

Engagement Summary

Draft Long-term Biosolids Management Strategy



Capital Regional District | June 2024

Background

The Capital Regional District (CRD) is required to submit a Long-term Biosolids Management Strategy to the BC Ministry of Environment and Climate Change Strategy by June 18, 2024 with the expectation that all biosolids be beneficially used through a range of options, in accordance with provincial regulation.

The CRD Board endorsed a draft strategy on May 8, 2024 that includes a portfolio of options to be utilized under a prioritization structure.

The Draft Long-term Biosolids Management Strategy and portfolio of options were available for public review and comment from May 13 to June 3, 2024. Feedback received during this time is being presented to the CRD Board for consideration as part of the final review and approval process.

Engagement Methods

“Get Involved” Website

The CRD uses its digital engagement site [GetInvolved.crd.bc.ca](https://getinvolved.crd.bc.ca) to share details of the draft Long-term Biosolids Management Strategy and invite feedback. Comments were collected using an online form and reviewed to ensure that personal information could be redacted.

During the feedback period, approximately 1177 visits resulted in three levels of participation:

- Aware (visited at least one page): 913 participants.
- Informed (downloaded documents, visited multiple pages): 459 participants.
- Engaged (shared comments or asked questions): 203 participants.

Media

An information bulletin was sent to media on May 13, 2024, following the CRD Board endorsement of the draft Long-term Biosolids Management Strategy. The bulletin highlighted the portfolio of options, next steps and how to share feedback.

Agenda items from the Board meeting and links for more information were included in the Board Highlights e-

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newsletter sent to subscribers in May. The Chair also highlighted the biosolids long-term plan and next steps in his monthly CFAF update in May.

- Info Bulletin: [The CRD invites public feedback on the Long-term Biosolids Management Strategy](#)
- [CRD Board Highlights: May 2024](#)

Local media coverage:

- [Times Colonist](#) May 19, 2024
- [Oak Bay News](#) May 13, 2024
- [CFAF Interview](#) May 8, 2024

Social Media

Staff scheduled a series of posts on social media schedule between May 13 to June 3 to promote engagement on the Long-term Biosolids Management Strategy. Each post included a call to action to learn more and share feedback on the Get Involved website. Staff responded to questions received through social media about the Long-term Biosolids Management Strategy when appropriate.

- **Facebook** posts resulted in approximately 7,524 impressions (number of times people saw a post) with a 2.32% engagement rate (percentage of people who clicked, liked, shared or commented).
- X posts resulted in approximately 2,814 impressions with a 1.78% engagement rate.
- **LinkedIn** posts resulted in approximately 2,501 impressions with a 5.67% engagement rate.
- **Instagram** posts reached approximately 1,194 people with an engagement rate of 1.59%.

Responses

The following comments were received by the CRD via an online comment form and are provided to the Board as part of the final Long-term Biosolids Management Strategy review and approval process.

The Long-term Biosolids Management Strategy also received comments from the Peninsula Biosolids Coalition in

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a letter sent on June 4, and two letters sent directly to the CRD Board email portal. These letters have been added to this report.

A total of 232 comments were received and common themes were identified. 18 comments indicated a preference for land application. 190 comments indicated a preference for thermal options or opposition to land application. 101 comments received followed a similar format.

Date received	Please provide your feedback on the strategy.
2024/05/13 – 6:45pm	There should be no distinction between in- and out-of-region land application options. As per the outcome of the surveys, ALL land application options should be pursued. The stricter requirements for in-region demonstrate NIMBY-ism and a double standard by our politicians. Listen to the survey outcomes.
2024/05/13 – 6:48pm	Our CRD politicians are dishearteningly presenting a NIMBY perspective by calling for more strict criteria for in vs out of region land application options. The surveys indicated public support for all land application options in and out of region options. Listen to the surveys, not the misinformed politicians (misinformed in continuing to support local land application ban).. Land application can be done safely even when considering contaminants.
2024/05/13 – 7:16pm	Any thermal option ("advanced" or otherwise) will have direct GHG implications. Land application options should be the priority instead. Shame on CRD politicians for not allowing in region options while allowing non-restricted out of region land application. Land application should be UNRESTRICTED no matter where.

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<p>2024/05/ 14 - 3:22pm</p>	<p>This public comment process is a joke and comes nowhere close to meeting provincial requirements for consultation with the public on a long term waste management plan. That said, the first two options make sense. Continued spreading of biosolids at Hartland is going to lead to significant longterm health and environmental impacts owing to bioaccumulation of "forever chemicals" that are present in small amounts in biosolids. While present in small amounts, continued application of 10 tonnes a day to the filling face of Hartland is an irresponsible practice. There should be no land application in region including at Hartland. There should be a full explanation of what went wrong with the Lafarge option where the biosolids were to be burned as fuel, and an effort made to find other similar facilities to Lafarge to take the biosolids as fuel. Lafarge is far from being the only facility that could take them in the interim while the gasifier is being built. If no out of region solution, like Lafarge, can be found, the biosolids should be biocelled and stored until they can be safely removed and destroyed when the pyrolysis process becomes available. This should not be at Hartland which is already under strain.</p>
<p>2024/05/ 14 - 7:28pm</p>	<p>Tiers should be reversed with priority being in region land application, followed by out of region land application, and and thermal option only if no other solutions are available.</p>
<p>2024/05/ 15 - 4:51pm</p>	<p>I find it interesting that Technical and Public Advisory Committee as well as the general public do not support the CRD Board's ill conceived land application ban, however the CRD intends to continue down a path that will cost the taxpayer unnecessary millions for an uncertain and unproven technology, which (if successful) will pump huge amounts of carbon dioxide directly into the atmosphere during a climate crisis.</p>
<p>2024/05/ 17 - 3:42pm</p>	<p>In region contingency options should take priority before out of region options. We process it here, we should manage and re-use it here. Being a sustainable community includes managing our waste within the community, not burdening other communities with it.</p>
<p>2024/05/ 19 - 6:20am</p>	<p>Please keep biosolids out of the forest. Do not apply it as forest fertilizer, as described in tier two of the board's strategy. Using biosolids as fuel has productive value. Using biosolids as forest fertilizer would only meddle with forest ecology as it is processed and not derived from the forest.</p>

