

Draft Guidance on Nutrient Growth Management Planning

Why is Growth Management Important?

The rapid development pressure of the 1980s led to decreased open space and focused attention on the need to manage growth, guide land use, promote balanced economic growth, provide for adequate capital facilities and infrastructure, and protect environmental resources. Towns need to stimulate their tax base to afford the wastewater costs necessary to meet water quality standards and, at the same time, the economic development necessary to achieve that result is limited by the problem that needs to be solved. Without additional ability to treat wastewater, towns don't have the capacity for appropriate patterns of growth that don't add to the cost of remediating marine ecosystems.

Both the Commonwealth and the Cape Cod Commission support well-planned growth to enhance community character, preserve high-quality open space, improve and support municipal budgets and improve impaired areas. To help reshape the development pattern on Cape Cod, measures must be taken to encourage mixed-use and compact forms of development (encouraging density) in existing centers and discourage sprawling development in sensitive areas.

Growth in nitrogen-sensitive watersheds carries a heavy price. While only a portion of the existing nitrogen must be removed in these areas, all of the future nitrogen load must be mitigated. A 15% growth in wastewater flow translates to a potential 20% increase in capital cost. A 30% growth potentially increases the capital cost by 40%.

Consistent with the goals of the Environmental Bond Bill, discussed further below, towns should correlate land use planning with wastewater infrastructure planning and examine zoning and land use regulations to ensure that sewers meet the resource protection and growth management goals of the community, and support growth where it is desired. Towns should also consider adopting sewer system checkerboard authority to implement growth management goals.

Growth management is particularly important in preventing and minimizing "non-point source pollution" (which is diffuse and does not discharge through a pipe). Non-point source pollution tends to grow proportionally with population density.

Components of a Nutrient Growth Management Plan

Growth management is defined as “the use of planning, zoning, and other forms of land use control to direct the quality, rate, and location of a community’s development”.¹

Identify Areas and Approaches:

- Identify planned source reduction for areas in nitrogen sensitive watersheds identified for future economic growth and areas planned for housing, mixed use, or other density; high density areas are where wastewater collection and treatment systems can be constructed for the lowest cost and serve the greatest number.
- Identify down-zoning, Transfer Development Rights strategies, compact and open space development regulations, I/A requirements (recommended in watersheds requiring less than 50% N removal), open space protection, checkerboarding, and other land use controls to reduce nitrogen contributions from existing and new development and to ensure that TMDLs are met for current, and future conditions at buildout under current zoning. A comprehensive discussion of various land use controls is provided in the 208 Plan Update, Chapter 7.
- Provide mapping indicating area proposed for higher density, lower density and to remain under current zoning. Map areas where checkerboarding, sewer regulations, and other land use controls will be implemented to achieve nutrient growth management.
- Require the use of Low Impact Development/green infrastructure approaches and support public education regarding fertilize applications.
- Identify regulatory approaches to promote new development to leverage nitrogen treatment for existing development (nutrient reducing development) through public/private partnerships, and density bonuses for provision of shared infrastructure.
- Consider use of a District of Critical Planning Concern (DCPC) where the grandfathering protections afforded under state law would prevent the community from effectively addressing growth management via zoning changes – a DCPC can be adopted in one town or multiple towns within shared watersheds.
- Address growth potential through flow-related sewer connection regulations (see below).

Ensure effectiveness of point source permits in targeted/priority subwatersheds for:

- Municipal and industrial wastewater treatment facilities that contribute to significant measurable nitrogen and phosphorus loadings;
- Stormwater sources that discharge into nitrogen and phosphorus impaired waters or are otherwise identified as a significant source.

It is recommended that local plans segregate and present costs to manage nutrient from existing development and costs to manage nutrient removal from anticipated development.

¹ Brian Morrison, et. al., Industrial Economics, Inc., “Protecting Wetlands and Coastal Waters: A Land-Use Guide for Growing Communities.” Second draft (Cambridge, Mass.), p. 1-1

FLOW NEUTRAL PLANNING and 0% Rate of Interest SRF Loans

Each year MassDEP solicits projects from Massachusetts municipalities and wastewater districts to be considered for subsidized loans. The current subsidy is provided via a 2% interest loan or, under certain growth-neutral criteria, 0% financing. Loans may be forgiven or partially forgiven. In recent years, the program has operated with \$300 to \$350 million per year, representing the financing of 50 to 70 projects annually. The State Revolving Fund (SRF) Loan Program continues to emphasize watershed management priorities. A major goal of the program is to provide incentives to communities to undertake projects with meaningful water quality and public health benefits and that address the needs of the communities and the watersheds.

The passage of Section 5 of the 2008 Environmental Bond Bill provides towns access to SRF loans without interest for construction of wastewater infrastructure projects intended for nutrient management that meet certain criteria (Chapter 312 of the Acts of 2008).

The availability of zero rate of interest SRF loans is contingent upon a town's ability to demonstrate that sewers will not enable more growth than otherwise would be allowed under zoning and current wastewater regulations. For example, among the criteria required to access the zero percent SRF funds, a town must have adopted land use controls intended to limit wastewater flows to a level that would have been allowed under regulations in effect when the wastewater management plan was approved. These flows are calculated in the aggregate with flexibility to allocate flows for new growth and expansions of existing development. Flows associated with undeveloped and underdeveloped parcels can be allocated to areas identified for mixed use and compact development. Mandates for water saving devices can also accommodate new growth.

Consistent with the goals of the Environmental Bond Bill, towns should correlate land use planning with wastewater infrastructure planning examine zoning and land use regulations to ensure that sewers meet the resource protection and growth management goals of the community, and support growth where it is desired. Towns should also consider adopting sewer system checkerboard authority to implement growth management goals.

MassDEP has promulgated regulations (310 CMR 44.00) prescribing how towns should conduct a buildout analysis to demonstrate baseline flows, and requiring towns to provide proof of adoption of flow neutral land use controls. To date, Cape Cod towns seeking zero interest loans have adopted sewer and board of health regulations and bylaws limiting flows from new development and redevelopment.