relationships in Atlantic, Cape May and Cumberland Counties, 1979."

"Projected Major Land Uses for Atlantic County, New Jersey 1977-2000," Atlantic County Planning Board, December 1978.

Rutgers University, "Casino Impacts: Atlantic County New Jersey," Rutgers University Urban Design Studio-Spring 1978, New Brunswick, New Jersey, 1978.

Weston, Designers-Consultants, "Atlantic County Solid Waste Management Plan (Draft Report)", Roslyn, New York, August 1979.

Woodruff, Kathleen, "Officials Want Orderly Growth," The Star Ledger, Newark, New Jersey, October 31, 1979.

Woodruff, Kathleen, "South Jersey Transit: Gambicini Stamps for the Bond Issue," The Star Ledger, Newark, New Jersey, October 24, 1979.