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<p>2024/05/ 19 - 8:06am</p>	<p>I strongly disagree with dumping biosolids due to the health risks of spreading pollutants such as hormones and medicines passed through human waste. Also the risk of bacteria, virus's, such as MSRA, protozoa, microplastics, etc.</p>
<p>2024/05/ 19 - 8:59am</p>	<p>As a resident near the Hartland Landfill I am concerned that the strategies will affect the ground water. Many of the near by residents are on a well and have their own septic systems. It seems like all this sewage passing us by will ultimately affect us and we aren't able to use the sewage system ourselves. Its only fair that this project hook up all the surrounding homes to the sewage system since we have to pay for our septic upkeep and CRD costs. I also think this project should hook us up to city water so that we are not always worried about contamination.</p>
<p>2024/05/ 19 - 1:50pm</p>	<p>Stop being political hypocrites.... land application should be freely done both in and out of region. There should not be more stringent criteria for in region.</p>
<p>2024/05/ 19 - 2:33pm</p>	<p>Definitely don't put biosolids on agricultural fields. CRD should find some way to detoxify the waste.</p>
<p>2024/05/ 19 - 3:08pm</p>	<p>do not pour dangerous, forever chemical solids on top of landfill. Find a safer way to store for as long as needed.</p>

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<p>2024/05/19 – 4:32pm</p>	<p>We need to fast track the biochar/energy production option. There should be enough data from Australia & elsewhere that we do not need to "reinvent the wheel". There already working plants -why do we need our own "demo" ? Surely Synagro can contribute to the process- they are planning similar facility in US ? Maybe Fortis can get involved. Maybe a joint venture with Australian partner. The prospect of using tier 2 & 3 options for the next 8-10 years to dispose of 10 tons a day poses too many environmental /legal liability /staff time-logistical risks. Lets make the CRD an environmental leader in this field with Provincial/Federal support & create some internationally exportable Canadian expertise. Lets do a REALISTICALLY costed full production facility analysis in the next year & present it to CRD tax payers. Thank you & good job on the what we heard report.</p>
<p>2024/05/19 – 5:48pm</p>	<p>Please read the article from this link. https://biochartoday.com/2024/01/01/micropollutants-in-biochar-produced-from-sewage-sludge-a-systematic-review-on-the-impact-of-pyrolysis-operating-conditions/#:~:text=Biochar%2C%20a%20charcoal-like%20material%20produced%20from%20organic%20waste%2C,harmful%20micropollutants%20in%20biochar%20derived%20from%20sewage%20sludge.</p>
<p>2024/05/19 – 6:03pm</p>	<p>Bio solids should not be spread on land outside of the landfill site. Lands they might be spread upon have an unknown future and the waste could have long term negative impacts. Perhaps they could be shipped to Drax in the UK so they can burn it for electricity generation instead of burning wood pellets from BC's old growth forests. Seriously, generating energy from the waste could be the best solution.</p>
<p>2024/05/20 7:19am</p>	<p>I am always amazed at how little attention decision-makers give to the consequences of their actions. Nobody looks at 'the big picture' - just the political consequences of not responding to 'Mr Floatie.' The biosolid issue should have been part of the planning process from the beginning of the decision of land-based sewage treatment. Decisions made in haste reverberate into the future ... now no one wants the 'products' of the sewage decision. Rightly so, given the presence of 'forever chemicals.' The (provincial) political decision to "build, build, build!" will bring more people to the Island, will create an ever-increasing supply of unwanted PFAS-contaminated 'biosolids.' We are destroying the natural environment which is the foundation for life, and drowning in our own waste. Shitty situation.</p>

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2024/05/
21 –
11:59am

The only option that makes sense for many reasons is the "Tier 1" Advanced Thermal Option. All other management options outlined in the CRD's long term strategy involved land application of the toxic sludge that is referred to as biosolids. The persistence of "forever chemicals" such as PFASs and the other 80,000 chemicals found in sewage sludge is just too dangerous for humans, livestock and the natural environment. Many other countries and US states have now banned the land application of sewage sludge after learning the hard way that there are so many negative impacts of this approach. Please use common sense, listen to the public who have elected you to make sound decisions on our behalf. Surely you were alarmed at the news that Synagro is being sued in Texas because of the deleterious effects from their sale of biosolids to farmers there. No land application of biosolids!

2024/05/
21 –
4:14pm

Dear CRD Board,

Thank you for considering my feedback on the draft long-term biosolids management strategy. After reviewing the GHD Technical Memo on the Long-Term Biosolids Beneficial Use Strategy, I have some concerns regarding the selection of "advanced thermal options."

While these options may offer benefits, they also come with significant drawbacks and uncertainties:

1. High CAPEX and OPEX: The capital investment and energy-intensive pre-drying process associated with these options can be cost-prohibitive.
2. Undetermined End Use: The utilization of bio-oil, ash, and biochar remains uncertain and subject to market demand.
3. Controversial Impact: The agricultural and global warming effects of biochar land application are still debated.
4. Contaminant Reduction Uncertainty: The level of reduction and environmental fate of contaminants are not well-defined.
5. Technological Readiness: Pyrolysis and gasification have low technological readiness levels.
6. CCME Guideline Concerns: These thermal processes may conflict with the CCME beneficial use guideline due to negative energy balances and limited residuals recovery opportunities.

