Planning Management System:
Using Targets and Indicators to Evaluate Public Policy Implementation

Bedminster Township
Somerset County

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Prepared by the Bedminster Township Planning Board
with assistance from Banisch Associates, Inc.

Introduction

Achieving the goals of Bedminster Township's Master Plan will require strategic implementation of its policies and recommendations. Measuring the success of local policies and strategic planning initiatives can be assisted by the development of a ***Planning Management System*** (PMS), which is a program that uses indicators to measure change over time. Indicators are measurable datasets that can be examined in a time series to discern patterns of activity or trends. This report details Bedminster's PMS and its role in the community planning process.

Somerset County has provided Bedminster with a matching grant to develop this Planning Management System, which is intended to advance the objectives of Bedminster's Master Plan, the State Development and Redevelopment Plan and the strategic planning initiatives of Somerset County. Bedminster's Master Plan was reviewed by the State Planning Commission (SPC) in 1995 and found to be highly consistent with the State Development and Redevelopment Plan (SDRP) and has been subsequently updated to achieve enhanced consistency with the SDRP, including the formal designation of Bedminster as a Village Center and Pluckemin as a Town Center.

Monitoring indicators can offer valuable insights into emerging trends. With careful selection of useful indicators and continuing updating of the PMS over time, the policies and regulations adopted by Bedminster's elected and appointed officials can be fine-tuned to better effectuate the township's vision to maintain and enhance Bedminster's ecological values, natural resource capabilities, historic and cultural assets, scenic vistas and desirable community character.

Fulfilling Bedminster's Master Plan Vision

Bedminster's Master Plan details a wide array of goals and objectives related to land use and management, natural resources, transportation, recreation and open space, historic and cultural resources, community design and agriculture. However, the Master Plan also includes a summary statement of Bedminster's Vision for the future, which crystallizes the essence of the numerous goals and objectives of the plan, which reads as follows:

> "This Master Plan is dedicated to preserving, protecting and enhancing Bedminster's natural and cultural resources, and promoting a sustainable future for the Township and the region. The vision for Bedminster's future is reflected in these key objectives:
>
> 1. Protecting and improving the quality of the air and water that flow through Bedminster, thereby enhancing regional air and water quality.
>
> 2. Conserving community character by carefully managing the scale and intensity of new development and retaining farmland and open spaces.

3. Preserving our cultural landscape by recognizing historic structures and districts, and managing change within the historic villages.

4. Protecting scenic vistas of the rural countryside and the villages and hamlets that impart the special character of Bedminster.

5. Providing a balance of opportunities to live, work and play in safe and attractive surroundings.

6. Maintaining an efficient circulation system that promotes important circulation linkages retains the rural road system and provides for pedestrian, equestrian and bicycle movements.

7. Expanding the Greenway system linking significant public open spaces along a network of pathways, waterways and significant natural features.

The Bedminster PMS is designed to assist the Township in achieving the goals of the township's Master Plan by providing a framework for measuring progress toward local goals. The PMS employs a series of indicators, organized around these principal Master Plan objectives, to provide baseline and succeeding measurements to identify trends.

Tracking these trends will provide valuable information, now and in the future, regarding the success of local policies and regulations in meeting the goals of the Master Plan. This report identifies a series of indicators that will be used to measure how well the key objectives of Bedminster's Master Plan are being met, and whether adjustments to land use policies should be made.

Table 1 provides a capsule summary of the findings of this study.

Table 1 Summary of Goals, Indicators and Trends

Desired Trend	Observed Trend	Indicator and Status
Air Quality		
↓	↓	**Ozone Pollution:** Number of times federal ozone standard is exceeded for a particular year. Trend shows fewer reported days of ozone exceedences.
↓	↓	**Commuting:** Methods of transportation by single occupant. Trend shows a .2% decrease in commuters who drive alone.
Water Quality		
↑	↑	**AMNET Monitoring**: Scores are currently stable and improving.
Community Character		
↑	↓	**Rural Character:** Percent of land cover in forest or agriculture state currently is decreasing.
↑	**TBD**	**Historic Resource**: Number of historic sites altered or protected. Not yet determined
↑	**TBD**	**Protect Scenic Vistas**: Viewsheds identified but building permits have not been analyzed.
Housing and Economic Availability		
↔	↔	**Housing Affordability**: Ratio of housing values to household income. Housing value: income ratio is stable between 1990 and 2000.
↓	↑	**Housing Conditions**: Percentage of housing units that are overcrowded. There has been an increase in overcrowding by .7%from 1990 to 2000.
↔	**TBD**	**Housing Availability:** Ratio of housing units to jobs. Not yet determined
↓	↓	**Unemployment Rate:** U.S. Census shows a self-reported reduction in unemployment rate from 2.3% in 1990 to 1.8% in 2000
Critical Environmental Areas		
↑	↓	**Wetlands**: Protection or loss of wetlands and wetland transition areas. Trend has shown a small loss of wetlands between 1986 and 1995.
↑	**TBD**	**Floodplains:** Acres of protected floodplain and transition areas. Not yet determined
↑	**TBD**	**Stream Corridors**: Acres of protected riparian areas. Not yet determined
Open Space and Recreation		
↑	↑	**Recreation, Greenways and Open Space Areas**: Acres of recreation land and preserved open space has been increasing for both the Township and the County.
Agricultural Retention		
↑	↓	**Agricultural Productivity:** Acres in Farmland Assessment, crops produced, and protection of prime soils. There has been an overall decrease in crop production and acres in farmland assessment in the last 20 years.
↑	↑	**Preserved Farmland**: Dramatic increase in the acres of preserved farmland.

