



Response to the Film *Sludge Diet (Tabou(e)!*

by North East Biosolids and Residuals Association (NEBRA)

March 13, 2007

For more information, contact NEBRA: 603-323-7654 or info@nebiosolids.org

www.nebiosolids.org

Background

The film *Tabou(e)!* is a professional documentary made in Québec by Mario Desmarais about the agricultural use of treated municipal sewage sludge, or biosolids. It was televised on April 20, 2006, by Télé-Québec, and has had occasional public showings around the province since then. *Tabou(e)!* has a website, <http://www.taboue.net/>, which includes details about the film, its subject, its director, and photographs of its making (in French). The Québec ministry of environment (MDDEP) responded to *Tabou(e)!* with website information ([http://www.mddep.gouv.qc.ca/matieres/articles/documentaire/tabou\(e\).asp](http://www.mddep.gouv.qc.ca/matieres/articles/documentaire/tabou(e).asp)), addressing various allegations and assumptions (for example: as is also typical in the U. S., biosolids are only 0.2% of the total fertilizers and soil amendments applied to Québec soils each year – the vast majority, 95%, are manures; and only 0.2% of agricultural soils receive biosolids each year). The MDDEP reports that, since *Tabou(e)!* aired, there have been several municipalities that have adopted or may adopt local restrictions on use of biosolids, despite the fact that such local regulations are likely illegal because the province has preemptive authority.

Later in 2006, an English version of the film, *Sludge Diet*, was released and is being distributed by Ciné-Fête de Montréal. It is the same video with English subtitles. *Sludge Diet* has seen only limited distribution, according to Ciné-Fête, but that has included, in 2007, distribution of copies to Virginia legislators and a public showing to invited legislators in Concord, NH. Cine-Fête and others note that the film was nominated as an American Library Association Notable Video – a nomination that can be made by anyone. It was not selected, however. *Sludge Diet* was on the schedule (October 28, 2007) of the “Planet In Focus” environmental film festival in Toronto.

General response:

This film is well-made and compelling. However, it paints an inaccurate picture of the scope and risk associated with the application to soils of biosolids/treated sewage sludge. Much of the information presented is imbalanced, misleading in its presentation, and/or sensationalized.

Addressing the key assumption that biosolids have caused considerable harm.

In order to reach its conclusion that biosolids must be dangerous, *Sludge Diet (Tabou(e)!*) walks the viewer through compelling testimony of individuals whose lives were apparently affected by biosolids, including the parents of Daniel Pennock in Pennsylvania and people discussing Shayne Conner in Greenland, NH. The tragedies discussed are real; all feel sympathy for the families and friends. However, independent public officials examining each case did not reach the same certain conclusions as the people in the film regarding the association of biosolids with these tragedies:

- The Daniel Pennock case was investigated by Pennsylvania Department of Environmental Protection (PA DEP); the agency's final report is available at <http://www.depweb.state.pa.us/biosolids/cwp/view.asp?a=1291&q=481939>. The concept of biosolids being involved in some way was not raised until six years after the events in question, at which time some information was no longer available and firm conclusions could not be made. The cause of Daniel Pennock's death was clear – massive infection by common pathogens that could have come from numerous sources. The biosolids involved were properly treated, and other people had been equally or more exposed to them.
- The Tony Behun case was investigated by PA DEP, and the agency's report is available at <http://www.depweb.state.pa.us/biosolids/cwp/view.asp?a=1291&Q=483661&PM=1>. Conclusion: "Based on the results of its investigation, the Department of Environmental Protection has found no medical or scientific evidence that Tony Behun's death was linked to any contact with the biosolids on the Al Hamilton Mountain Top mine site."
- The Shayne Conner case in Greenland, NH was investigated by the NH Acting Medical Examiner, the Department of Environmental Services, and Greenland Selectmen – all found no association between biosolids and the tragedy. A subsequent civil suit ended with a settlement, the details of which are not public; however, the family of Shayne Conner publicly stated that the science developed in the case did not prove that biosolids caused or contributed to Shayne Conner's death. For a synopsis of the events, allegations, and subsequent court case, see the NEBRA Information Update "Were biosolids involved in the death of a Greenland, NH man?" a PDF document available from NEBRA (603-323-7654 or info@nebiosolids.org).

EPA's Position

In the film, Paul Gilman, an EPA official, is shown making a statement on CBS Evening News in 2003. His short, excerpted on-camera statement cannot be construed as representing EPA's position. In 2003, EPA rebutted allegations and claims made by petitioners seeking a moratorium on the land application of biosolids. In a 24-page formal response to the Center for Food Safety et al. petition, Tracy Mehan, Assistant Administrator of the Office of Water, wrote:

In summary, there has been no causal connection whatsoever established between the deaths of Shayne Conner, Tony Behun or Daniel Pennock and exposure to land-applied sewage sludge. Therefore, EPA does not agree that any of these cases provide a reasonable basis for banning land application of sewage sludge.

and, in conclusion:

EPA has examined the information provided in the petition, as well as other sources of information, and finds no evidence to substantiate the claims they make concerning land-applied sewage sludge. Petitioners do not present scientifically-based evidence or documentation that links the land application of sewage sludge or chemical pollutants allegedly contained in sewage sludge to human health and environmental impacts that are described in the petition. Consequently, EPA concludes that they do not justify their request for immediate moratorium on the land application of sewage sludge... In addition, for reasons set forth in this letter and in EPA's Federal Register notice announcing its 2003 biennial review of

sewage sludge regulations under section 405(d)(2)(C) of the CWA, EPA concludes that they do not justify their request that EPA should initiate rulemaking to change the Part 503 Sludge Rule promulgated under the authority of the CWA at 40 CFR 503 to eliminate land application as an acceptable practice for sewage sludge disposal. For those foregoing reasons, the petition is denied.