I recommend considering alternative approaches, such as thermal hydrolysis or hydrothermal processes. These options could offer lower costs, reduced energy input, and more clearly defined beneficial-use products. Additionally, I noticed that the previous survey lacked questions about people's familiarity with biosolids management technologies. Including such questions would provide valuable insights.

Thank you for your attention to this matter.

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<p>2024/05/ 21 - 7:17pm</p>	<p>Just no biosolids on farm/agricultural land.</p>
<p>2024/05/ 21 - 8:44pm</p>	<p>It is hypocritical for the CRD to rank in-region land application of biosolids as the last resort (tier 3), while placing out of region land application in the tier 2 ranking. Some out of region biosolids land application may be reasonable, but only if the CRD is willing to land apply biosolids within the CRD first. Therefore the CRD should prioritize in region land application, ranking this option as tier 2. Similarity, all other management options that are explored for CRD generated biosolids should prioritize in-region management that is complemented by out of region beneficial uses. Combustion options that do not have a net environmental benefit should not be considered for CRD biosolids. The cost estimate of each management option should be visible to CRD residents, since the cost will be passed onto tax payers.</p>
<p>2024/05/ 22 - 11:42am</p>	<p>Is the CRD Board's position that the provincial government (Ministry of Environment) is knowingly poisoning people and the environment in order to allow municipal governments to save money? I'm curious as to why the Board doesn't seek advice from experts in this field, and continues to rely solely on the opinions of concerned citizens with no education or experience in environmental science or resource management.</p>
<p>2024/05/ 22 - 12:22pm</p>	<p>CRD staff has indicated that the cost of a temporary demonstration facility for "advanced thermal" technology is approximately \$10 million dollars. If the trial successfully processes all of the biosolids produced for 15 months, the per tonne cost is close to \$2500/tonne. This is more than 100 times higher than the per tonne cost of the existing land application options employed by all other Regional Districts in BC. What is the CRD Board thinking?</p>
<p>2024/05/ 23 - 6:28am</p>	<p>We do not want that garbage here, it should be taken care of from where ever they take it from</p>

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2024/05/
23 -
7:10am

Disposing city waste in the country is as bad as pumping raw sewage into the ocean. The solution is to make it someone else's problem. The contract for the job should not have been awarded if they didn't have a proper way to dispose of the material..

2024/05/
23
8:05am

The thermal plant should have been constructed at the same time as the waste disposal plant. It is unfortunate it was not built as needed but typical of politics and short term thinking.

There are many of these thermal plants operating around the world. The need for a 2 year trial is inappropriate, it seems that the right people are not working for the CRD and the right politicians are not making the right decisions to run this issue to ground. The thermal plant should have been phase 1 construction as the treatment plant was built. The CRD should immediately adopt an appropriate sized, proven technology plant and begin construction. A 2 year pilot is a waste of time, there many types of waste to energy plants in Europe, I am sure CRD engineers have multiple options for consideration. Please stop the analysis paralysis.

2024/05/
23 -
9:08am

We in Jordan River are against any biosolid land application here or anywhere.
Thanks for listening
[REDACTED NAMES]

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2024/05/
23
10:28am

The Tier-1 Advanced thermal option is far superior to the Tiers-2 and -3 options. Construction of an advanced thermal processing facility for CRD sewage treatment of biosolids into biochar should proceed as quickly as possible. Also, planning and development should proceed expeditiously for facilities for accepting and using all the biochar produced by the CRD. This biochar should be used only in ways that have positive environmental and climate effects (carbon sequestration), e.g. a substitute for construction materials such as concrete and tar.

The only Tier-2 measures that should be allowed are supplying biosolids for alternative fuel combustion and for supplying biochar production facilities outside the CRD. CRD biosolids should not be used for agriculture, industrial reclamation or forest fertilizer applications because of the threat of environmental contamination.

Tier-3 should be for emergency situations only and should comprise the provision of specifically constructed containment facilities to securely and safely store thermally processed biosolids until they can be further processed into biochar per Tier 1.

2024/05/
23 –
4:00pm

Absolutely NO. No to all of it. The simple fact that this waste will contain absolutely everything that is put into the waste system including chemicals, drugs, effluent, detergents, microplastics and so much more is a deterrent in its own right. Undetermined chemicals mixed together to create new unknown chemical compounds... microplastics... pharma drugs... etc. This is going to be dispersed onto land that surrounds the South Islands main drinking water source (Sooke Lake and all of it's surrounding watershed tributaries)! Does the CRD have an exact knowledge of groundwater flow patterns? This has the potential to affect those on well water in addition to municipal water distributed from Sooke Lake. The 'potential' for this to happen alone should be sufficient deterrent to proceed! Our drinking water is our lifeline. Not to mention the adverse effect on wildlife flora and fauna. There are hundreds of micro-biomes on the Island, all of them will be affected in different ways either directly or indirectly by this. How they will be affected is merely speculation, truly unknown, and the resulting "we warned against this" will be words uttered far too late. Other municipalities around Canada use waste treatment plants and other methods to process waste that are non-threatening to the environment. Stop this absurdity before irreparable damage is done! Our forests and Island environments are doing just fine without human waste being sprayed/dumped all over them...

We can put people on the moon, rovers on distant planets, but are unable to solve the challenge of what to do with human waste on Vancouver Island without risking our potable water supply and a very delicate ecosystem made up of hundreds of fragile micro-biomes! Think about that for a minute. NO to this absurdity!

