

BACKGROUND ON BILL # _____

FOR PROTECTION OF PUBLIC HEALTH AND THE ENVIRONMENT

- Life saving chemotherapy drugs work by damaging fast growing cancer cells, as well as other fast growing cells such as immune, hair and skin, which is why cancer patients often show visible signs of treatment and its side effects.
- Cytotoxic chemotherapy drugs work to save lives by destroying cancers because they are just that – highly toxic chemicals which rank among some of the most powerful compounds on earth.
- Such drugs are considered so toxic that from laboratory to hospital pharmacy to health care professional infusion, their handlers use precautions that include robots, special filtration barrier cabinets within isolation rooms, and of course face shields, double gloves, gowns and masks.
- Hazards from these drugs to patients and their families extend to the home (85% of chemotherapy treatments are done on an outpatient basis). The American Cancer Society offers a long list of guidelines for patients and their families ([link to http://www.cancer.org/Treatment/TreatmentsandSideEffects/TreatmentTypes/Chemotherapy/UnderstandingChemotherapyAGuideforPatientsandFamilies/understanding-chemotherapy-chemo-safety-for-those-around-me](http://www.cancer.org/Treatment/TreatmentsandSideEffects/TreatmentTypes/Chemotherapy/UnderstandingChemotherapyAGuideforPatientsandFamilies/understanding-chemotherapy-chemo-safety-for-those-around-me)) for patient personal hygiene upon returning home from treatment.
- Yet, despite all the dangers regarding chemo therapy drugs, there is no prohibition against flushing wastes containing high levels of chemicals that are toxic, carcinogenic, mutagenic etc. down the toilet, into the waste stream, and potentially into our water supply because they were given as chemo drugs.
- As recently as a few years ago, there was no accurate way to measure cytotoxic drugs in the environment, but there is a growing body of evidence that this is a concern.
- A 2008 USGS study of ponds on Cape Cod (MA) ([link to File – USGS Fish Tumors Cape Cod](#)) used DNA evidence to link the high occurrences of fish cancer (>50%) to a genotoxic compound like cyclophosphamide, a much utilized breast cancer treatment. The most affected ponds are surrounded by homes on septic systems, and the USGS concluded the cancers were not a result of pollution from the Otis military base.
- A recent study – April 2012 – of Cape Cod’s water supply and septic systems [Link to file _ Barnstable County – Contaminates of Emerging Concern](#) identified cancer treatments as CECs – Contaminants of Emerging Concern.

- Not all chemo drugs are at issue – some are 100% metabolized by the body. But a few of the most utilized drugs are among those of most concern. Doctors and the FDA are aware of which ones.
- The bill provides for patient education and for the safe collection and disposal of human waste from affected patients. Given the benefits to patients and the environment, the costs are minimal and should be included as part of treatment.