***TBD** (To Be Determined) identifies indicators useful to the PMS which have not been quantified due to lack of available information or monitoring*

Developing Useful Indicators

An indicators program should provide useful data that will help measure success in achieving a coherent vision for a desirable future for the community. As noted above, Bedminster's Master Plan articulates a clear vision, and includes a wide range of policies designed to reach these goals. Indicators, which provide a way of measuring success toward these goals, are not an end in themselves. Rather, they are a tool for evaluating progress that can be used for decision making, planning and monitoring to achieve the Township's vision.

Indicators in State Planning

In New Jersey, a number of state departments such as Health, Education, Environmental Protection and Transportation have developed indicators to measure progress in meeting their respective goals. The New Jersey State Planning Commission examined the use of an indicators program to assist in measuring the success of State planning policies, and the adopted State Development and Redevelopment Plan (2001) includes a monitoring component that uses six (6) key indicators. The SPC explored the use of indicators[1] in the State planning process, and defined several terms related to a monitoring program as follows:

> "An ***indicator*** is data (e.g., the percentage of students graduating from public high school) collected and examined over some period of time (e.g., from 1990 to the present) to determine whether it suggests a trend (increasing or decreasing) or where it stands in relation to some standard or benchmark (e.g. 95% have achieved a diploma). An indicator is a pointer that can be used to help evaluate policy or the allocation of resources. Although new information or data collected over only two time periods can be very useful, three data points are needed to show a trend. Therefore, in order to serve as an indicator, the data has to be collected and analyzed in a consistent fashion over three or more time periods.
>
> A ***target*** is the value we would like the indicator to have, the state of things we are working toward (e.g., eventually, we would like 98 percent of all high school students to graduate).
>
> A ***benchmark*** is a reference point that is used to evaluate a trend in an indicator. It could be where we started; it could be the target, or some intermediate point: (e.g., during the next five years, we would like to get halfway to our target)."

In its review of indicators programs, the SPC noted that many programs do not have either targets or benchmarks. It also notes that some programs have targets for some

[1] Developing Indicators and Targets during Cross-Acceptance**.** Robert Kull and William Bauer. New Jersey Office of State Planning, June 1998.

indicators, but not for all, such as the unemployment rate, which is used to sense the direction of the national economy, but for which there is no national policy target.

Targets and benchmarks can be attached to specific times or not. A desire to meet the target for an indicator by 2010 could have milestones in two-year increments. There are instances in which not attaching specific years to targets and milestones may be the more responsible approach. The most common of these is when we do not know a lot about the dynamics of the indicator or about the relationship between the indicator and the measures being used to affect it. In such cases, the indicator itself is the more important tool to be used in learning about that relationship.

The 1998 SPC study also examined the criteria for selecting indicators and recommended that indicators meet the following criteria:

1. The indicator can be drawn from an existing database or an easily created new database.
2. The database from which the indicator is drawn is clearly defined, reliable and, if necessary, can be verified.
3. The data on which the indicator is based is collected on a regular basis so that the indicator can be compared to itself over time.
4. The data is available at an appropriate scale (e.g., town, census tract).
5. The indicator is easy to understand.
6. The indicator measures the results we want to achieve, rather than the effort that goes into achieving results.
7. Where possible and appropriate, the indicator should be comparable across political boundaries

As noted in the SDRP, the State Planning Act requires the State Planning Commission to include "appropriate monitoring variables and plan targets in the economic, environmental, infrastructure, community life and intergovernmental coordination areas to be evaluated on an on-going basis...".

