



The Costs and Benefits of Alternative Growth Patterns: The Impact Assessment of the New Jersey State Plan



**Economy
Environment
Infrastructure
Community Life
Intergovernmental Coordination**

**Center for Urban Policy Research
Edward J. Bloustein School of Planning and Public Policy
Rutgers, The State University of New Jersey
September 2000**

The Costs and Benefits of Alternative Growth Patterns

September 2000

The Costs and Benefits of Alternative Growth Patterns: The Impact Assessment of the New Jersey State Plan

Prepared for

Herbert Simmens, Director
New Jersey Office of State Planning (OSP)

Prepared by

Robert W. Burchell, Ph.D.
William R. Dolphin
Catherine C. Galley
Rutgers University, Center for Urban Policy Research
Edward J. Bloustein School of Planning and Public Policy

With the assistance of

Richard K. Brail, Ph.D.
Rutgers University,
Edward J. Bloustein School of Planning and Public Policy
Alex Zakrewski
Rutgers University, Center for Urban Policy Research
Nancy C. Neuman, Ph.D.
Sandstone Environmental Associates

Reviewed by

John Epling, D.P.A.
The Epling Corporation
Charles L. Siemon, Esq.
Siemon Larsen & Marsh
David Slater
Hammer Siler George Associates
James C. Nicholas, Ph.D.
University of Florida
Neil Muller
Muller Bohlin Associates



Courtesy of C. Galley

OVERALL ASSESSMENT

The second impact assessment of the New Jersey State Development and Redevelopment Plan is undertaken at a time when techniques for analyzing this complex document are more sophisticated than those available in 1992, and when the document itself more clearly defines policies for growth and their implementation. However, the charge given to the second impact assessment is essentially the same as that given to the first: to assess the economic, environmental, infrastructure, community life, and intergovernmental coordination implications of the State Plan over a 20-year period. (The assessment period for this analysis is 2000 to 2020.) The purpose of the assessment is to guide policymakers in determining whether the Plan's policies will be beneficial to the state's future.

The State Planning Act (P.L. 1989, c. 332, N.J.S.A. 52: 18A-202.1g et seq.) requires the impact assessment to be undertaken as part of the process of preparing the State Development and Redevelopment Plan. The assessment must be completed before the State Plan is finalized and voted upon by the State Planning Commission.

The impact assessment measures two alternative futures for New Jersey: one in which growth is managed according to the strategies in the State Plan (PLAN) and one in which growth continues according to historical trends (TREND). The second impact assessment draws upon the experience and knowledge the Center for Urban Policy Research (CUPR) at Rutgers Uni-

versity has acquired during eight additional years of conducting similar analyses nationwide. The assessment also draws upon eight years of data collection and model building by the New Jersey Office of State Planning. The result is a fundamentally revised, more comprehensive assessment. The new presentation format includes illustrative material, including photographs, maps, and tables. Tabular materials present data on the impacts of the TREND and PLAN scenarios and highlight differences between the two alternative scenarios by region, type of municipality (urban, suburban, rural), planning area, and center location. The assessment uses current information about the state to establish a baseline for 2000 and then projects the impacts of each scenario for 20 years into the future. Although various methods may be used in making such projections, the best procedures available for conducting this task have been employed in the analysis.

The findings of the impact assessment presented in this report indicate that the State Development and Redevelopment Plan can create a positive development future for New Jersey. Development under the State Plan (PLAN) will produce economic benefits similar to those produced under TREND conditions. However, PLAN will direct more development into existing and new centers and less development into rural and environmentally sensitive areas. This, in turn, will attract income to and expand the tax base of communities with existing and new centers; save appreciable amounts of developable land; require provision of less road and water/sewer infrastructure; slow the increase in housing prices; and substantially reduce the need for expanded local public services in rural and environmentally sensitive areas. Quality of life in the state will improve as part of the overall growth of New Jersey. Intergovernmental coordination will benefit from additional and productive contact between local and county governments and state agencies because of the processes and procedures instituted by the Plan. Therefore, it is not necessary to appreciably change the content or form of the Draft State Plan before it is adopted.



