

Old decisions, new development put water at risk

FROM A1 feeding East Lyme’s well,” or the “capture zone,” she said.

To create its map, East Lyme hired the engineering firm Macguire Group to conduct soil and hydrogeological tests to determine the sources of the water feeding the public wells. The so-called pumping tests involved the drilling of numerous test wells and taking a series of measurements of how groundwater levels changed over time when water was withdrawn. These numbers were then plugged into formulas that modeled what was happening in the aquifer.

Long before that law, however, the town identified its aquifers on zoning maps and established municipal regulations that specifically prohibited construction of gas stations — notorious for large spills, leaking underground tanks and accumulated drips as people fill their tanks, and the most common single source of groundwater contamination, according to the U.S. Geological Survey. Just one gallon of gas is enough to contaminate one million gallons of water with toxic chemicals that exceed Environmental Protection Agency standards, according to the Groundwater Protection Council.

The original aquifer protection zone, however, was much larger than the current one, covering the entire aquifer as defined by soil types rather than just the “capture zone” of the wells.

“Aquifer Protection Act is a misnomer,” said Gary Robbins, geology professor in the University of Connecticut’s Department of Natural Resources, who teaches groundwater hydrology courses. “It’s a well-head protection act.”

Towns concerned about their aquifers, he said, shouldn’t rely on the limited requirements of the law, but rather should mandate development in those areas, including additional monitoring systems and filtration systems to capture stormwater and spills.

Development vs. conservation

Kim Czaplá, environmental analyst for DEEP, said towns such as East Lyme could have opted to keep their entire aquifers protected under local zoning regulations, along with the smaller wellhead area identified in the state-approved maps.

For several months in 2012, East Lyme did keep the entire aquifer protected. But in October 2012, Mulholland, the town zoning enforcement officer, sent a memo to the zoning commission asking whether keeping the two areas would create “regulatory confusion.”

In June 2013, the Zoning Commission voted unanimously to eliminate the larger area from zoning, a decision that made it possible, three years later, for the Costco gas station to be located where it would previously not have been allowed. Preliminary plans show the gas station sits 280 feet east of the smaller Aquifer Protection Area boundary — still atop the sandy soils that define the aquifer, but outside the “capture zone” of the town well.

Engineering tests done for the developer show groundwater flows through the gas station parcel just 5 to 6 feet below the surface. The Costco building and parking lot are fully within the Aquifer Protection Area, where the groundwater is found from 5 to 9.5 feet below the surface.

The decision came after a March 12, 2013, letter from Theodore Harris, the attorney representing the Costco developers, to Mulholland. In it, he urges the town to eliminate the larger aquifer protection zone, arguing that the state regulation “strikes a balance between environmental protection and economic development that the Connecticut General Assembly mandated in the Aquifer Protection Act.”

“While there is apparently no prohibition on a municipality exacting standards higher than that of the model regulations, it would seem to negate the balance sought between protection and economic activity,” Harris wrote. He added that restrictions imposed if the larger area were kept could be “vulnerable to challenge by affected property owners.”

Also weighing in on the issue were the town’s Planning and Natural Resources com-

missions, both of which urged their counterparts on the Zoning Commission not to shrink the protected area.

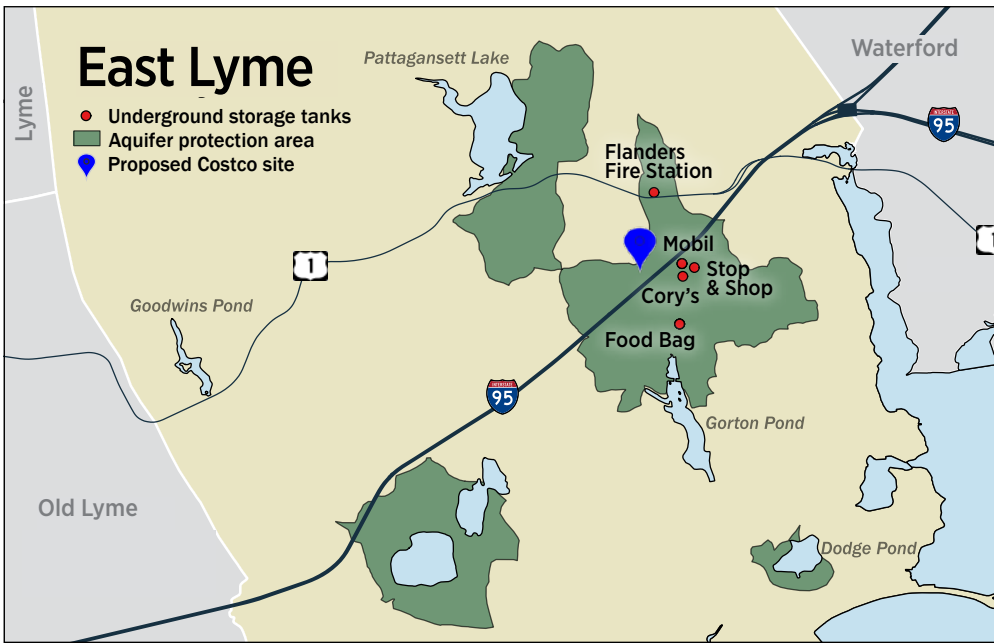
“Although the proposal does potentially stimulate development, it sacrifices conservation,” the Planning Commission said in a June 10, 2013, letter to the Zoning Commission. Such a move would be “inconsistent with the town’s plan of conservation and development” and short-sighted in considering the town’s future water resources, the letter said. Town Planner Gary Goeschel made a similar argument in a letter to Mulholland.

