

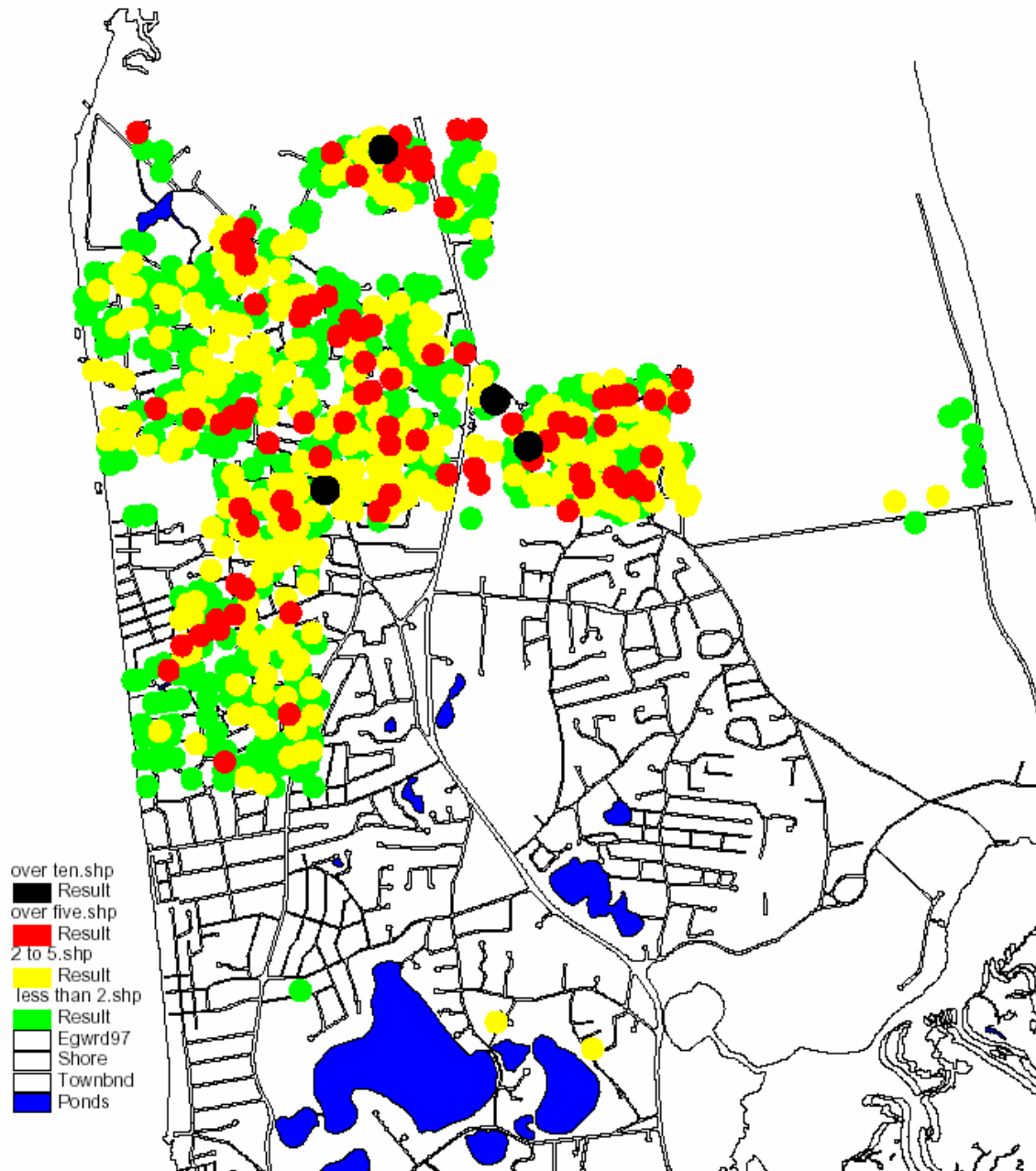
## Eastham Water Screening Project 2003

Since the Fall of 2002, about 1,000 water samples have been collected in North Eastham, the part of the annual water screening program whereby nitrate levels are measured from one third of the town on a three-year cycle. To date, 849 of these samples have been analyzed. The area from which these samples were received and the distribution of nitrate levels therein are displayed in Figure 1 in which the green circles indicate less than 2 parts per million (ppm) of nitrate, the yellow circles 2 to 5 ppm, the red circles 5 to 10 ppm and the black circles above 10 ppm nitrate.

