

## **Finally Filtering the Pond Water for Drip**

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Early in 2008, we purchased a twin stainless steel sand filter system with a capacity of 350 gpm and a bypass for unfiltered water. This was the result of a series of irrigation transitions that had taken place since the 1910 on a 30 acre piece of land along the Merrimack River in Methuen, MA.

Over the years, irrigation was primarily overhead starting with a gravity-fed system and moving to a diesel-powered system with above ground mains and then buried mains. In 1995, we started using plastic mulch on the farm but continued to use overhead irrigation. Much of the irrigation on the plastic was with travelers but also included solid-set aluminum pipe.

The water supply on this land is from a family-owned spring that feeds our irrigation pond. The pond is approximately 100' x 300' and averages 6 feet deep. The spring adds about 30,000 gallons of water per day to the pond. About every 5 years we need to pump water from the river to fill the pond and in some years, we have done this on multiple occasions.

Due to a few dry years, concern over the need to use set up equipment to pump from the river, concern about possible government interference with that pumping, and just a general desire to reduce water use began a discussion of bringing drip to this field. Another consideration was to reduce the incidence of disease on warm season crops by reducing leaf wetness.

We spoke with Trevor Hardy at Brookdale Fruit Farm in Hollis, NH and Fran Dellamano from Belle Terre Irrigation LLC in NY and considered the options. We wanted to irrigate 12 acres of plastic all at one time, no zones, to minimize the time that the diesel pump was running. We decided to use our existing underground lines even though they were oversized (6") for the application. We also decided against separate disc filters for each area. Since there were 4 areas, each about 3 acres and each coming from the same water supply, we opted for a centralized system that was self cleaning.

The system has a bypass so that we can use unfiltered water for overhead irrigation on cool season crops such as lettuce, kale, beets, parsley, and leeks. An advantage of the combined system is that we have enough capacity to filter the water and run overhead and drip at the same time if we are not irrigating all the crops using drip at the same time.

This presentation will provide more background as well as a discussion about the system itself and how it worked. I will also mention and describe the irrigation on the rest of the farm.