RULS-AD-1978-105

9-1978

Review of Ecological Planning,
Bedminster

6 pgs.

PD-23 end
11/28/84 - EDS

A REVIEW OF ECOLOGICAL PLANNING IN BEDMINSTER TOWNSHIP, N.J.

By

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Prepared for

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September, 1978

A. The Ecological Approach to Planning -- [illegible]

(1) Objectives

(2) Method

o Inventory Phase --
  climate
  geology
  physiography
  ground water hydrology
  surface water hydrology
  soils
  vegetation
  wildlife

o Interpretive Phase --
  Locations inherently hazardous to human life
  Locations hazardous to human life and health by specific human actions
  Irreplaceable unique or scarce resources
  Vulnerable resources requiring regulation to avoid social costs

  High resource productivity (e.g., minerals, agriculture)
  On-site development costs (e.g., for building foundations, water supplies, etc.)
  Desirable locations (e.g., topographic interest, vegetation diversity)
  Desirable activities (e.g., historic preservation, outdoor recreation)

o Performance Specifications Phase -- examples
  Ground water management
  Surface water management
  Vegetation management
  Erosion management
  Wildlife management

(3) Examples of Ecological Planning

Ecological Planning Study of the Minneapolis-St. Paul Metropolitan Region
Comprehensive Highway Route Selection Method -- Interstate 95, N.J.
Ecological Planning Study of Skippack Watershed, Montgomery County, Pa.
Ecological Planning Study of Wilmington and and Dover, Vt.
Ecological Planning Study for Woodlands, New Town, Texas
Comprehensive Plan for Sanibel Island, Florida
Ecological Planning Study for San Francisco Metropolitan Region (MTC)
Ecological Planning Study of the Denver Metropolitan Region
Lake Austin Growth Management Plan, Austin, Texas
Ecological Planning Study for Medford, New Jersey

B. A Review of Ecological Planning in Bedminster Township

(1) Review of Township's Inventory

(a) Data Sources -- Natural Resource Inventory for Bedminster Township

(b) Data Summary

Geology	Most of Township in triassic shale. Northern section in Pre-cambrian gneiss. Parts of the Township are overlain by glacial drift.
Physiography	Gently rolling topography, with slopes over 25% found on the traprock ridges east of Route 206, north of Pottersville Road, and along stream valleys.
Ground Water	Relatively dependable water resources for widely spaced domestic supplies, but not adequate for industry or public water supply for dense populations.

Surface Water Hydrology	Township is in the upper watershed of the North Branch of the Raritan River. Five subwatersheds in the Township. Each contribute varying amounts of point and non-point pollution to the North Branch, which is classified as FW2 by the N.J. D.E.P., meaning that it may be used for public water supply after treatment, and that it is suitable for the maintenance, migration and propegation of natural and established biota, etc. Water quality sampling indicates that certain sections of the North Branch at certain times of the year have reached their "assimilative capacity".
Soils	29 mapped soil series in the Township. Poor drainage wetness, and a high water table are common problems throughout the Township.
Vegetation	Forests in the Township predominantly are oak-hickory association. Conifer plantations are common. Old field succession occurring in numerous locations. Large part of Township in hay crops and pasture land.
Wildlife	No information.

(2) Review of Township's Data Interpretations

Stream Overflow Hazards
Prime Agricultural Lands
Floodplains
Septic Effluent Disposal Limitations

Agricultural Suitability
Critical Impact Areas - High Water Table
Critical Impact Areas - Bedrock
Critical Impact Areas - Erodibility and Slope
USGS Gladstone Quadrangle with URWA Notations
Ground Water Resources
Combined Building Limitations
Soils Appropriate for Spray
Corridor Study Maps

(3) Review of Performance Standards in Township's Zoning Ordinance (Amended as of August 21, 1978)

(a) Assuming that ecological inventory and interpretations are accurate and valid, they are only marginally reflected in the zoning ordinance.

Examples

Art. 4.1 (para 4) -- Encourages clustering to protect aquifers.

Art. 8.1 -- recognition of floodway areas and slopes over 15%. However, permitted uses, particularly on slopes over 15% may be: (1) unnecessarily restrictive and (2) more environmentally damaging than a number of uses which are not permitted, e.g., crop agriculture versus low density residential development. The article fails to provide performance standards which are realistic or effectively protective of the environmental values which the ordinance recognizes, namely ". . . the quality of soils, the underlying formations and water potentials".

Art. 16.2.2 -- pervious surfaces to reduce storm runoff. However, the requirement that all parking areas have pervious surfaces is unrealistic, given the variety of site conditions in the Township and the fact that pervious paving materials have not been in use for a sufficient period of time to provide enough evidence that they should be required under all circumstances.

(b) The zoning ordinance contains a number of provisions which cannot be defended on the basis of ecological planning.

Examples

Art. 3.2 -- Zone boundaries, except where shown otherwise, are based upon center lines of streets, property lines or center lines of streams. Except for designated critical floodplain and steep slope areas, the boundaries of zoning districts cannot be defended on the basis of ecological planning data which I have reviewed.

Art. 10.1 -- Regulations controlling floor area ratio, lot size, etc. are set forth in Schedule "A" of the ordinance. Maximum floor area ratio figures and minimum lot sizes based on specified diameters of circles cannot be supported by the ecological planning data which I have reviewed.

C. Summary of Findings

(1) Bedminster has undertaken some studies which indicate its interest in ecological planning in the Township.

(2) However, the findings of those studies are only marginally incorporated in the Township's zoning ordinance.

(3) Finally, the Township's zoning ordinance contains performance specifications which do not appear to be supported by the Township's ecological planning analysis.