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<p>2024/05/23 - 4:44pm</p>	<p>I personally feel that if this is to be performed, you are solely responsible for harming future generations. Not only human, but flora, fauna, mamilian, insects and avians to name a few. If what is found in water from human waste is any testiment to what will leach in to ground water, water sheds and tables, thus reaching spawning streams and other sources, it will cause irreparable damage that cannot be un done. Shame on whatever 'science' you are basing this proposal upon. It's an absolute disgrace that this is even considered. Please, never, ever do this. We need to leave a better earth for future generations, and by spreading biosolids, you are guaranteeing a wasteland. Literally.</p>
<p>2024/05/23 - 4:46pm</p>	<p>Biosolids are an added nutrient to the environment and many countries promote their use.</p>
<p>2024/05/23 - 5:43pm</p>	<p>Please keep Victoria's bio solids in Victoria. Don't risk know and possibly more unknown risks/hazzards to spoil our forests and possibly react our Juan de Fuca strait. Thousands of flora and fauna are existing happily and we don't need city biosolids trucked here. Make Victoria produce the planned bio solid product and sell it as planned. Too many risks for no gain.</p>
<p>2024/05/23 - 7:21pm</p>	<p>We should find alternative to spreading biosolids into rural lands! This could seriously harm the wildlife and the drinking water of those on wells.</p>
<p>2024/05/23 - 8:04pm</p>	<p>I feel this is the wrong way of dealing with this. I draw my water directly from Demamiel creek, spreading the bio solids in the hills above my residence will contaminate this creek and effect the salmon bearing stream and my water along with the residents in my neighborhood! Not to mention that this is in the area of the Victoria watershed also! This is a very bad plan and they should look into a better way of dealing with the biosolids. This should not be spread in the hills of a watershed and above residential areas</p>

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<p>2024/05/ 23 - 8:25pm</p>	<p>We need to find a better way than putting biosolids near our water resources.</p>
<p>2024/05/ 23 - 9:43pm</p>	<p>It is my opinion that this idea is not thoroughly researched or well thought out. The JdF forestry lands happen to be the watershed to many people living in the interface zones not included in the CRD water distribution system. We rely on wells and surface waters to survive. There are many fish bearing streams in this area, plants and fungi that people and wildlife depend on for sustenance. If your feces is so clean, how about you spread it around Sooke Lake watershed</p>
<p>2024/05/ 24 - 5:46am</p>	<p>Please DO NOT spread any biosolids anywhere ... but especially anywhere near my home in Jordan River. The science is all you need to know to realize what a huge mistake this is. Please review his plan . It is insane</p>
<p>2024/05/ 24 - 7:38am</p>	<p>We are opposed to any soil applications of Biosolids in Metchosin. Specifically because a great portion of our properties rely on wells for drinking water. This could cause contamination of our groundwater and soil via toxic chemicals and disease causing pathogens. Our region's soil consist of loam and sand and exposed bedrock which means our aquifer 606 is extremely vulnerable to contamination due to its high infiltration rate. We feel that biosolids would be better utilized as a source of energy capture, a combustible fuel alternative.</p>
<p>2024/05/ 24 - 9:08am</p>	<p>This is a horrible idea when people are trying to be more sustainable by growing crop and raising animals for themselves and for the market. Bio-solids do not belong on rural land, not just because of the people living there but also the wild animals who inhabit these areas. Think again.</p>
<p>2024/05/ 24 - 10:54am</p>	<p>Only stupid people think that a biosolid is safe to be in OUR WATERSHED!!!! So No! Those dried shit should be where they are made! It is a big NO NO NO NO that it gets here in JDF forests! Get a grip guys, use your knowledge and money earned degree (if you have one) to think twice. NOT IN THE WATERSHED! NOT IN THE FOREST!!!!!!!!!!!!!! NOT IN JDF community!!</p>

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2024/05/24 - 11:45am	Strategy Seems reasonable. But am worried that the land fill/spreading options may end up being implemented if adequate energies/funds are not devoted to other utilisation measures
2024/05/24 - 12:18pm	using metchosin land for biowaste. This is a biodiversity hub that needs to be managed for its Keystone species ans not a dumping ground.
2024/05/24 - 12:27pm	I strongly oppose the distribution of biosolids on land. Now, with human waste laden with antibiotics and other drugs, as well as forever chemicals, it would be ludicrous to imagine that it would benefit life on land. It should not be spread anywhere: not on farmland and not on forests. Yes, it might speed up forest growth for the timber industry, but at the expense of contaminating all of our ecosystems for all time. Go the route of gasifying and creating biochar. A clean, usable product that will actually benefit this place we call home.
2024/05/24 - 1:54pm	The only disposal of biosolids that I approve of is gasification. All efforts should be made to have this option be realized more quickly and at a lower cost. I believe this will be possible if you focus on just this one option. When you consider cost, please deduct the value of the usable energy produced by gasification. Maybe we can profit by turning poop into product. Spreading biosolids on the ground is absolutely out. I'm sure you know that the toxins will leach out of the dangerous dung and into the streams and aquifers. What's worse than what might be in regular human waste is what hospitals and industry put down the sewer drain. Can you imagine? Here's the rule: If you wouldn't eat or drink it, don't put in on the land, anywhere.
2024/05/24 - 6:13pm	Are there no facilities nearby that we can ship to for transition to fuel while we build out Tier 1 option? There would be a revolution if attempts were made to spread it in the watershed of all the people and businesses in non core CRD lands,

