

Appendix D -- Non-Structural Review of Plan, Ordinances

Municipal Regulations Review

Township of Barnegat

As part of the requirements for municipal stormwater management plans in the Stormwater Management Rules at N.J.A.C. 7:8-4, municipalities are required to evaluate the municipal master plan, and land use and zoning ordinances to determine what adjustments need to be made to allow the implementation of nonstructural stormwater management techniques, also called low impact development techniques.

This checklist, included in the New Jersey Best Management Practices (BMP) Manual, was prepared to assist municipalities in identifying the specific ordinances that should be evaluated, and the types of changes to be incorporated to address the requirements of the Stormwater Management Rules. It was used to review the Township of Barnegat's compatibility with the nonstructural stormwater management techniques, including the Township Master Plan and Ordinances:

Part 1: Vegetation and Landscaping

Effective management of both existing and proposed site vegetation can reduce a development's adverse impacts on groundwater recharge and stormwater runoff quality and quantity.

A. Preservation of Natural Areas

Municipal regulations should include requirements to preserve existing vegetated areas, minimize turf grass lawn areas, and use native vegetation.

Yes **No** Are applicants required to provide a layout of the existing vegetated areas, and a description of the conditions in those areas?

YES – In general places within Article V, Subdivision Regulations, and Article VI, Subdivision Regulations.

Yes **No** Does the municipality have maximum as well as minimum yard sizing ordinances?

Minimum yard size only, per Code Section 55-62, Schedule of Area, Yard, and Building Requirements.

Yes **No** Are residents restricted from enlarging existing turf lawn areas?

Yes No Do the ordinances provide incentives for the use of vegetation as filters for stormwater runoff?

Section 55-122.2, Landscaping, references use of landscape for retention basins, detention basins and swales.

Yes No Do the ordinances require a specific percentage of permanently preserved open space as part of the evaluation of cluster development?

Per Section 55-63, Cluster Development, 20% open space is required for clustering within RL and RL/AC Zones.

B. Tree Protection Ordinances

Municipalities often have a tree ordinance to minimize the removal of trees and to replace trees that are removed. However, while tree ordinances protect the number of trees, they do not typically address the associated leaf litter or smaller vegetation that provides additional water quality and quantity benefits. Municipalities should consider enhancing tree ordinances to a forest ordinance that would also maintain the benefits of a forested area.

Yes No Does the municipality have a tree protection ordinance?

However, per Section 55-122.2, Landscaping, areas containing trees and vegetation must be preserved. In addition, Section 55-172, Natural Features, requires trees to be preserved whenever possible.

Yes No Can the municipality include a forest protection ordinance?

Yes No If forested areas are present at development sites, is there a required percentage of the stand to be preserved?

Per site design regulations within the Code, including Pinelands and CAFRA regulations, where applicable.

C. Landscaping Island and Screening Ordinances

Municipalities often have ordinances that require landscaping islands for parking areas. The landscaping islands can provide ideal opportunities for the filtration and disconnection of runoff, or the placement of small LID-BMPs. Screening ordinances limit the view of adjoining properties, parking areas, or loading areas. Low maintenance vegetation can be required in islands and areas used for screening to provide stormwater quality, groundwater recharge, or stormwater quantity benefits.

Yes **No** Do the ordinances require landscaping islands in parking lots, or between the roadway and the sidewalk? Can the ordinance be adjusted to require vegetation that is more beneficial for stormwater quality, groundwater recharge, or stormwater quantity, but that does not interfere with driver vision at the intersections?

Landscaping is to be provided per Section 55-122.2, Landscaping. Section 55-122.2 allows use of vegetation in drainage facility design.

Yes **No** Is the use of bioretention islands and other stormwater practices within landscaped areas or setbacks allowed?

Per Section 55-122.2, Landscaping.

Yes **No** Do the ordinances require screening from adjoining properties? Can the screening criteria require the use of vegetation to the maximum extent practicable before the use of walls or berms?

Per Section 55-122.2.

D. Riparian Buffers

Municipalities may have existing buffer and/or floodplain ordinances that require the protection of vegetation adjacent to streams. Municipalities should consult existing regulations adopted by the Department to ensure that riparian buffer or floodplain ordinances reflect the requirements of the Department within these areas. The municipality should consider conservation restrictions and allowable maintenance to ensure the preservation of these areas.