The petitioners included several of the concerned individuals appearing in the film *Sludge Diet*. EPA maintains its position that any of the options legally available for the use and disposal of sewage sludge and biosolids are protective of public health and the environment. In comparison to the science-based U. S. federal regulations that EPA robustly defends, most U. S. states and Canadian provinces have additional, stricter regulations for the management of biosolids/treated sewage sludge.

Allegations of Problems in Ontario, Quebec, France, with worms...

- In May, 2006, the French Minister of Agriculture and Fisheries, Didier Rat, said, regarding biosolids use in France: “To this day there has not been any documented incident negatively impacting public health. The agricultural use of sludges has been the object of vigilance and research without precedent.” («...aucun incident portant atteinte à la santé publique n’a été enregistré à ce jour... l’épandage agricole des boues fait l’objet d’une vigilance et d’un effort de recherche sans precedent...»).
- Jim Poushinsky of Ottawa Citizens Against Pollution by Sewage states that biosolids, which are the solids removed from wastewater, are then allowed to wash back into surface water when they are applied on soils. As noted below, the greatest concern of biosolids and manure constituents reaching surface waters is with regard to the nutrients nitrogen and phosphorus. For this reason, the EPA Part 503 regulations require biosolids to be set back 10 meters from surface waters. Most states, including those in New England, and the provinces in eastern Canada, require considerably larger setbacks. In comparison, the federal government and most states and provinces do not require any setbacks for manures, which contain similar levels of the same nutrients.
- “As water becomes cleaner sludge becomes more toxic.” This is misleading. Pollution in wastewater is mostly organic matter and nutrients that, when released untreated into surface water, cause biological growth that results in reduction in dissolved oxygen. Biosolids are more than 99% inert grits and sands and complex organic matter from human and other organic waste (including microorganisms from the wastewater treatment process) containing essential nutrients. These materials, just like manures, are beneficial to soils and boost plant growth. As wastewater treatment plants do a better job removing these pollutants from water, they increase the volumes of this same material.
- Ellen Harrison’s discussion about worms was not a scientifically defensible investigation (we are not aware of any formal publication of this research) – there are several other plausible hypotheses as to why worms were not found at the particular site at that particular time. The fact is, there are many published research papers about impacts of biosolids use on earthworms that show no impacts, or positive impacts, on worm populations. For example, Sally Brown of the University of Washington used relatively large applications of biosolids to restore vegetation to acid-mine-drainage-impacted lands in Leadville, Colorado and found earthworms thrived in the new biosolids-amended soil whereas they could not survive in the un-amended local soil (Brown, S.; Sprenger, M.;

Maxemchuk, A.; and H. Compton, 2005. Ecosystem function in alluvial tailings after biosolids and lime addition, *J. Env'tl. Qual.* 34:1.)

In July, 2002, a National Academy of Sciences panel, which included Ellen Harrison, stated the following overarching finding in its final report executive summary:

“There is no documented scientific evidence that the Part 503 rule has failed to protect public health. However, additional scientific work is needed to reduce persistent uncertainty about the potential for adverse human health effects from exposure to biosolids.” (National Research Council, 2002: *Biosolids Applied to Land*, p. 3). All of the events discussed in *Sludge Diet* had occurred, had been investigated, and had been presented to the panel. With all of the concern about biosolids, wouldn't it be likely that someone would turn up some clearly documented harm, the way deaths and illnesses from manures have been scientifically documented several times in the past fifteen years (for example at Walkerton, Ontario, where drinking water tainted with bacteria from manure was the proven cause of several deaths)?

Immediately after *Tabou(e)!* was aired by Télé-Québec in April 2006, the network held a 90-minute televised debate involving stakeholders and scientists, including the president of UPA (Union of Agricultural Producers), three independent Québec university researchers, and a senior-level official at the Québec ministry of environment. At the end of the debate, the debate moderator made the following remark: “*Is there really something to worry about? Even the Québec National Institute for Public Health is comfortable and doesn't see (significant) risks... a call for cautiousness, yes, but nothing that confirms Mr. Desmarais's film*” («... Est-ce qu'on a de quoi s'inquiéter? Même l'Institut national de santé publique du Québec est assez ouvert, ne voit pas de risque. On ne trouve personne du côté scientifique pour dénoncer... un appel à la prudence, oui, mais rien pour aller jusqu'à confirmer le film de M. Desmarais.»).

Sewage sludges are known to involve potential risks to public health and the environment from pathogens, heavy metals, trace chemicals, and nutrients (e.g. nitrogen, phosphorus). These risks, and methods to reduce them when sewage sludge is treated and tested and used on soils, have been the subject of decades of research and thousands of published papers. Absent compelling scientific evidence of harm to public health and the environment from the use of biosolids in accordance with regulations and best management practices, it makes no sense to eliminate the practical and beneficial option of utilizing treated sewage sludge/biosolids on soils as a way to manage a necessary by-product of essential wastewater treatment and provide a recycled resource with proven benefits to soils and plant growth.

About NEBRA

The North East Biosolids and Residuals Association is a 501(c)(3) non-profit professional association dedicated to advancing the recycling of biosolids and other organic residuals in New England and eastern Canada. NEBRA membership includes most of the environmental professionals and organizations that produce, treat, test, consult, and manage the beneficial uses of biosolids and other large volume recyclable organic residuals in this region. NEBRA is funded by membership fees, donations, and project grants and directed by a volunteer Board of professionals from MA, ME, NH, PQ, and VT. NEBRA's financial statements and other information are open for public inspection during normal business hours. Information requests and memberships are welcome from anyone: info@nebiosolids.org or 603-323-7654.