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2024/05/
25 –
4:25pm

We have flagged the issue of Biosolids for some time now and when I attended the CRD meeting in January 2024 I started to feel very uncomfortable about the path of the CRD. Since January we have spoken to many people in our community who are quite rightly aghast when they realize the dangers that spreading Biosolids creates and the plans of the CRD to include surface application to lands in the Juan de Fuca rural resource land areas as part of their regional strategy. BC and Canada do not have standards for Biosolids and science tells us that regardless of standards there is no safe level of containments within Biosolids that permit safe spreading. The toxic materials in Biosolids occur largely due to the presence of Plastics and Pharmaceuticals which have been ingested and then flushed down the local sewers. Simple drying, as is done now at Hartland Landfill does not remove these toxic substances. The dried Biosolids, if dumped anywhere, can and will find their way in to our lands and water and all animals. Wind born dust can easily scatter the poisons ten kilometers from the source point. Rain and snowmelt can dissolve them and carry the poisons into the soil, the interflow water level and into streams, lakes, rivers and most dangerously into the underground aquifers from which so many of us draw our drinking water. The only safe technological approach to clean Biosolids that I have seen is complete burning (pyrolysis). The resulting biochar substance is as clean and inert as we can currently expect. Starting now the CRD is moving to this conclusion, I think, and yet they drag their feet with a study of the process, building of a pilot plant, and then upgrading it to a full size plant to handle the Biosolid product. This, we can expect to take them seven to ten years to complete and in the meantime their plans follow that when they need to get rid of the biosolids they always have the option of dumping it on forested lands well outside the inner urban core of municipalities. Even if our local governments in Metchosin, Sooke, and the Juan de Fuca were given a vote on the plan they would not be able to over come the votes of the other municipalities who only rational is "out of sight, out of mind". Biosolids are dangerous. They can poison and kill animals, birds, fish, humans, and contaminate and kill plants and farm produce by the use of water from local wells. Once polluted we cannot rectify our aquifers. We will be without water. Residents strongly support the ban against dumping any biosolids, anywhere, anytime. Thank you,

2024/05/
25 –
6:18pm

Is it intentional that this box is so difficult for the the public to find to comment ? There is no defined safe limit for PFSA's and other "forever plastics" anywhere in the world to show if the PFSA's and other plastics found in the CRD Biosolids are safe to spread or not, so a plan to spread this is unethical, dangerous and potentially criminal. If we the public know about the hazards, one would think "the experts" on CRD staff, the consultants and the Board know. So NO to spreading biosolids. Thank you.

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<p>2024/05/ 26 - 7:24am</p>	<p>I am vehemently against the land application of biosolids. It is untenable in my view to compromise the productive capacity of our soils and compromise our watersheds. The issue is not the human waste, although this would require proper handling. The issue is the other contents of this waste. Micro plastics and more end up in the biosolids. One of my biggest concerns are the PFAS chemicals -also called forever chemicals, that are unfortunately found in common household products like non-stick pans, cosmetics, stain removers and cleaners. There are over 9,000 of these compounds. They are proven to cause cancer, and birth defects among other ailments. These are found in the biosolids and they never go away. Testing for PFAS is very costly and complicated. The only regional solution that I recommend is to incinerate our waste. It is very costly, but this is the price of maintaining our health, and the health of our soils and the ocean. A medium to longterm solution is to ban these chemicals at the source. We have no need of PFAS chemicals in our homes, nor do we need persistent pollutants in the products we use in our homes. If we could garner support at the provincial and federal level, pressure could be applied to manufacturers to only use biosolid-safe ingredients in their products. The issue can be revisited when we can guarantee that the land application of biosolids won't contaminate our soils and our people. Until then, I remain vehemently opposed to the land application of biosolids.</p>
<p>2024/05/ 26 - 3:20pm</p>	<p>I definitely want to see the ban on land application of biosolids in the CRD maintained. That is, I do not want any biosolids used in land applications in the CRD - or anywhere else.</p>
<p>2024/05/ 26 - 3:34pm</p>	<p>I do not believe that "nutritive value in biosolids outweighed the land contamination risks" for land application use of biosolids. That assessment is based on a perspective that contamination is understood and predictable. Have a real-time conversation with anyone who has ever suffered from PFAS contamination and see how the perspective of nutritive value outweighing the negative impacts of contamination is transaction-centric, not human-/environment-centric. Please maintain the ban on land application of biosolids!</p>
<p>2024/05/ 26 - 9:44pm</p>	<p>I am no expert in biosolids (aka bio sludge). I do appreciate that the local food I eat is effected by the quality of our soils. Any decision to add the toxicity of biosludge to the soil my food is grown in is insane. I am sure the CRD is not looking for a nomination for membership in the reckless endangerment club. Safety of our food supply simply cannot be compromised.</p>

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2024/05/27 – 5:15pm	Under no circumstances should biosolids be used on our soils, especially after hearing of the legal case in the US concerning hazardous materials found in biosolids by the same company considered by the CRD. To have not had a clear plan for the disposal of this waste right from the start, is where the negligence began.
2024/05/28 – 8:52am	Fossil fuel free thermal conversion, using the latest carbon free technology, is the only way to go. It's the best long term solution that takes into account our region's need to reduce our carbon footprint and stop destroying forests for landfills.
2024/05/28 – 9:45am	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 – 10:03am	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 – 10:06am	I strongly support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 – 10:09am	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 – 10:11am	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

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Draft Long-term Biosolids Management Strategy

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2024/05/28 – 10:13am	<p>I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.</p> <p>I support the continued ban on all land application of biosolids in the CRD, including at Hartland.</p>
2024/05/28 – 10:15am	<p>I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.</p> <p>I support the continued ban on all land application of biosolids in the CRD, including at Hartland.</p>
2024/05/28 – 10:19am	<p>I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.</p> <p>I support the continued ban on all land application of biosolids in the CRD, including at Hartland.</p>
2024/05/28 – 10:21am	<p>I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.</p> <p>I support the continued ban on all land application of biosolids in the CRD, including at Hartland.</p> <p>It is crucial to avoid incineration or combustion of fossil fuels.</p>
2024/05/28 – 10:22am	<p>I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.</p> <p>I support the continued ban on all land application of biosolids in the CRD, including at Hartland.</p>
2024/05/28 – 10:22am	<p>I support biosolid disposal in the kindest way not to impact our planet</p>
2024/05/28 – 10:25am	<p>I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.</p> <p>I support the continued ban on all land application of biosolids in the CRD, including at Hartland.</p>

