

## Summary of Key Findings/Principles Derived from Watershed Stakeholder Process

Compiled by the Consensus Building Institute (CBI)

### Scenario Planning Findings and Principles

#### *CORE FINDINGS*

- There are a range of ways to meet TMDLs and water quality goals, which will draw on a mix of different technologies, both conventional and alternative, with different scales (from site to cape-wide), different targets (wastewater, stormwater), and different impacts (prevention, reduction, remediation).
- Selections among these options should be locally-determined, drawing from broadly-shared information about the technologies (the technology matrix, pilot information) as well as from detailed information about local sites for implementation, and should respect local progress to date and local priorities regarding cost-sharing, risk tolerance, and willingness to pay.
- In general, solutions should be incremental, using adaptive management to integrate new information, while continuing forward momentum towards reaching water quality outcomes.

#### CRITERIA TO WEIGH TECHNOLOGY OPTIONS WITHIN AND ACROSS WATERSHEDS

- *Prioritize Low-Hanging Fruit:* move first with solutions that have high levels of consensus - simple, visible, and high-impact.
- *Minimize financial expenditure:* consider both capital and life-cycle costs, as well as “soft-costs” (risk and vulnerability, education and public buy-in). Be efficient in terms of cost, impact, lifespan, and resources used and look for cost-savings – look for lower costs per unit of nitrogen removed.
- *Effectiveness:* promote technologies which are proven (or likely) to be highly successful at removing nitrogen. Consider impacts of seasonal variation. Solutions should not rely on on-going homeowner maintenance for effectiveness.
- *Maximize co-benefits:* create useful secondary benefits for communities, such as additional recreational space or conservation areas, habitat, restored wetlands and estuaries, jobs, revenue generation, carbon reduction, etc.
- *Minimize secondary costs:* weigh and minimize the costs of economic, environmental and aesthetic downsides, such as increased energy use, odors, displacement of other uses, reduced property values, etc.
- *Maximize economies of scale:* investigate ways to reduce costs by ensuring that solutions are at a scale which makes them cost-effective and tap into opportunities for regional oversight and partnership among multiple towns.
- *Ponds:* ponds are extremely important to economic and social value on the Cape – solutions should include nitrogen reduction in ponds.
- *Adaptability:* solutions should be amenable to a range of potential changes, including population, occupancy, and emerging contaminants of concern. Maximize opportunities to benefit from future technological advancement or start small and

scale up as needed.

- *Risk*: weigh economic, regulatory, and environmental risks and side effects of new technologies. Ensure additional solutions are ready if riskier approaches underperform. Consider flood zones and potential impacts from climate change.
- *Robustness*: promote solutions that are less vulnerable to failure and are self-sustaining.
- *Ease of implementation*: promote solutions that can be easily implemented, and weigh the costs of political, social, regulatory, and technological feasibility.
- *Timing of implementation*: consider how quickly solutions will achieve results, and seek to balance immediate mitigation and long-term reduction. Consider soil percolation and nitrogen travel time.

### **Regulatory, Legal, and Institutional Findings and Principles**

- Towns and the region should move forward to incentivize and implement cost-effective stormwater and fertilizer management options.
- Solutions should draw on other regulatory mechanisms, such as land use regulations, codes, growth and buildout goals, and comprehensive planning, and make sure that these are aligned with wastewater planning.
- Towns and the region should seek and maximize opportunities to work with or through state or federal partners to fund and implement shared priorities that support water quality goals (e.g. MassDOT, USDA, US Army Corps of Engineers, NOAA, etc.).
- There are significant potential benefits to scoping solutions at the watershed level rather than town-by-town.
- The regulatory process for giving credit for new technologies needs to be more agile to respond to changing technology, while still ensuring effectiveness.

### **Implementation Findings and Principles:**

- Broad-based effective public information/education will need to accompany any next steps to finalize and implement watershed planning.
- While solutions should not rely on voluntary homeowner-level behavior or technology changes, especially for on-going maintenance, incentives should be used to help promote homeowner actions.
- Monitoring protocols to establish the effectiveness of different solutions will need to be developed and implemented. Each solution should come with a defined feedback loop that includes the type of results expected, clear monitoring, and a clear timeframe for expected information.
- Financing should be equitable. Costs should be spread fairly across direct users, homeowners, towns, and watersheds. Creative methods should be available to allow collaboration across towns for maximized solutions. Consider variations in ability to pay across residents.