ECONOMIC ASSESSMENT

Overall Conditions

National and regional forces shape New Jersey's economic growth. PLAN and TREND development scenarios are impacted by these forces equally. PLAN's goals and policies will not cause population or jobs to be driven from the state.

Although some policymakers are concerned that the State Plan will cause people to be driven from the state for economic reasons, that result is not likely. At the state and regional levels, growth will be essentially the same. Both growth alternatives will accommodate 908,000 in new population, 462,000 in new households, and 802,500 in new jobs (not including agricultural jobs or self-employment) over the 20-year period, 2000 to 2020. Growth in New Jersey during the 1990s was somewhat faster than it was during the 1980s. The state's current growth rate is the result of a strong economy and immigration. Those forces will diminish somewhat but will still be felt for most of the projection period. New Jersey will grow about 0.55 percent annually in population, 0.77 percent annually in households, and 1 percent annually in employment. Population and households will continue to grow faster in the central region compared with the southern and northern parts of the state. Employment growth will be about the same in the central and northern parts of the state; the southern region will trail the central and northern regions in employment numbers by about 20 percent. The state will be less industrial and more service-oriented than it is today; property values and income will rise at approximately the same rate as in the 1990s. All of these base conditions will occur with or without the State Plan.

Population

PLAN development will cause a population increase of 144,000 more than TREND in urban communities, 132,000 more in densely developed communities, and 170,000 more in communities with urban, regional, or town centers.

New Jersey's current population is four and one-half times larger than it was in 1900. At 1,100 people per square mile, New Jersey is the most densely populated state in the United States—a title that it has held since 1970. New Jersey's annual growth rate is one-half the national growth rate but multiple times the growth rates of its neighboring states. New Jersey's population reached 8.15 million in 2000; it will grow by 908,000 during the period 2000 to 2020. The full population increase projected for New Jersey can be accommodated in the state under both TREND and PLAN development. This also holds true for the state's three large regions.* However, the growth taking place below the regional level will be different under the two scenarios. Generally speaking, under PLAN versus TREND development, much more growth will occur in urban communities[†] (144,000), in communities with more densely developed planning areas[‡] (132,000), and in communities with urban, regional, and/or town centers[§] (170,000).

* The three regions are defined with New Jersey counties as follows: northern New Jersey encompasses eight counties—Bergen, Essex, Hudson, Morris, Passaic, Sussex, Union, and Warren; central New Jersey encompasses six counties—Hunterdon, Mercer, Middlesex, Monmouth, Ocean, and Somerset; southern New Jersey encompasses seven counties—Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, and Salem (see map on page 25).

[†] Urban, suburban, and rural communities are defined by Rutgers University, Center for Government Services municipal classifications.

[‡] More densely developed planning areas encompass State Plan planning areas 1, 2, and 3; less densely developed planning areas encompass State Plan planning areas 4 and 5.

[§] Communities with urban, regional, and/or town centers are communities with designated, proposed, or identified large centers; communities with village, hamlet, or no centers are referred to as "communities without large centers."

Employment

PLAN development will double the number of jobs in urban communities (80,000 more) and cause an increase of 117,000 jobs in communities with urban, regional, and/or town centers over the course of the 20-year projection period.

Total employment—the number of jobs located in a geographic area—is a key indicator of the scale of an area’s economic base. As of 2000, New Jersey’s total employment was 3.9 million, not counting agricultural jobs or self-employment. For the upcoming 20-year period, employment in New Jersey will grow by 802,500 jobs. In the eight years since the end of the state’s recession in May of 1992, New Jersey’s total employment has grown by 450,000 jobs.

Overall, TREND and PLAN growth futures will create approximately the same number of jobs (802,500). The primary difference between TREND and PLAN futures will be the location of new jobs in the state. Under PLAN versus TREND, almost twice the number of new jobs (80,000 more) will be found in urban communities. Approximately 117,000 more new jobs will be found in communities with urban, regional, or town centers, rather than in communities without large centers. Since many of the new jobs will be in areas of excess labor, the jobless rate in urban and rural centers will be reduced.

