

Opening Slide- Peggy Stevens

Map – Peggy Stevens

Cyanobacteria – Polly Jones- This is a recent photo of a massive cyanobacteria bloom along the bike path in Derby Bay, evidence of our lake in crisis, evidence of contamination by an overload of nutrients. The blooms have extended the entire length of the lake. Our lake was declared Impaired by the ANR Lake Scorecard years ago for this reason. Cyanobacteria is toxic to humans and animals and signals a clear danger to our health and safety. They are caused by nutrient overload in runoff exacerbated by climate change in the form of torrential rain, flooding and rising temperatures.

Sludge – Polly Jones - Manure and sewage sludge or biosolids contribute to the phosphorus load in agricultural runoff increasing cyanobacteria blooms. In addition to the nutrient overload, biosolids which have no beneficial use, contribute dangerous chemicals including PFAS in significant amounts. Since 2019, 31 out of 34 locations where biosolids were applied have shown PFAS contamination in groundwater. It should be noted that even after **leachate** ceased to be disposed of in Newport's WWTF in 2019, PFAS have been detected at the point of discharge from between 17 and 27 ppt. The other three WWTFs that discharge into the watershed have not been sampled for PFAS yet, but it stands to reason that they are also emitting contaminants.

Brown Bullhead slide – John Barrows

PFOS in Fish – Polly Jones - Whether from leachate and groundwater, in air emissions, or discharged from WWTFs, PFAS levels in the tissue of Lake Memphremagog's fish population are also alarming. When you read the average concentrations of PFOS in fish tissue above each picture, note that nanograms per kilogram are equivalent to ppt. The EPA has designated PFOA and PFOS as HAZARDOUS chemicals with no safe level of exposure. The public should be warned about the significant concentrations of PFOS to make informed decisions about whether or not to consume fish from the lake. H.113 will call attention to these ongoing studies, the brown bullhead melanomas and the PFOS levels in fish tissue. My family maintains a catch and release policy - we enjoy the thrill of the catch, but we don't eat them.

MCI Toxic Legacy Slide – Johanne Lavoie

Additional Notes:

Representative Labor's Question – In partial answer to the question of whether sludge/biosolids are spread on lands draining into the Memphremagog watershed, please see this video - <https://www.youtube.com/watch?v=Me9y3YXVVbk&t=906s>
Eamon Twohig of VT DEC explains the differences between Class A and B biosolids:

Class A, also called Exceptional Quality Biosolids, is treated for pathogens and some contaminants and is given away. It is considered by the DEC to be “safe” for agricultural use and is not regulated. In other words, where it is spread is not followed or known. It is not filtered for PFAS removal.

Class B may be partially treated for pathogens but is not free of them. Spread of it is closely monitored by the DEC. It is regulated and cannot be applied to crops for human consumption. Significant PFAS contamination of soil and groundwater has been detected in places where these biosolids have been spread. “Since 2019, Vermont has discovered PFAS contamination in groundwater at 31 locations where biosolids had been applied, mostly at properties where the material was spread for decades, Twohig said.”
<https://www.sevendaysvt.com/news/vermont-still-allows-farmers-to-spread-contaminated-sludge-on-fields-41816071>

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