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|  | MARCH 11  A consumer notice was received on March 11, 1999, notifying  residents of Moss Beach that the chemical Methyl Tertiary Butyl  Ether (MTBE) was detected in two wells serving the community.  It is possible this contaminant could find its way into the ocean  ecosystem and deserves further research and monitoring.  MARCH 17  The first set of water samples collected from San Vicente  Creek were from locations below the agricultural fields. To test  conclusively for the effects of agricultural runoff, additional  water samples were collected from San Vicente Creek just before  and just after the creek flows through the agricultural fields.  Ion chromatography test results shown below, received just a  day before this report was published, give proof coastal farming  is contaminating the creek as it flows to the ocean.  San Vicente Creek, before it runs through the agricultural  fields, had a nitrate reading of only 2.7ppm. According to Dr.  Joy Andrews, this is a very typical reading for a creek. The  creek, after it runs through the agricultural fields, had a very  high reading of 8.7ppm. Dr. Andrews states that this reading  of 8.7ppm is of great concern. Although it is under the allowable  amount for nitrates (10ppm) in surface water, damage from contamination  can still occur to the ecosystem of the ocean.  Also significant is the presence of nitrates in the two Seagrass  Sites. These sites are actual ocean water and should have readings  close to that of the Control, which is uncontaminated sea water.  The level of nitrate found in Seagrass Site #2 is very high for  this site. In the other data collected, the amount of nitrate  at this site was considerably less. On the day I collected the  second set of water samples, the creek was extremely high because  of heavy rains. If the creek was to continue to flow to site  #2, the growth of Ulva could increase because of the new availability  of nutrients. This could lead to an increase in problem with  the ecosystem and possible advancement of eutrophication. These  recent tests give strong support to my research that the creek  is being contaminated by the agricultural fields and is in return  affecting the ecosystem at Fitzgerald Marine Reserve.  NITRATE LEVELS (PPM)  Control: 1.5  Seagrass Site #1: 4.3  Seagrass Site #2: 4.4  Sunshine Valley Creek: 8.8  Drinking fountain: 29  San Vicente Creek (before): 2.7  San Vicente Creek (after): 8.7  The chart below plots changes in nitrate, salinity and temperature  as creek water flows from the test site before agricultural fields,  through the fields, discharges into the ocean and flows out towards  the control site located in open ocean. Note the nitrate levels  rise sharply when measured after the fields then begins to drop  as the creek is diluted with ocean water. A corresponding rise  is salinity occurs as the nitrate levels drop. These results  are consistent with my hypothesis that nutrients from coastal  farming are draining into the creek creating ideal conditions  for simulated Ulva lactua growth on the reefs of Fitzgerald Marine  Reserve. |

*This Web Site is Best viewed with 256 or more colors.*

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