Goal Statements for the Water and Wastewater Element:

Falmouth shall provide its residents with a high quality water supply to meet the present and future needs of its population.

Falmouth shall protect the health of its citizens and water bodies from the harmful effects of wastewater. Multiple approaches shall be considered.

The Town of Falmouth is facing significant future challenges to appropriately manage the wastewater generated within town, and to provide clean, high-quality drinking water to the residents. The LCP has defined wastewater as the grey and black water generated by the various land uses throughout town, storm water is not included in the definition of wastewater. Wastewater is further divided into sewage and septic, with a sewer defined as a system of mains collecting the sewage from individual properties, treating it at central plant, and discharging large quantities of treated wastewater on a continual basis. Septic differs from sewers in that it is an on-site treatment system that serves a single property, or small group of properties. The Water and Wastewater Element has taken the position that a municipal-scale sewer expansion project is the most responsible future course of action, which will be discussed in greater detail below. Furthermore, this Element will expand upon the critical importance of protecting the town’s drinking water supplies, and the need to budget carefully and to fully account for all the costs associated with the capital construction, repair, maintenance, and operation of Falmouth’s water and sewer systems.

Falmouth is facing a serious nitrification problem in both fresh and coastal water bodies. The fresh water ponds are impacted by the addition of phosphorous, while the coastal ponds are impacted by nitrogen, both of which are found in the wastewater flowing from homes and businesses. The overloading of nutrients results in very poor water quality, algae blooms and fish kills. Expanding the limited municipal sewer is a hugely expensive proposal, and should first be planned for the higher-density areas of town where the costs can be shared by the greatest numbers of users possible, primarily those areas south and west of Route-28. However, those areas of town not likely to be sewered within the next 20-to-50 years must also take steps to ensure that as little nitrogen and phosphorous as possible is added to the groundwater by utilizing advanced or alternative plumbing and septic systems. A comprehensive and holistic approach to efficiently and effectively addressing the critical wastewater needs in Falmouth is essential, relying on a reasonable balance of both municipal-scale sewers, and alternative techniques, where appropriate.

The Town of Falmouth has an extensive municipal water system providing potable water directly to the vast majority of properties in town. Falmouth’s water is sourced from both a series of groundwater wells and Long Pond, which is an open surface supply. Falmouth also cooperates with the other Upper Cape towns and the Massachusetts Military Reservation to meet the peak summertime water needs on a regional basis. In the near-future the town is likely to be researching and exploring filtration, or other disinfectant options, for the water pumped from Long Pond. In the long-term, Falmouth has protected an area of land in the Ashumet Valley for possible future well sites. An emerging issue facing Falmouth, and all other municipalities, is the presence of trace amounts of endocrine disruptors and other pharmaceuticals in drinking
water. The impacts of these types of contaminants on human health are not well understood, and the methods for removing them are extremely expensive. Falmouth is well positioned to provide plenty of water to its citizens, but must be careful to protect the quality of both the groundwater and surface water used for drinking water.

Reliable and effective water and sewer systems are expensive. Tax increases, debt exclusions, and rate increases are unpopular. Planning and budgeting responsibly for the services that the resident’s of Falmouth need and deserve are critically important for the future quality-of-life of the citizens, and the fiscal health of the municipality. The LCP recommends that the Town of Falmouth institutionalize a rigorous capital budget process to clearly define and communicate the long-term vision for the future water and sewer system needs, and then lay out a course of action to meet implement the vision. Investing in the ability to provide high-quality drinking water, efficiently manage wastewater, and protect the health of both the people and water bodies will pay significant dividends long into the future.

**Public Policy Statements for the Water and Wastewater Element:**

- Falmouth shall develop and protect all current and future drinking water sources, by purchasing and reserving sufficient land for those purposes.
- Falmouth shall institutionalize a budget process to provide for the full-cost pricing needs of the water and wastewater infrastructure.
- Falmouth shall practice water conservation and efficient use of water resources, and shall explore recycling wastewater for reuse.
- Falmouth shall endeavor to manage its entire wastewater infrastructure to the greatest extent possible.
- Falmouth shall explore where-and-whenever appropriate, regionalization of sewage treatment.
- Falmouth shall equitably and fairly distribute the cost of building and operating the wastewater treatment infrastructure.

**Action Items for the Implementation of the Water and Sewer Element:**

- Implement the recommendations of the Feasibility Study conducted for the Long Pond water treatment plant to ensure the highest quality potable water is conveyed.
  - Short-term and ongoing (begin implementation within next 2-years)
  - Responsible parties: DPW director, Town Manager, Board of Selectmen, Finance Committee, Town Meeting
- Implement the recommendations included in the Comprehensive Wastewater Management Plan, including beginning Phase I of the sewer expansion project.
  - Short-term and ongoing (begin implementation within next 2-years).
  - Responsible parties: DPW director, Town Manager, Finance Director, Finance Committee, Board of Selectmen, Town Meeting, Electorate
- Evaluate and monitor the rate of groundwater withdrawal and recharge. Take appropriate steps to ensure adequate aquifer recharge annually.
  - Intermediate-term and ongoing (begin within the next 5-years)
Responsible Party: DPW director

- Develop an effluent discharge plan, including the feasibility of utilizing injection wells for groundwater recharge by sub-watershed.
  - Intermediate-term (specific recommendations within the next 5-years)
  - Responsible Party: DPW director

- Fully investigate an Enterprise Fund, or other appropriate mechanism, in order to finance current and future water and sewer infrastructure projects.
  - Intermediate-term (in place within the next 5-years)
  - Responsible Parties: DPW director, Town Manager, Finance Director, Finance Committee, Board of Selectmen

- Evaluate water and sewer rate structure to ensure that the full cost of operating and maintaining the system is accounted for.
  - Intermediate-term (finished within the next 5-years)
  - Responsible Parties: DPW director, Finance Director, Finance Committee

- Investigate non-potable reuse of treated effluent.
  - Intermediate-term (specific recommendations developed within the next 5-years)
  - Responsible Party: DPW director

- Explore increased opportunities for a regionalized system of water and sewer infrastructure with Bourne, Mashpee, Sandwich and the Massachusetts Military Reservation.
  - Intermediate-term (specific recommendations developed within the next 5-years)
  - Responsible Parties: DPW director, Town Manager, Board of Selectmen

- Develop a robust capital improvement planning process and corresponding capital budget to assess the entire infrastructure, facilities and equipment need of the town and appropriately schedule water and sewer system replacement and expansion projects.
  - Short-term (complete within the next 2-years)
  - DPW director, Town Manager, Finance Director, Finance Committee, Board of Selectmen, Town Meeting, Electorate

- Develop an equitable sewer betterment policy that addresses connection fees for existing land uses, new development, and redevelopment.
  - Short-term (complete recommendations within the next 2-years)
  - Responsible Parties: DPW director, Town Manager, Board of Selectmen

- Develop a water conservation program for all users of the town’s potable water system, and establish standards for a grey water re-capture pilot program.
  - Short-term (develop programs within the next 2-years)
  - Water superintendent, DPW director, Board of Health, Building Commissioner and inspectors.