In response to this mandate, the 2001 SDRP identifies six key indicators that relate to these five policy areas, as follows:

1. New development, population and employment located in the Metropolitan and Suburban Planning Areas or within Centers in the Fringe, Rural and Environmentally Sensitive Planning Areas;
2. The amount of land permanently dedicated to open space and farmland preservation;
3. Percent of New Jersey's streams that support aquatic life;
4. Meet present and prospective needs for public infrastructure systems;
5. Progress in socioeconomic revitalization for the 68 municipalities eligible for Urban Coordinating Council assistance;
6. The degree to which local plans and state agency plans are consistent with the State Plan.

The SDRP also identifies an additional twenty-seven additional indicators to provide greater detail for each category, and notes that the Office of State Planning will track these indicators annually, as well as other indicators that may be appropriate.

The SDRP advocates what is known as a "balanced scorecard" approach to public policy and strategic planning. This approach "balances broader outcome measures that assess how policies affect the outside world with targeted input and output measures of government functions", and is also used in New Jersey Future's Sustainable State indicators and the Department of Environmental Protection's National Environmental Performance Partnership System (NEPPS). The SDRP also encourages local government agencies to develop and maintain their own balanced scorecard of input, output and outcome measures, and link these measures with the outcome measures of the State Plan to provide a strategic framework for assessing public policy and State Plan goals.

Indicators in Regional Planning

Regional planning organizations, such as the Delaware Valley Regional Planning Commission (DVRPC), have also adopted indicators as part of regional land use and transportation plans. DVRPC's "Directions 2020" initiated its indicators program, which was further refined in the report titled "Horizons 2025"[2]. Where the 2020 Plan detailed a physical plan for future development and transportation facilities in conjunction with goals, policies and recommended actions in eight specific areas, "Horizons 2025" proposes additional development and transportation facilities in eight specific areas, including:

Physical Form	Economic Development
Traffic Congestion	Freight Movement
Environment	Mobility
Air Quality	Housing

"Horizons 2025" presented 26 refined indicators to collectively track the region's progress toward DVRPC's adopted goals, and the criteria recommended for selecting meaningful indicators were as follows:

> *Outcome-based.* The indicators focus on the results or outcomes of policies rather than simply reporting inputs such as dollars or labor hours invested.
>
> *Regional in geographic scope.* With very few exceptions, indicators report results for the entire Delaware Valley nine-county region. County or other local data are, in some cases, provided to illustrate differences within the region. Instances where Pennsylvania and New Jersey use different reporting standards or data definitions and therefore are not directly comparable are highlighted in the text and tables of this report.

[2] Regional Indicators: Measuring Our Progress to 2025, DVRPC (2000).

Measurable over the long range. In order to analyze trends, DVRPC relied on data series that have at least four or five years of historic data and that have a reasonably strong likelihood of continued availability in years to come.

Publicly available data sources. Due to the high cost of data collection and the need for consistent and continuing reporting, DVRPC relied on existing public sources for the vast majority of indicators.

DVRPC also recommended that, in order to keep the report widely accessible, highly technical indicators, of interest to only specialists in a particular discipline, were not included.

Indicators in Local Planning

Indicator use by local governments is increasing, particularly in cases where local master plans establish goals and objectives consistent with those of the SDRP. The State Planning Commission has made the establishment of targets and indicators a work program feature in the Planning and Implementation Agendas (PIA) for designated centers and endorsed plans. In the case of Bedminster Township, with the center designation of Bedminster and Pluckemin, the PIA provides that:

> "The Planning Board shall establish appropriate targets and indicators for Centers/Environs land use management strategy, (i.e. infill and redevelopment in center, protection of natural systems, water quality and quantity, and open space preservation in the environs)."

DVRPC cited the limited amount of data that is collected at the regional level as a major challenge to developing meaningful indicators. This applies to data availability at the local level as well. While the US Census generally provides consistent and detailed coverage across the state and the nation, it is collected only once every ten years, limiting the frequency of monitoring and feedback. Additionally, values like "community character" and a "sustainable environment" may be more difficult to monitor than those for which clearly quantifiable indicators are available, like traffic accidents or the number of construction permits issued.

Bedminster's Environmental Indicators Plan

Bedminster's Environmental Commission prepared the Bedminster Environmental Indicators Plan (EIP) with the assistance of the Upper Raritan Watershed Association (URWA) in 2002. The purpose of this section is to review the components of the Environmental Indicators Plan and how it complements the Planning Management System.