PLAN’s goal is to concentrate development in centers; a portion of this development is nonresidential growth. PLAN will be able to steer employment growth to the more densely developed planning areas of communities.

Household Growth and Income

PLAN development will reverse a \$340 million loss in household income in urban communities under TREND and produce eight times that amount in household income gains.

Households are the unit of measure of housing occupancy and the basic source of income supporting local expenditures. There are currently 3.0 million households in New Jersey, a figure that will grow by 462,000 over the period 2000 to 2020. The projected growth in number of households for the state and its three major regions is the same under the TREND and PLAN scenarios. Households will grow at a rate (0.77 percent annually) that is more than one-third higher than the population growth rate (0.55 percent annually). Half of the growth in number of households will take place in the central region of the state (234,000).

Under PLAN, there will be noticeable differences in the locational growth of households below the regional level. Compared with TREND projections, PLAN policies will produce six times the household growth in urban communities, and significant differences in communities with more densely developed planning areas (63,000 more), and in communities characterized by the presence of urban, regional, and/or town centers (92,000 more).

There will be similar growth in household income under TREND and PLAN at the state and regional levels. This will not be true below the regional level. PLAN's policies will produce significant income growth in urban communities, in communities with more densely developed planning areas, and in communities with urban, regional, and/or town centers. A \$380 million loss in household income in urban communities under TREND will be reversed under PLAN and eight times

that amount will occur in household income gains over the 20-year projection period.

Equalized Valuation

Under both growth scenarios, the state will expand its property tax base by \$85 billion. PLAN development will expand the property tax base of urban communities by 6.5 times the level of TREND development.

Property value relates to the economic health of political jurisdictions. The state of New Jersey, as of 2000, had \$548 billion in equalized real property value.

Over a 20-year projection period, TREND and PLAN futures will have equivalent real property tax base growth of approximately \$85 billion. About one-half of this growth will take place in the central region of the state (\$42 billion); the remainder (\$43 billion) will be distributed almost equally between the northern and southern regions. TREND real property growth will be very uneven, however. Suburban and rural communities will expand their property tax bases by 83 percent and 15 percent, respectively, under this scenario, and urban communities will expand their tax bases by only 2 percent.

Under the PLAN scenario, there will be a purposeful relocation of development and an accompanying real property value shift to urban communities, communities with more densely developed planning areas, and communities with urban, regional, and/or town centers. Under PLAN development, urban communities will expand their property tax base by 6.5 times the rate observed for TREND development.

Fiscal Impacts

PLAN development will reduce fiscal deficits attributable to growth by \$160 million annually in municipalities, counties, and school districts.

Fiscal impacts determine whether growth pays for itself. The fiscal impact assessment compares the public-service costs versus revenues raised from accommodating new residents and workers under the two alternative growth scenarios. As New Jersey grows into the future, most development will be residential in nature. This will contribute to annual fiscal deficits under any growth scenario. Under TREND development, by 2020, local governments will experience a fiscal deficit of \$418 million annually; under PLAN development, the fiscal deficit will be \$257 million annually. By containing population and jobs around already developed suburban communities and by redirecting a share of growth to closer-in or more distant communities with urban, regional, and/or town centers, the State Plan, by 2020, will provide an annual \$160 million (current dollars) fiscal advantage to local governments. This advantage reflects the ability under PLAN to draw on usable excess operating capacity in already developed communities and to benefit from their existing tax structure. Local costs under PLAN development will be somewhat higher than under TREND, but revenues will be higher still, leading to less negative fiscal impacts under PLAN development. While both growth scenarios will cause the state fiscal deficits, PLAN development will reduce these deficits by \$160 million annually.

ENVIRONMENTAL ASSESSMENT

Developable Land

PLAN development will save 122,000 acres of land that typically would be converted by TREND development.