Marc Salerno, Zoning Commission chairman in 2012 and 2013, said, “The commission made its decision based on the science and based on the new state requirements.”

Neither Matthew Walker, the current commission chairman, nor Harris, who also represented the developers of a 400-unit apartment complex built next door to the Costco site, could be reached for comment.

Selectwoman Rose Ann Hardy, liaison to the Natural Resources Commission, along with several members of that group, believe the larger area should have been retained. She and Arthur Carlson, commission chairman, said they mistakenly thought at the time that that wasn’t an option.

“I didn’t realize we could have kept the original zone,” Hardy said. “Very clearly, there was more interest in development than in aquifer protec-



SOURCE: CONNECTICUT DEEP, TERRACON CONSULTANTS INC. SCOTT RITTER/THE DAY

The proposed 14.7-acre Costco site in East Lyme near Exit 74 is within the town’s Aquifer Protection Area. Preliminary plans show the accompanying gas station atop the sandy soils that define the aquifer, but outside the “capture zone” of the town well.

tion.” She and others are also critical of the plan for a big-box Costco store and gas station, because it is “far different from the original plan” approved in 2008 for a village-like development of small shops.

Christensen said annual reports on the town water supply show contaminants including MTBE, a gasoline additive that was phased out several years ago but persists in the environment, and sodium at warning levels for those on restricted diets. The Costco project, he said, puts town water at greater risk of contamination from road salt and spills.

He also noted that a recent water-swap agreement, in which New London sends its reservoir water to East Lyme when supplies are low in the summer in exchange for East Lyme sending water the other way in the winter, also could be at risk.

“They’re not going to want our water if it’s contaminated with gasoline,” he said, adding that he fears that it’s only a matter of time before a huge spill occurs on I-95 and reaches the public water supply.

Fellow commission member Penny Heller said the town’s water is only getting a mini-

mum level of protection.

“The town has the responsibility to protect its drinking water resources, and not to have it cost huge amounts of money later on to clean it up when it gets tainted, just for the benefit of private enterprise,” she said.

Next steps

Margaret Miner, executive director of the Connecticut Rivers Alliance, called the Aquifer Protection Act “extremely weak,” and said that other towns did opt to keep their own aquifer protections in place when it was enacted.

“It’s odd that East Lyme didn’t do that, since they’re famously water-challenged,” she said. “The law as it is now barely provides for wellhead protection. It’s a matter of serious concern that we are not protecting our high-quality waters.”

Czapla, the DEEP analyst in charge of implementation of the law, conceded that the law was weakened from its original form.

“As this progressed, we had to compromise on many, many issues,” she said. In essence, she said, the law was pared down to a list of 28 of the most risky activities that would be prohibited in an Aquifer Protection Area. Those include gas stations, car repair shops and hazardous waste storage facilities. Any of those types of businesses already in aquifer areas could stay as long as they registered with the town and were inspected periodically. The state wanted additional businesses on the prohibited list, such as beauty salons, golf courses and bus lots, she said, but that did not survive in the final version.

The potential of the Costco project is just one area of risk for the town’s aquifers, said Carlson, the natural resources commission chairman.

“We have a much more massive problem than that one issue,” he said. “We have to have a much broader and deeper discussion about how to minimize the problems. You just

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