The Bedminster Environmental Indicators Plan is designed to provide a broad framework for the collection, analysis and application of basic environmental information. This information is to be utilized by the Environmental Commission in discharging its advisory and statutory responsibilities. Additionally, the Planning Board will be able to utilize the

information in future Master Plan development, development of new regulations and development review functions.[3]

The Bedminster Environmental Indicators Plan focuses on six indicators, including:

1. Open spaces and protected open spaces,
2. High value agricultural soils,
3. Surface water quality,
4. Groundwater quality/quantity,
5. Impervious Coverage and
6. Stream corridors

The Bedminster Environmental Indicators Plan calls for an action plan to address each indicator, which would involve

- defining the feature (e.g. develop a working understanding of the wetlands classification system),
- obtaining available data on the feature,
- mapping the feature,
- conducting an analysis of the feature and
- comparing data for feature from one period to another. (e.g. wetlands data from 1986 and 1995)

The Planning Management System, which is designed to advance the goals of the Master Plan, establishes indicators to measure a variety of conditions. These indicators include the areas of concern reflected in the EIP, as well as other concerns identified in the Master Plan.

Bedminster's Planning Management System

The criteria for establishing indicators have considered the ease of data collection, data availability and ability of time-series data comparisons to demonstrate outcomes. The Planning Board explored the use of specific targets for each indicator, but concluded that precise targets could not readily be identified and that desirable trends, which are easily discerned, are a better basis for determining progress.

The following summary identifies the overarching goals of the Master Plan, and the indicators that can be used to measure progress toward these goals. A policy background statement is included for each indicator, along with a summary of observed trends. In some cases, useful indicators are identified, despite the fact that there is not currently sufficient data to permit a trend analysis. However, these indicators are included so that they may be developed as the PMS is refined over time.

Identified Goals, Indicators and Trend Summary

Appendix A provides a detailed outline of the goals, indicators and trends identified in the PMS, which are described in further detail below.

[3] Bedminster Environmental Indicators Plan, June 25, 2002, Page 3.

1. Goal: Improve air quality

1.1 Indicator: Number of times Federal Ozone Standard is exceeded for a particular year.

1.2 Policy Background: Air quality plays a critical role in the health of people, the environment, and the economy. It is strongly affected by production, transportation, and elation patterns. Poor quality diminishes the attractiveness of communities as a place to work and live. Since NJDEP began collecting data in the late 1960s, air quality has improved dramatically.

At the present time the state is meeting the National Ambient Air Quality Standards (NAAQS) for all air pollutants with the exception of ground level ozone. In 1997, NAAQS for ozone and particulate matter were established, making this standard more stringent and difficult to attain. The new standard focuses on smaller particulate matter and a new monitoring program was established to measure levels of these particles, but there is not sufficient data to determine whether the standard is being met.

1.3 Trend: Overall, the trend in ozone levels in the past decade has been downward and significant progress has been made towards attaining this standard. Year to year fluctuations in the number of ozone exceedance days are due in part to variations in weather, with heaviest loading in summertime and during years with higher temperatures. Ozone measurements taken at Chester, the closest monitoring station to Bedminster, indicate a downward trend in ozone exceedances. In 1998, 22 eight-hour ozone exceedances were observed while in 2004 there were no exceedances of the eight-hour ozone standard. This is a desirable trend, but results from 2004 were unusually low and should not be interpreted to reflect an elimination of ozone exceedance occurrences.

2. Goal: Improve air quality

2.1 Indicator: Percentage of commuters who drive to work alone.

2.2 Policy Background: The indicator measures the extent to which commuting alternatives are used from Bedminster. The increasing number of single-occupant vehicles on the road exacerbates congestion and pollution from motor vehicle exhaust, which is a primary catalyst for ozone exceedances. These single occupant vehicle (SOV) trips significantly degrade regional air quality. Alternatives to SOV trips, such as car pools, van pools, public transit, biking and walking should be maximized to the extent practicable. The number of resident worker SOV home-to-work trips is provided by the U.S. Department of Commerce's Census Bureau every ten years. Resident worker data refers to where workers live as opposed to their places of employment. A lower percentage of SOV trips indicates a greater usage of transportation alternatives which should correlate with improving air quality.

2.3 Trend: Somerset County and neighboring counties have witnessed varying trends in SOV trips. While about 90% of Somerset County commuters drove to work alone in 2000, comparable to the number who drove alone in 1990, Morris County saw an increase in SOV

trips (89% in 1990 to 91% in 2000) and Middlesex County saw a decrease in SOV trips (96% in 1990 and 87% in 2000). Bedminster saw a minor reduction in the number of commuters who commute to work (1990 – 95%, 2000 – 92.7%). However, the proportion who drive alone to work remained relatively constant. (1990 – 87.3%, 2000 – 87.0 %)

3. Goal: Maintain and improve water quality

3.1 Indicator: AMNET Biological Monitoring is conducted by NJDEP through water quality sampling around the state. Within Bedminster Township, seven water quality monitoring locations are included along Peapack Brook, the North Branch of the Raritan River, Middle Brook, Herzog Brook, Lamington River and Chambers Brook.