There is plenty of land statewide to accommodate projected 20-year development—even after the 1 million acres for the open-space referendum are deducted. That should not be surprising, because since its founding, New Jersey has accommodated 8.15 million people, 3 million households, and 3.9 million jobs on approximately 1.35 million acres. Of the state’s 4.8 million acres, 1.9 million remain undeveloped and unprotected, two-thirds of which are forests and one-third of which are agricultural lands. The governor has requested and received approval from the voters to set aside 1.0 million additional acres for open space of which most, but not all, will come from the supply of developable land.

A 20-year development future under the TREND scenario will convert 355,000 of the remaining 1 million acres to provide land for 462,000 households and 802,500 jobs. Development under the PLAN regimen will convert approximately 233,000 acres to accommodate a similar number of households and jobs, a saving of 122,000 acres. Overall, new development under TREND conditions will require more than 52 percent more land than would be required for new development under the PLAN scenario. Almost all of the saved developable acreage will be located in suburban communities (with significant savings in the central region of the state), in communities with less densely developed planning areas, and in communities without urban, regional, and/or town centers.

Agricultural Land

PLAN development will save 68,000 acres of agricultural land, or more than one out of every two acres that would be converted by development under TREND conditions.

New Jersey loses significant amounts of agricultural land on a regular basis. PLAN development will slow the agricultural land loss in the state. Of the total land converted for development under TREND conditions, approximately 125,000 acres will be agricultural land. Under PLAN conditions approximately 57,000 acres of agricultural land will be converted. In the aggregate, approximately 68,000 acres of agricultural land will be saved under the compact development measures of the State Plan.

Under the PLAN scenario, 53 to 55 percent of agricultural land committed to development under the TREND scenario will be saved in both suburban and rural communities, communities with more and less densely developed planning areas, and in communities with and without urban, regional, and/or town centers. In absolute number of acres, more agricultural land will be saved in suburban communities, in communities with less densely developed planning areas, and in communities without large centers.

Environmentally Fragile Land

PLAN development will save more than 45,000 acres of environmentally fragile land.

New Jersey also loses environmentally fragile land to development. In fact, approximately 81,300 acres of the land converted for development under the TREND scenario will be environmentally fragile land. The lands converted, which include for-

ests, steep slopes, and critically sensitive watersheds, could be permanently damaged. PLAN development will convert about 44 percent of this amount, or approximately 35,700 acres. Thus, all future development objectives will be met under the State Plan while saving more than 45,000 acres of environmentally fragile land.

INFRASTRUCTURE ASSESSMENT

Roads

PLAN development will save 870 centerline miles of local roadway and \$870 million in local road costs.

There are approximately 45,000 centerline miles of public and private local roadways in the state. TREND development to the year 2020 will require an additional 3,720 centerline miles of local roadway. PLAN development will require the addition of only 2,850 centerline miles of local roadway. Ninety percent of the amount saved, or approximately 780 centerline road-miles, will be in communities with less densely developed planning areas. Plan-guided development will require 870 fewer centerline miles of local roadway. Under the PLAN scenario, a statewide saving of approximately \$870 million in local road infrastructure costs will be achieved because development will be directed to existing neighborhoods (through redevelopment and infill) and to outer-area centers.

Transit

Under PLAN development, the work trip transit-use increase will be 1.5 times that of TREND development.

Approximately 1 percent of the population in New Jersey uses transit for trips to work. There are currently 317,000 work trip transit users in the state of New Jersey. Two-thirds of those users (207,000) are in the northern part of the state. The State Plan, with its system of centers, redirects new growth to moderate- and high-density population areas. Over the period from 2000 to 2020, TREND development density will create a demand for 18,000 new work trip transit users. PLAN development density will create a demand for 27,000 new work trip transit users—1.5 times the demand for public transit that would be created under the TREND development scenario. The vast bulk of this increase in demand will occur in the central and southern regions of the state, in urban communities, in communities with more densely developed planning areas, and in communities with urban, regional, and/or town centers.

Water and Sewer

PLAN development will provide a saving of \$1.45 billion in water and sewer infrastructure costs.