Yes **No** Is there a stream buffer or floodplain ordinance in the community?

Section 55-126.6, Floodplain Regulations.

Yes **No** Is the ordinance consistent with existing state regulatory requirements?

Ordinances are consistent with Federal Insurance Agency and NJDEP requirements.

Yes **No** Does the ordinance require a conservation easement, or other permanent restrictions on buffer areas?

Per Section 55-126.6, developments traversed by water courses must provide easements.

Yes **No** Does the ordinance identify or limit when stormwater outfall structures can cross the buffer?

Yes No Does the ordinance give detailed information on the type of maintenance and/or activities that is allowed in the buffer?

Part 2: Minimizing Land Disturbance

The minimization of disturbance can be used at different phases of a development project. The goal is to limit clearing, grading, and other disturbance associated with development to protect existing features that provide stormwater benefits. Zoning ordinances typically limit the amount of impervious surfaces on building lots, but do not limit the amount of area that can be disturbed during construction. This strategy helps preserve the site's existing hydrologic character, as well as limiting the occurrence of soil compaction.

A. Limits of Disturbance

Designing with the terrain, or site fingerprinting, requires an assessment of the characteristics of the site and the selection of areas for development that would minimize the impact. This can be incorporated into the requirements for existing site conditions and the environmental impact statement. Limits of disturbance should be incorporated into construction plans reviewed and approved by the municipality. Setbacks should be evaluated to determine whether they can be reduced. The following maximum setbacks are recommended for low impact development designs:

- front yard – 20 feet;
- rear yard – 25 feet; and
- side yard – 8 feet.

Yes No As part of the depiction of existing conditions, are environmentally critical and environmentally constrained areas identified? (Environmentally critical areas are areas or features with significant environmental value, such as steep slopes, stream corridors, natural heritage priority sites, and habitats of threatened and endangered species. environmentally constrained areas are those with development restrictions, such as wetlands, floodplains, and sites of endangered species.)

Identification of critical areas are required in several places within the Township's Land Code, including Article V, Article VI, and Section 55-148 (Site Plan Details) .

- Yes No Can any of the existing setbacks be reduced?
- Yes No Are there maximum turf grass or impervious cover limits in any of the setbacks?
- Yes No Do the ordinances inhibit or prohibit the clearcutting of the project site as part of the construction?
Per Section 55-122.2, Landscaping, and Section 55-172, Natural Features.
- Yes No Is the traffic of heavy construction vehicles limited to specific areas, such as areas of proposed roadway? Are these areas required to be identified on the plans and marked in the field?
- Yes No Do the ordinances require the identification of specific areas that provide significant hydrologic functions, such as existing surface storage areas, forested areas, riparian corridors, and areas with high groundwater recharge capabilities?
Per Section 55-178, Major Site Plan Details, an Environmental Impact Statement and Environmental Constraints Map must be provided for major development projects.
- Yes No Does the municipality require an as-built inspection before issuing a certificate of occupancy? If so, does the inspection include identification of compacted areas, if they exist within the site?
Per Section 55-121, Improvements Required Prior to Issuance of Certificate of Occupancy.
- Yes No Does the municipality require the restoration to compacted areas in accordance with the Soil Erosion and Sediment Control Standards?
All construction work is subject to Ocean County standards, as well as Section 55-126.12, Soil Erosion and Sediment Control.

B. Open Space and Cluster Development

Open space areas are restricted land that may be set aside for conservation, recreation, or agricultural use, and are often associated with cluster development requirements. Since open space can have a variety of uses, the municipality should evaluate its open space ordinances to determine whether amendments are necessary to provide improved stormwater benefits.

Yes No Are open space or cluster development designs allowed in the municipality?

Per Section 55-63, Cluster Developments.

Yes No Are flexible site design incentives available for developers that utilize open space or cluster design options?

Clustering is permitted as per Section 55-63, thereby preserving natural amenities, and creating land for schools, recreation sites and parks.

Yes No Are there limitations on the allowable disturbance of existing vegetated areas in open space?

Per Section 55-63, treed areas and wetlands shall be preserved, as well as per Section 55-122.2 , Landscaping.

Yes No Are the requirements to re-establish vegetation in disturbed areas dedicated for open space?