3.2 Policy Background: NJDEP's AMNET Biological Monitoring Program evaluates the biological health of New Jersey's streams and rivers. Water sampling measurements are taken to determine benthic macro-invertebrate populations, which are found in abundance in high quality waters and whose populations decline as water quality deteriorates.

3.3 Trend: Water quality monitoring locations along Peapack Brook, the North Branch, Herzog Brooke, and the Lamington River, all exhibited the highest AMNET scores possible in both 1993 and 1998. These monitoring locations are found in generally less developed portions of the community. Evidence of impairment was observed in 1993 at two monitoring stations along Middle Brook and one on Chambers Brook, as seen on Table 2. However, it is noteworthy that the scores in Middle Brook increased between 1993 and 1998, despite the continued prevalence of agricultural activities within this sub-watershed area. Greatest water quality degradation was observed in Chambers Brook, which is heavily influenced by the development that has occurred in and around the Pluckemin vicinity. Chambers Brook rated moderate water quality in both 1993 (Amnet score 21) and 1998 (Amnet score 18) although the scoring indicates a decline in water quality based on Amnet scores. The locations where the results portrayed in Table 2 were obtained are illustrated on Figure 1.

TABLE 2 – AMNET MONITORING SCORES AND RATINGS

Site ID	Stream	1993 Score	Rating	1998 Score	Impairment Rating	Trend
AN0350	Peapack Brook	30	NONE	30	NONE	stable
AN0351	North Branch	30	NONE	30	NONE	stable
AN0354	Middle Brook	27	NONE	30	NONE	stable
AN0355	Middle Brook	12	MODERATE	24	NONE	improved
AN0361	Herzog Brook	30	NONE	30	NONE	stable
AN0370	Lamington River	30	NONE	30	NONE	stable
AN0371	Chambers Brook	21	MODERATE	18	MODERATE	declined

4. Goal: Retain community character

4.1 Indicator: Changes in land cover type.

4.2 Policy Background: NJDEP has interpreted land cover types from aerial photographs over several periods. Since the essential community character of Bedminster Township is most frequently identified with its rural countryside and historic villages, changes in land cover can help to measure changes in community character.

4.3 Trend: A review of 1986 and 1995 land use and land cover data indicates a minor (22.8 acre) increase in urban land, and an even larger reduction in agricultural land (42.2 acres lost) and forest land (38.3 acres lost). NJDEP is currently interpreting 2002 aerial photographs, which will provide important information for comparison purposes as they will reflect continuing development in the highway corridor area.

While the data suggests minor land cover changes between 1986 and 1995, this should be viewed with some skepticism since substantial development at The Hills and throughout the Pluckemin and Bedminster village areas occurred during this period.

5. Goal: Protect historic resources

5.1 Indicator: The number of alterations to historic sites approved by the Historic Preservation Commission (policy background).

5.2 Policy Background: The 2003 Master Plan includes an expansive inventory of historic resources as part of the Historic Preservation Plan. The Historic Preservation Commission issues Certificates of Appropriateness for alterations to historic structures. However, no compilation of this data has been accomplished to date.

5.3 Trend: Certificates of Appropriateness should be catalogued to identify the trend in alterations to historic structures that are found not to be in keeping with the historic character to be protected. Anecdotal evidence suggests that the Historic Preservation Commission does a thorough job reviewing proposals for new construction or alterations within the designated historic districts, and in general, applicants cooperate with the HPC to the extent where their proposals are typically deemed appropriate by HPC review. Compilation of Certificates of Appropriateness authorized since formation of the Historic Preservation Commission could assist in better understanding this trend, although alterations to isolated historic structures, not situated within historic districts, may occur without HPC review.

6. Goal: To promote housing opportunities

6.1 Indicator: Number and percent of overcrowded housing units (greater than 1.01 persons per room).

6.2 Policy Background: Residential crowding has been used as one indicator of extent to which a community's housing stock meets the housing needs of the local population. According to the U.S. Census guidelines, overcrowding occurs when there is more than 1 person per room in a dwelling unit. Overcrowding is a functional and temporal phenomenon, since it is not intrinsic to the dwelling unit but rather to the household that occupies the unit.

6.3 Trend: In 1990, 39 units were rated as overcrowded, compared with 75 units in 2000, a near doubling. This resulted in a small increase in the proportion of overcrowded units (1990 – 1%, 2000 – 1.7 %). The increase in crowding, while not alarming, should be monitored to determine whether this is an increasing trend.