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2024/05/28 – 10:27	<p>I support using new technologies or incineration or fossil fuels or biogas or LNG for the thermal conversion of biosolids to eliminate all toxic chemicals.</p> <p>I do not support the continued ban on all land application of biosolids in the CRD, especially at Hartland. The CRD needs to have the possibility to install a plant of its choice to manage our waste, and we need to give them the tools and support to do so. I trust in a sustainable, long term and affordable solution will be sought and found.</p>
2024/05/28 – 10:28	<p>I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.</p> <p>I support the continued ban on all land application of biosolids in the CRD, including at Hartland.</p>
2024/05/28 – 10:46am	<p>I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.</p> <p>I support the continued ban on all land application of biosolids in the CRD, including at Hartland.</p>
2024/05/28 – 10:54am	<p>I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.</p> <p>I support the continued ban on all land application of biosolids in the CRD, including at Hartland.</p>
2024/05/28 – 11:00am	<p>I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.</p> <p>I support the continued ban on all land application of biosolids in the CRD, including at Hartland.</p>
2024/05/28 – 11:01am	<ol style="list-style-type: none">1. I support using technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil-free energy.2. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

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2024/05/28 - 11:05am	For Health and community safety concerns, I adamantly oppose any land use applications of biosolids.
2024/05/28 - 11:06am	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 - 11:10am	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 - 11:17am	My first wish, expressed only "in general", is to close loops. Thus i would see human waste reintroduced into human sustenance. I understand this isn't feasible on account of challenges of source control and specific considerations like pharmaceuticals. So next best loop closure is to return biosolids to the biosphere. Your blended growing media for reclamation sounds GREAT as well as silviculture with safeguards. Then IF biosolids can be used as fuels, displacing other fuels, OK. But the very last choice should be using other fuels to incinerate biosolids. I want to add: while we here focus on biosolids I hope that liquid "waste" receives as much attention in terms of beneficial use.
2024/05/28 - 11:21am	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 - 11:23am	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

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2024/05/28 – 11:25am	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 – 11:26am	We support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 – 11:33am	I support thermal conversion of biosolids, toward production of nontoxic biochar. I believe this needs to be accomplished without the use of fossil fuels. Thank you.
2024/05/28 – 11:41am	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 11:44am	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 – 11:53am	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 – 11:58am	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

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2024/05/28 – 12:09pm	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 – 12:11pm	Before it was relabeled as "biosolids" this material was referred to as sewage sludge..... It is nasty toxic material and should not be used anywhere in the CRD
2024/05/28 – 12:15	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 – 12:30pm	support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 – 12:43pm	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 – 12:48pm	Toxic biosolids from Victoria's sewage treatment plant are a public health threat. I call for the CRD and Province of British Columbia to adopt thermal conversion as the only safe and viable solution. Our safety should be paramount.
2024/05/28 – 1:07pm	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

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2024/05/28 – 1:11pm	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 – 1:26pm	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 – 1:28pm	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 – 1:33pm	I am in favour of the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 – 1:42pm	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 – 1:58pm	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 – 2:30pm	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

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<p>2024/05/ 28 - 2:37pm</p>	<p>I support a CRD demonstration project that will use gasification or pyrolysis technology to process biosolids to produce energy and biochar.</p> <p>I support the continued ban on all land application of biosolids in the CRD; including burying in 'Biocells' or use as landcover at Hartland.</p>
<p>2024/05/ 28 - 2:41pm</p>	<p>I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.</p>
<p>2024/05/ 28 - 2:51pm</p>	<p>No incineration. Use biosolids for energy through gasification.</p>
<p>2024/05/ 28 - 2:53pm</p>	<p>I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.</p> <p>I support the continued ban on all land application of biosolids in the CRD, including at Hartland.</p>

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2024/05/
28 –
3:24pm

I DO NOT support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.

I DO support the continued ban on all land application of biosolids in the CRD, including at Hartland.

Sierra Club-Supported Report:

AN INDUSTRY BLOWING SMOKE—10 reasons why Gasification, Pyrolysis & Plasma Incineration are not “green solutions”

<https://www.no-burn.org/wp-content/uploads/2021/03/BlowingSmokeReport-1.pdf>

The only solution—see "Living Downstream" documentary, interviewing Retired BC Cancer Agency Senior Scientist Researcher Dr. John Spinelli.

Free-stream it with your GVPL library card—<https://www.hoopladigital.com/title/11043083> Trailer—

<https://www.youtube.com/watch?v=z2UsmBqYpwo> About film—

<https://web.archive.org/web/20230528204824/https://www.livingdownstream.com/about-film>

Don't test toxins on the public, in our lungs, bodies, air, water or soil. Keep the toxins out of the biosolids in the first place. Hold The Province and Ottawa accountable for this by binding them to The Precautionary Principle—<https://www.sehn.org/precautionary-principle-understanding-science-in-regulation>.

"If we can stop cancer [and Parkinson's and Alzheimer's] before it begins, why don't we?" —Kristina Marusic, "A New War on Cancer—The Unlikely Heroes Revolutionizing Prevention"—<https://www.kristinamarusic.com/>

2024/05/
28 –
3:29pm

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy

2024/05/
28 –
3:30pm

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.