Both housing costs and public-service operating costs are affected by the costs of providing basic development infrastructure. The two alternative scenarios will produce different levels of demand for water and sewer infrastructure. Development under the PLAN regimen will be close-in, contained, and somewhat denser compared with development under the TREND regimen. For example, there will be more multifamily units under PLAN development. PLAN development will therefore reduce the cost of water and sewer infrastructure.

The savings in water and sewer demand under PLAN conditions will be 6.3 million and 3.2 million gallons per day, respectively, from 2000 to 2020. The difference in demand may not

seem significant until the hardware (infrastructure) and cost implications are considered. In the case of water and sewer lateral costs, the use of existing infrastructure and the construction of more multifamily housing units under PLAN development will produce water and sewer lateral cost savings of \$25 million and \$171 million, respectively, between 2000 and 2020. PLAN development will also save \$1.26 billion in full sewer costs (including savings in treatment and distribution infrastructure). Taking into account both laterals and full sewer costs, \$1.45 billion will be saved under PLAN development.

COMMUNITY LIFE ASSESSMENT

The community life assessment consists of two elements: (1) quality of life and (2) housing supply and demand and costs.

Quality of Community Life

Quality of life will improve in the future under both TREND and PLAN development. Households that seek redeveloping neighborhoods under PLAN development may experience a slower rate of improvement in quality of life in the short term.

Quality of life is determined by how people relate to their environment. A community's environment can be measured empirically. Quality of life is measured in communities by 26 regional and 18 local factors that make up an index created specifically for this project. The regional index depicts quality of life through county ratings of wealth, education attainment, costs of housing, weather, taxes and government spending, and so on. The local index depicts quality of life through local ratings of economic well-being, housing value and ownership, property tax base and rates, public safety, school achievement,

and community amenities. The above sets of factors create a combined quality-of-life rating (from one to five) for each community. All households and jobs in a community under the TREND scenario or the PLAN scenario will be affected by the quality of life at those locations.

A combined quality-of-life rating of 3.05 out of 5.0 is observed when the quality-of-life measures described above are applied under TREND development conditions. Applying the same measures under PLAN development conditions (taking into account the effects of population redistribution under PLAN) results in an overall quality-of-life rating of 3.01 out of 5.0. These ratings for the year 2020 represent increases over the quality-of-life rating of 2.82 for 2000. The ratings reveal that both development scenarios (TREND and PLAN) will improve the quality of life of the state's residents: the quality-of-life rating will increase by 8.2 percent under TREND and by 6.7 percent under PLAN. The difference between the TREND and PLAN scenarios is the somewhat lower quality of life that will be experienced by the portion of new population moving to the closer-in suburban and urban communities and by some of those moving to existing centers in the relatively short term.

Housing Supply and Demand and Housing Costs

PLAN development, because it offers more variety in housing types, will slow the decrease in housing affordability relative to TREND.

People cannot enjoy life unless they have an affordable place to live. There must be a way to provide shelter at reasonable cost to meet the demand of future household growth. The projected increase in household demand over the period 2000 to 2020 is 462,000 households.

In the case of TREND development, household demand will be more than adequately met by an additional 446,300 single-family homes (one- to four-unit structures), and 40,100 multifamily units (structures of five or more units). In the case of PLAN, there will be 429,400 single-family homes, and 57,000 multifamily units.

Housing affordability will decrease somewhat over the period 2000 to 2020. Negative change in the general affordability of the housing stock (i.e., a relative increase in price and a decrease in income) will characterize the future. PLAN's decrease in housing affordability will be 6 percent less than under TREND development. The percentage of the state's households able to afford housing will decrease from approximately 77 percent to 62 percent under TREND and from approximately 77 percent to 67 percent under PLAN. PLAN's better position reflects the population increment moving to urban, regional, and/or town centers where housing prices will be lower, given the densities of urban communities and centers, and the housing mix that will be found there. Under PLAN conditions, housing developed in centers will exceed housing built elsewhere; therefore, housing costs under the PLAN scenario will be somewhat lower than those under the TREND scenario.

INTERGOVERNMENTAL COORDINATION

Under PLAN development, county governments will experience more contacts and better relationships with state, other county, and local governments. Governments will also experience an increase in municipality-to-municipality and municipality-to-state interactions under the State Plan.