The overall results for North Eastham in 2003 are compared with the those for this area in 2001 in Figure 2. Although the number of wells with the lowest nitrate levels has increased by about 3% between these years with a concomitant decrease in the number with higher nitrate levels, we can only conclude that the nitrate loading of North Eastham's water has remained essentially constant, i.e., there has been no deterioration of the water quality. This conservative conclusion is based on the different number of samples in the two years (342 in 2001 vs. 849 in 2003) and that in most cases not the same wells are compared. Also informative is the breakdown of the results into map areas as shown in Figures 3 and 4. Here we see that in both years many map areas have more than 10% of their wells with nitrate levels between 5 and 10 ppm.

The results of this year's screening are reassuring in that they show that our water quality is not rapidly deteriorating. The monitoring activity is important to understand the effectiveness of our wastewater treatment method (currently onsite septic systems), to identify areas with potential problems and to guide wastewater management planning activities. For the 2004 program, vials will be mailed this Fall to homeowners in the second tier of the town. Instructions about the procedure for drawing water samples and the collection sites will accompany the vials.

# Eastham Water Sampling Program Nitrate Analysis 2003



**Figure 1**

### EWS Results - 2001 & 2003

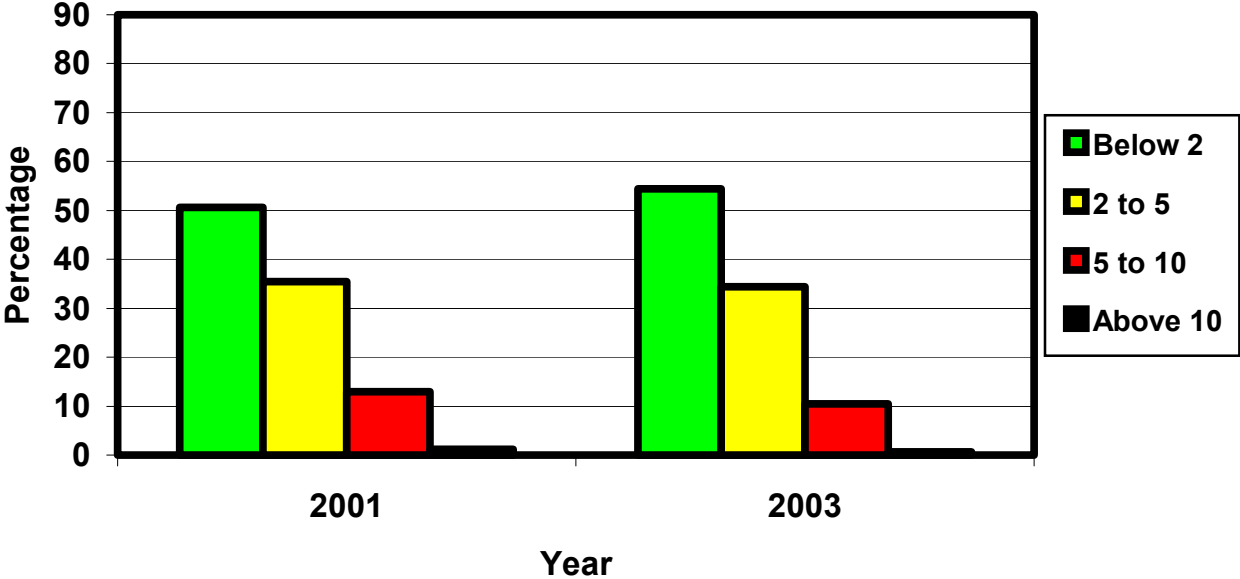


Figure 2

### EWS 2001 Results - North Eastham

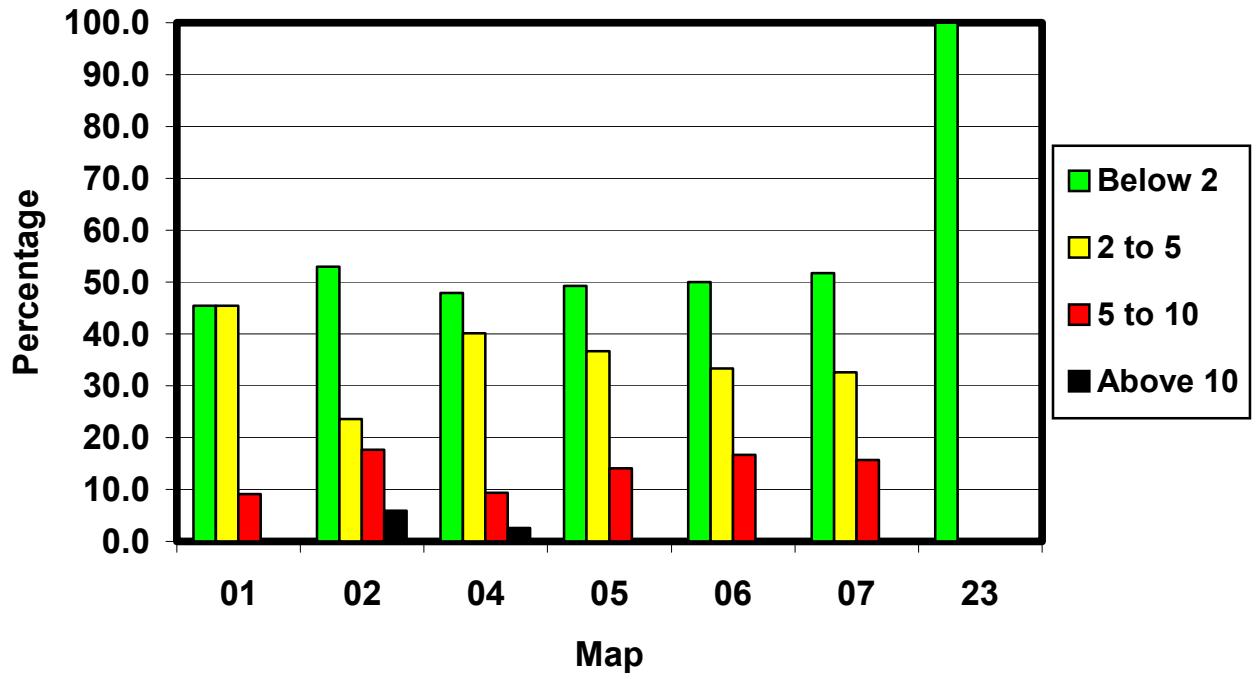
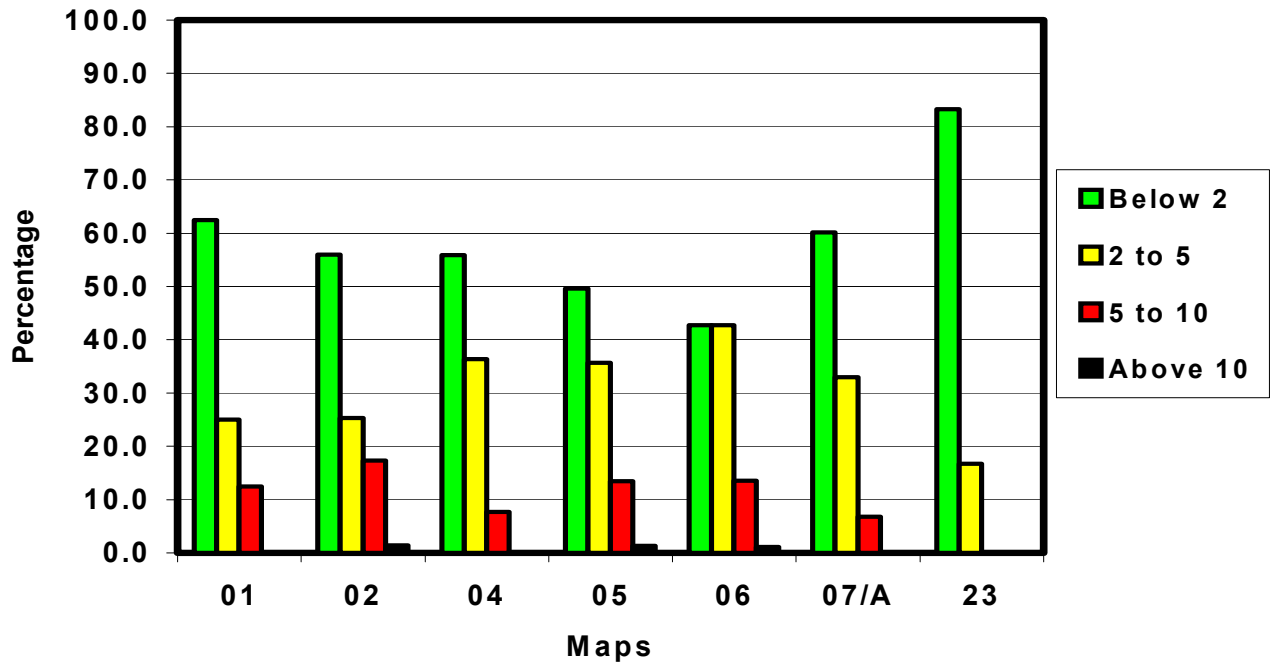


Figure 3

### EWS 2003 Results - North Eastham



**Figure 4**