I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

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2024/05/28 – 3:30pm	<p>I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.</p> <p>I support the continued ban on all land application of biosolids in the CRD, including at Hartland.</p>
2024/05/28 – 3:51pm	<p>I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use biochar and fossil fuel free energy.</p> <p>I support the continued ban on all land application of class A biosolids in the CRD, including at Hartland</p>
2024/05/28 – 4:04pm	<p>I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.</p> <p>I support the continued ban on all land application of biosolids in the CRD, including at Hartland.</p>
2024/05/28 – 4:20pm	<p>I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.</p> <p>I support the continued ban on all land application of biosolids in the CRD, including at Hartland.</p>
2024/05/28 – 4:47pm	<p>I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.</p> <p>I support the continued ban on all land application of biosolids in the CRD, including at Hartland.</p>
2024/05/28 – 5:13pm	<p>I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.</p> <p>I support the continued ban on all land application of biosolids in the CRD, including at Hartland.</p>
2024/05/28 – 5:26pm	<p>I support using new technologies that DO NOT involve incineration or fossil fuels for the thermal conversion of biosolids.</p> <p>I support the continued ban on all land application of biosolids in the CRD, including at Hartland.</p>

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2024/05/ 28 - 5:26pm	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland. I am astonished that we are still having this discussion. Biosolids do NOT belong anywhere in a dump!
2024/05/ 28 - 5:35pm	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

2024/05/
28 -
5:43pm

So Duh

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<p>2024/05/28 – 7:18pm</p>	<p>As most biosolids in low industrial environments across North America have been shown to contain low concentrations of potentially toxic components, most land applications in the short term are likely to show very limited impacts, positive or negative. In the short term it seems likely that Biosolids applied to forest or park lands, especially recent cuts, may well enhance the organic matter regime. My concern is with the longer term application of these materials to food producing surfaces. Again, in the short term, there will likely be a brief enhancement of the organic matter regimen, which in the case of depleted crop lands could represent an improvement and increased yields. My concerns lie with the long term applications of a host of low concentration elements, which have a longer soil residency period, therefore, greater opportunity to find their way in to the food chain and food supply. Increasing longer term, and greater mass applications (as is inevitable with expanding populations) concentrations of all potentially toxic, long residency elements will invariably increase. This is especially critical when producers are working to maintain full Organic Certifications. It also leads to increasing, yet uninformed, ingestion of moderately toxic foods stuffs. . Hence, it is important in my view for the CRD to conduct a proper and complete populations based Risk Assessment followed by the development of a long term Risk Management Plan.</p>
<p>2024/05/28 – 7:33pm</p>	<p>I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.</p>
<p>2024/05/28 – 7:43pm</p>	<p>My family and I oppose the land application of biosolids in Shirley. Our watershed is close by, we grow our food, and we're raising our children here. We do not want our community at risk. Please come up with another option. Thank you</p>
<p>2024/05/28 – 7:48pm</p>	<p>I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.</p>

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2024/05/28 – 9:41pm	<p>I do NOT support any land use of biosolids or any application on land for any reason.</p> <p>I do NOT support incineration or composting of biosolids or any form of incineration releasing biosolid particles into the air, on land, or water (sea water or fresh water), or our environment.</p> <p>I do NOT support the use of biosolids as fertilizer in wooded areas and forests whether federal or provincial or regional or municipal or privately owned properties.</p>
2024/05/28 – 9:42pm	<p>I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.</p> <p>I support the continued ban on all land application of biosolids in the CRD, including at Hartland.</p>
2024/05/28 – 10:30pm	<p>I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.</p> <p>I support the continued ban on all land application of biosolids in the CRD, including at Hartland.</p>
2024/05/28 – 10:39pm	<p>I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.</p> <p>I support the continued ban on all land application of biosolids in the CRD, including at Hartland.</p>
2024/05/28 – 11:03pm	<p>support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.</p> <p>I support the continued ban on all land application of biosolids in the CRD,</p>
2024/05/29 – 6:34am	<p>I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.</p> <p>I support the continued ban on all land application of biosolids in the CRD, including at Hartland</p>

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2024/05/
29 –
7:36am

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.
I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

2024/05/
29 –
9:06am

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.
I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

2024/05/
29 –
10:43am

This has to be one of the most inadequate public consultation processes I have ever seen and is totally unfit for purpose for consultation on such a complex topic. There is no opportunity to upload documents or provide a detailed response. However, since this is the only way to provide input, let me say the following. Tier 1, using thermal conversion, is the only safe and sensible approach given the potentially long term effects of bioaccumulation of biosolids containing forever chemicals. As more and more is learned about the dangers and persistence of these chemicals that are present in treated biosolids, it becomes ever more important to maintain the ban on land application. The present policy of dumping 10 tons a day at Hartland is a ticking time bomb. This must stop immediately. Given the time to bring Tier 1 onstream (this process should be prioritized and accelerated) it is essential that non land application interim solutions be found. The first option in Tier 2 must be to reactive the Lafarge solution. As part of this, the Board should pursue legal options to remedy the farce that Lafarge has become, wasting hundreds of thousands of dollars of taxpayer money and delivering no results. Either Lafarge is in breach of contract or Synagro is for not producing pellets with the required caloric value. Either way, the public has a right to know and the Board a responsibility to shed light on what happened, so as to avoid it happening again. If Lafarge doesn't work, find other similar beneficial fuel uses. Do not resort to land application either out of region, in region or at Hartland. The only safe solution is to biocell the biosolids somewhere other than Hartland until such time as the biosolids can be beneficially used in the pyrolysis conversion plant to produce biochar, which can generate revenue. Tier 3 should be off the table completely. The CRD fortunately has been able to avoid most of the long term risks by not applying biosolids to land in the region. Don't throw all that away for some short term gain. Either use the stuff as fuel, or biocell so that it can be used as fuel in future while Tier 1 option is expedited.