Intergovernmental coordination is defined as the degree to which various levels of government pool their efforts to achieve

mutually desired ends. Where there is more coordination, more actions are achieved with less effort. As a result of coordination, governments are better able to serve their constituencies.

In a recent survey, county planning directors were asked to rate the frequency and quality of contact between themselves and other levels and units of government before and after the state planning process was implemented. They were also asked to provide their views on municipality-to-municipality and municipality-to-state contacts. While it is true that their responses indicate only a momentary judgment and are subject to change over time, the county planning directors nonetheless provide insight into intergovernmental coordination effects under the state planning process as it has evolved.

County planning directors reported improvements in the *frequency* of contact between all levels of government viewed and improvements in the *quality* of contact both between counties and state agencies and between municipalities. The most significant improvements in the frequency of contact have occurred in the south-central part of the state; the most significant improvements in the quality of contact have occurred in the west-central part of the state.

CONCLUSIONS

The study team conducted a total of 14 impact assessments in the five major impact areas and their subareas. The results of the assessment reveal that the State Plan will offer improvement to the state of New Jersey in almost all of the measured indices; it will be a neutral factor in the remainder. The State Plan will save as much as \$2.3 billion in capital costs for local road and water and sewer infrastructure over the next 20 years and as much as \$160 million per year in reduced fiscal deficits statewide for municipalities and school districts. New Jersey residents will also reap the benefits of somewhat more afford-



able housing with the State Plan. Given these results and those that reveal savings in land consumption and improvements in quality of life and intergovernmental coordination, the study team concludes that the State Plan will help to make New Jersey a better place in which to live and work. More specific conclusions are found below.

Economic Assessment

The State Development and Redevelopment Plan, if carried forth to fruition, will sustain the economy of the state; maintain growth in all regions; redevelop urban communities, communities with more densely developed planning areas, and communities with urban, regional, and/or town centers to a greater extent than they would be under traditional development conditions; and strike an appropriate balance between economic and conservation measures. Under the State Plan, jobs will be created in all locations in the state, but especially in locations with the highest rates of unemployment. Further, the State Plan will help reduce the fiscal deficits of most local public-service providers (i.e., municipalities, school districts, and counties) and save operating costs because growth is directed to the more established and mature public-service providers.

Environmental Assessment

The State Development and Redevelopment Plan contains measures that clearly will protect the environment and improve environmental quality. Lands in a variety of categories are protected, and the quality of the state's natural environments will be improved or left basically unchanged.

One category of land saved is agricultural land, which is typically considered to be prime developable land as well. The PLAN scenario will save more than 50 percent of the agricultural lands that otherwise would be lost. At the same time, it will allow

development to occur on other lands. There are costs that accompany land preservation. Implementation of the State Plan will require the elected officials and citizens of New Jersey to address the equity concerns of farmland owners. If both of these conditions—preserving agricultural land and acknowledging the costs of farmland preservation—are addressed, there will be no negative impacts on the agricultural industry in New Jersey.

Much of the protection of natural resources attributable to the State Plan is the result of directing future development in and around locations of existing development or to new centers in outlying areas. These centers are targeted by the State Plan for growth; adjacent areas, or environs, are designated as limited-growth areas. The emphasis on center-oriented development will contribute significantly to the land savings discussed above.

Infrastructure Assessment

The State Plan will achieve savings in infrastructure costs in several functional areas. The potential savings are evident in terms of road costs, but they are also attainable in water and sewer infrastructure costs. Infrastructure costs will be reduced largely because of the redirection of development that will occur under the State Plan—i.e., the redirection of development to large centers and closer-in areas with established infrastructure systems as opposed to the direction of development to rural agricultural or environmentally fragile areas where new systems must be built.

Community Life Assessment

Quality of life in New Jersey, to the extent that it can be measured, will improve under either the TREND scenario or the PLAN scenario. Housing demand will be met by housing supply; housing costs overall will rise somewhat. Housing





Courtesy of A. Nelesen