7. Goal: Improve housing opportunities

7.1 Indicator: Ratio of housing value to household income.

7.2 Policy Background: The rapid increase in housing values in New Jersey prompts concern that housing will become less affordable if incomes do not rise at a comparable rate. However, Bedminster currently has exceeded its State-mandated affordable housing obligation and has in excess of 500 credits toward the Third Round Council on Affordable Housing (COAH) obligation for the period 2004 to 2014.

7.3 Trend: Bedminster has maintained a stable ratio housing value to household income. US Census data indicates that in 1989 the average housing value was $199,200 while the average household income was $62,545. This resulted in a housing value to household income ratio of 3.18. By 1999, housing value had grown to $228,000 while household income had grown to $71,550. This generated a ratio of 3.19, reflecting a stable trend in housing value to household income. It is noteworthy, however, that a significant run-up in real estate values has occurred since 1999, and it cannot be assumed that incomes have increased in lock-step. Nonetheless, Bedminster's extensive supply of affordable housing serves as an effective counter force to this increasing housing price trend.

8. Goal: Desirable employment opportunities

8.1 Indicator: Jobs to housing ratio

8.2 Policy Background: Public policy analysts have long recognized the value of balancing the number of jobs with the number of housing units within a community to the greatest extent practicable. While an equal jobs:housing ratio does not indicate that residents work within the community, it provides for a balance between employment and housing opportunities and promotes a beneficial municipal fiscal picture.

8.3 Trend: In 1990, there were 1.2 jobs per housing unit in Bedminster. This desirable ratio reflects Bedminster's regional location, which has attracted major regional employers. A direct comparison cannot be made to 2000, when comparative job data was not available. Thus, it is not possible to determine a current trend from available information.

9. Goal: Protect scenic vistas

Indicator: Number of building permits issued within identified scenic viewsheds

9.2 Policy Background: Bedminster Township prepared a scenic resource management plan with the aid of a Municipal Planning Partnership Grant from Somerset County which has identified scenic viewsheds throughout the township. The plan specifies a variety of scenic resource characteristics and suggests a review procedure when new development is proposed within scenic corridors or viewshed areas.

9.3 Trend: Since the completion of the Scenic Resource Management Plan, limited development has occurred, and no analysis of permits within these viewsheds has been prepared.

10. Goal: Promote agriculture

10.1 Indicator: Acres and farmland assessment

10.2 Policy Background: The Farmland Assessment Act of 1964 was enacted by the legislature to prevent the rapid conversion of farmland due to the real estate tax burden. Since that time, farmland assessment has substantially reduced taxation on farmland and allowed thousands of acres to continue in agricultural production while also discouraging its conversion to our uses. While rollback provisions incorporated in the Act require the repayment of a portion of the reduced taxes when the land comes out of agricultural production, farmland assessment has nonetheless allowed major land speculation over the extended period.

10.3 Trend: Bedminster Township's farmland assessment has remained relatively stable over the last several decades. In 1980, over 12,000 acres were under farmland assessment, a total which was reduced to 11,687 by the year 2000, accounting for a loss of 23 acres per year.

11. Goal: Promote Agriculture

11.1 Indicator: Acres and cropland harvested

11.2 Policy Background: Tracking acreage of cropland harvested identifies the areas in actual agricultural production, distinguished by type of crop or farming activity. Bedminster's agricultural base study, which was highlighted by the State Planning Commission in its Master Plan Consistency Report on Bedminster's Master Plan in 1995, examined a wide array of characteristics of about local agriculture including cropland harvested.

11.3 Trend: Bedminster's acreage in cropland has remained relatively stable since 1980 when 10,870 acres were in production. By the year 2000, that total had been reduced by

only 30 acres to 10,840, representing an annual decrease of 1.5 acres of cropland in production.

12. Goal: Protect prime farmland

12.1 Indicator: Number of acres of preserved farmland

12.2 Policy Background: Acreage in preserved farmland is an indicator of the permanence of agriculture activity in a community or region. The value of preserved acreage is important both quantitatively and qualitatively. Protecting a substantial number of acres from development through farmland preservation is a key objective for communities attempting to retain their agricultural land base and farming as a local economic activity. Qualitatively, the location of preserved farmlands can also serve as a catalyst for the preservation of surrounding lands suitable for continuing agriculture.

12.3 Trend: While Bedminster was a late starter in the Farmland Preservation Program, with no acreage preserved in 1993, by 2005 Bedminster included 559 preserved farmland acres. This represents an annual increase averaging 46.6 preserved farmland acres per year.