Reforestation of recreational open space is required per Section 55-122.2, Landscaping.

Yes No Is there a maximum allowable impervious cover in open space areas?

Part 3: Impervious Area Management

The amount of impervious area, and its relationship to adjacent vegetated areas, can significantly change the amount of runoff that needs to be addressed by BMPs. Most of a site's impervious surfaces are typically located in the streets, sidewalks, driveway, and parking areas. These areas are further hampered by requirements for continuous curbing that prevent discharge from impervious surfaces into adjacent vegetated areas.

A. Streets and Driveways

Street widths of 18 to 22 feet are recommended for low impact development designs in low density residential developments. Minimum driveway widths of 9 and 18 feet for one lane and two lanes, respectively, are also recommended. The minimum widths of all streets and driveways should be evaluated to demonstrate that the proposed width is the narrowest possible consistent with safety and traffic concerns and requirements. Municipalities should evaluate which traffic calming features, such as circles, rotaries, medians, and islands, can be vegetated or landscaped. Cul-de-sacs can also be evaluated to reduce the radius area, or to provide a landscape island in the center.

Yes No Are the street widths the minimum necessary for traffic density, emergency vehicle movement, and roadside parking?

As per Section 126.13, Streets.

Yes No Are street features, such as circles, rotaries, or landscaped islands allowed to or required to receive runoff?

Runoff is not precluded from these areas per Section 55-122.2, Landscaping or Article XXI, Stormwater Management.

Yes No Are curb cuts or flush curbs with curb stops an allowable alternative to raised curbs?

Per Section 55-126.5, Curbs, alternate curb types are allowed if approved by the Township Engineer.

Yes No Can the minimum cul-de-sac radius be reduced or is a landscaped island required in the center of the cul-de-sac?

A landscape island is required for cul-de-sacs and traffic islands per Section 55-122.2(c), Landscaping.

Yes No Are alternative turn-arounds such as "hammerheads" allowed on short streets in low density residential developments?

Per Section 55-126.13, Streets, short loop streets can be provided for less than 45 lots in lieu of cul-de-sacs.

Yes No Can the minimum driveway width be reduced?

Minimum driveway widths (per Section 55-151, Design Standards) are necessary.

Yes No Are shared driveways permitted in residential developments?

B. Parking Areas and Sidewalks

A mix of uses at a development site can allow for shared parking areas, reducing the total parking area. Municipalities require minimum parking areas, but seldom limit the total number of parking spaces. Table 1 shows recommendations for minimum parking space ratios for low impact design:

Table 1: Low Impact Development Parking Space Ratios

Use Parking Ratio per 1000 sq. ft. of Gross Floor Area	
Professional office building	Less than 3.0
Shopping centers	Less than 4.5

- Yes No Can the parking ratios be reduced?
Only if the Township Traffic Engineer deems existing parking ratios to be excessive.
- Yes No Are the parking requirements set as maximum or median rather than minimum requirements?
However, Section 55-134, "Variation of Minimum Requirements" would allow reductions if parking requirements are proven excessive.
- Yes No Is the use of shared parking arrangements allowed to reduce the parking area?
- Yes No Are model shared parking agreements provided?
- Yes No Does the presence of mass transit allow for reduced parking ratios?
- Yes No Is a minimum stall width of 9 feet allowed?
As per Section 55-151, Design Standards.
- Yes No Is a minimum stall length of 18 feet allowed?
As per Section 55-151, a 20-foot length is specified.
- Yes No Can the stall lengths be reduced to allow vehicle overhang into a vegetated area?
- Yes No Do ordinances allow for permeable material to be used in overflow parking areas?
However, the code definition of "Impervious Lot Area" includes paved and unpaved parking spaces and lots.
- Yes No Do ordinances allow for multi-level parking?
- Yes No Are there incentives to provide parking that reduces impervious cover, rather than providing only surface parking lots?

Sidewalks can be made of pervious material or disconnected from the drainage system to allow runoff to re-infiltrate into the adjacent pervious areas.

Yes No Do ordinances allow for sidewalks constructed with pervious material?

Per Section 55-126.10, Sidewalks and Aprons, sidewalks must be made of concrete.

Yes No Can alternate pedestrian networks be substituted for sidewalks (e.g., trails through common areas)?

Per Section 55-122.2, Landscaping.