13. Goal: Expand the Greenway

13.1 Indicator: Number of acres of Open Space

13.2 Policy Background: Public open space in Bedminster is owned by the State of New Jersey, Somerset and Morris Counties, and Bedminster Township. Over the last two decades, Bedminster has aggressively pursued open space preservation, acquiring a core of preserved recreation land between Bedminster Village and Pluckemin including "The Pond", River Road Park, The Hills Open Space (Block 59 Lot 1), the AT&T Open Space Dedication along Schley Mountain Road and a series of additions to the core recreation lands, as well as new reservation lands along Peapack Brook and the North Branch of the Raritan River.

The location of these preserved lands makes them uniquely valuable to most township residents. Bedminster and Pluckemin village residents can readily walk, jog, or ride their bike by way of the Township's intricate Bike & Hike Trail, which connects Bedminster Village and Pluckemin via a safe route of travel through the State highway corridor area.

13.3 Trend: State open space ownership has remained constant since 1993 with approximately 18 acres at (Hacklebarney State Park). County land ownership has increased dramatically from 44 acres in 1993 to 380 acres as of 2005, representing an annual increase of 28 acres of preserved County open space. By 1993, the township's preserved land base included 468.7 acres, and by the year 2005 this total had increased to over 630 acres, representing an annual increase of 13 ½ acres over the twelve year period of 1993 to 2005.

14. Goal: Protect natural resources

14.1 Indicator: Number of acres of wetlands lost.

14.2 Policy Background: Wetlands perform a variety of important natural resource functions including filtering contaminants from surface water, absorbing flood waters, and providing important wildlife habitat areas. State and National Freshwater Wetlands Regulatory Programs have severely curtailed the extent to which the filling of wetlands is permitted in recent years. However, Freshwater Wetlands Regulations in New Jersey still provide for limited wetland filling to accommodate the needs of development and other uses.

14.3 Trend: Land use land cover information interpreted by NJDEP indicates that in 1986 1,090 acres were identified as wetlands whereas by 1995 this total had been reduced to 1,035 acres. This represents a loss of 55 acres over the 9-year period (6.1 acres per year). It also does not include the activities of the last ten years, where statewide general permits have continued to be issued for development activities that involve wetlands filling. When 2002 aerial photo interpretations become available in early 2006, comparative data should be analyzed for this and all interpreted land cover features.

15. Goal: Protect natural resources

15.1 Indicator: Number of acres of wetlands buffers filled

15.2 Policy Background: Regulatory wetland transition areas have been required around wetlands to buffer the effects of manmade activities. NJDEP's Freshwater Wetlands Permitting Program allows the filling and/or disturbance of some wetland buffer areas under an averaging approach, where additional acres are added to the width of the buffer in one location to make up for those taken away in another location. While wetland buffer acreage is not as critical for environmental integrity as the acres of wetlands themselves, when these wetland buffers are eliminated in a highly sensitive area and relocated into an area of much lesser sensitivity, the functional value of these buffers can be compromised.

15.3 Trend: At this time no easy method of tracking the area of disturbed wetlands transition areas is available. However, research of records at NJDEP could yield insights into the extent of disturbance in this area.

16. Goal: Protect natural resources

16.1 Indicator: Number of acres affected by Stream Encroachment Permits

16.2 Policy Background: NJDEP regulates encroachments within regulated stream corridors and issues permits for permitted activities. This allows DEP to quantify the extent of manmade impacts within these stream corridor areas.

16.3 Trend: At this time no easy method of tracking the area of disturbed stream corridors areas is available. However, research of records at NJDEP could yield insights into the extent of disturbance in this area.

17. Goal: Protect natural resources

17.1 Indicator: Number of acres of floodplain filled

17.2 Policy Background: Floodplains are important natural areas which accommodate (?) of reoccurring stream overflow during peak periods of rainfall and flooding. As such they perform an important function by accommodating these floodwaters and providing a variety of important habitat areas for wildlife. Federal floodplain regulations tolerate filling of floodplains (not to exceed 20% net fill) but the long term effects of such policies are likely to exacerbate flooding in areas outside the floodplain.

17.3 Trend: At this time no easy method of tracking the area of disturbed floodplain areas is available. However, research of records at NJDEP could yield insights into the extent of disturbance in this area.

Maintenance of the Planning Management System

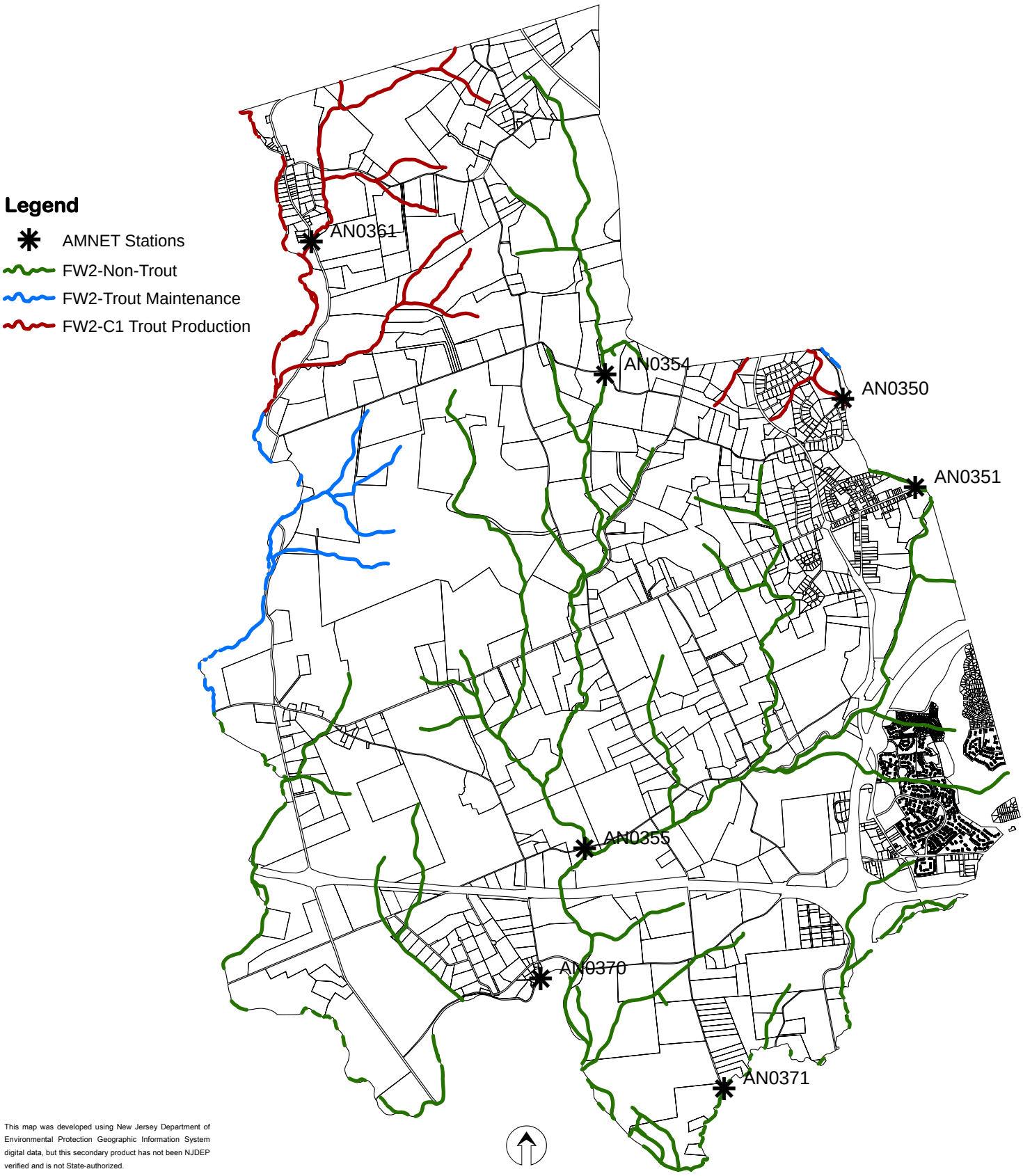
The usefulness of a Planning Management System relies upon its maintenance and monitoring over time. This will involve continuing evaluation of the usefulness of the selected indicators, and the addition or substitution of alternative measures when appropriate. Some data will be collected by other agencies and is only a click away on the internet. Other information will require more perseverance to be useful.

At the same time, the Planning Board should monitor indicator programs of other agencies, such as State agencies, Somerset County and other municipalities and regional entities. Since targets and indicators are seen as an important component of plan endorsement by the State Planning Commission, many other municipalities will be developing indicator programs that may be useful for comparison. These investments by other agencies will provide an opportunity for data sharing and methodology exchange.

Figure 1:
AMNET Monitoring Stations
Township of Bedminster

July 2005

Site ID	Stream	1993 Score	Rating	1998 Score	Rating
AN0350	Peapack Brook	30	NONE	30	NONE
AN0351	North Branh Raritan River	30	NONE	30	NONE
AN0354	Middle Brook	27	NONE	30	NONE
AN0355	Middle Brook	12	MODERATE	24	NONE
AN0361	Herzog Brook	30	NONE	30	NONE
AN0370	Lamington River	30	NONE	30	NONE
AN0371	Chambers Brook	21	MODERATE	18	MODERATE



This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been NJDEP verified and is not State-authorized.

Data Sources:
NJDEP

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