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2024/05/29 – 10:55am	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/29 – 11:19am	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/29 – 11:20am	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/29 – 11:23am	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/29 – 11:47am	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/29 – 1:36pm	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

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<p>2024/05/29 – 1:38pm</p>	<p>I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids (also known as solid sewage sludge) to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.</p> <p>I support the continued ban on all land application of biosolids (also known as solid sewage sludge) in the CRD, including at Hartland.</p> <p>I welcome information about the decision of the CRD Board regarding this essential ecological and environmental issue.</p>
<p>2024/05/29 – 3:07pm</p>	<p>I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.</p> <p>I support the continued ban on all land application of biosolids in the CRD, including at Hartland.</p>
<p>2024/05/29 – 3:10pm</p>	<p>I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and and produce beneficial use in biochar and fossil free energy.</p> <p>I support the continued ban on all application of biosolids in the CRD, including at Hartland.</p>
<p>2024/05/29 – 7:57pm</p>	<p>I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.</p>
<p>2024/05/29 – 8:04pm</p>	<p>I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.</p> <p>I support the continued ban on all land application of biosolids in the CRD, including at Hartland.</p>
<p>2024/05/29 – 9:07pm</p>	<p>I live in Otter Point. I just attended a presentation by Phillipe Lucas. Following this I am 100% opposed to the land application of biosolids. Gasification appears to be the only way forward. Municipalities which vote for land application approval must be prepared to receive the biosolids themselves!</p>

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2024/05/29 – 9:09pm	I disagree 100% with applying biosolids/sludge on the land, but I support using gasification or pyrolysis of biosolids/sludge to generate syngas for electricity generation. Mixing of biosolids with wood waste is ok to achieve better gasification or pyrolysis. The charcoal obtained in this process can be used for filtering the emissions from the gasifier or on the land as a soil amendment.
2024/05/30 – 7:24am	I think biosolids should be converted into gas and not put onto the land or in the water.
2024/05/30 – 7:26am	I am an organic farmer and opposed to putting biosolids on the land, particularly on farm land.
2024/05/30 – 8:23am	This reminds me of the Canadian Red Cross decision to ignore emerging science on HIV and continue using contaminated blood. It was a costly decision in many ways, including costing lives. "Only 6 measured parts per billion" does not sound like a lot. But it adds up. Just say "no" to land application. Speed up the biochar option and look at other nations' successes.
2024/05/30 – 9:07am	The only responsible option to deal with bio-solids is advanced thermal. Spreading it out on farm land or any forest is only going to poison (say PFASs) the land, and the water on and in it. Our water source is a well, drawing from an aquifer which is regenerated by rainwater. There are water licences for residences in our area that draw water from creeks. The land around our rural home is our water shed, so please don't poison it ... this concern must apply both inside and outside the CRD. Bio-solids spread on the land must not happen.
2024/05/30 – 9:10am	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

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2024/05/30 - 9:12am	Any plan to spread bio-solids on land must not happen!! Bio-solids are proven beyond doubt to be toxic to the environment and to all living things. To do so is beyond irresponsible -
2024/05/30 - 9:31am	I'm curious as to how the CRD has concluded that pursuing "advanced thermal" options at great expense is in alignment with the public feedback received, as this was the least supported option in the representative survey and will cost more than 10 times what other options cost. I also find it ridiculous that the CRD has separated "out of region" and "in region" land application options. If this material is truly "toxic waste" (it isn't) why would they send it out of region to somebody else's backyard?
2024/05/30 - 9:33am	BAD IDEA! Don't do it. Dumping bio solid where it won't have impact of our water and soil. I am COMPLETELY AGAINST THIS!
2024/05/30 - 9:44am	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/30 - 10:42am	Current system rejected around the world, unsustainable mass effect even now and is dangerous to public health - spreading toxins, forever chemicals and ever evolving noxious bacteria and viruses into schools, agricultural lands and the very water table in residential areas that rely on wells. Frequent bad odours as you pass Hartland enroute to adjacent Durance Lake and Tod Gowland park recreation area for an increasingly congested, nature-needy city tell it all. Victoria's prime, world-class tourist attraction, Bouchart Gardens, cops it too - what a short- sighted disgrace.
2024/05/30 - 11:05am	I am a resident of the Juan de Fuca regional district. I oppose the land application of biosolids as an option for managing waste and would like to see the current ban remain in place. The CRD should move ahead with establishing gasification processes.

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2024/05/30 – 11:19am	<p>I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.</p> <p>I support the continued ban on all land application of biosolids in the CRD, including at Hartland.</p>
2024/05/30 – 1:09pm	<p>It seems that the CRD could benefit from some professional help when it comes to managing biosolids. Is there any reason why they do not bring in a tenured professor of environmental or waste management to advise them? Might be a step up from relying on special interest groups focusing on preventing anything from occurring in their own back yard.</p>
2024/05/30 – 1:14pm	<p>\$10 Million for a 1-year pilot project, and then a significantly higher amount if the technology works?! The CRD is going to spend more on this (non)-issue than other regions will spend this century!</p>
2024/05/30 – 1:41	<p>If other regions can safely land apply biosolids I'm not sure why we can't. Is the assertion that cancer rates are higher outside of the CRD? Are the forests around Nanaimo a toxic wasteland? The CRD Board should dismiss Phillippe Lucas' statements for the hyperbole they are, and the CRD should bring in the experts that have advised other local governments when these same questions have been asked.</p>
2024/05/30 – 4:11pm	<p>I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.</p> <p>I support the continued ban on all land application of biosolids in the CRD, including at Hartland.</p>
2024/05/30 – 4:15pm	<p>I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.</p> <p>I support the continued ban on all land application of biosolids in the CRD, including at Hartland.</p>
2024/05/30 – 4:50pm	<p>I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.</p> <p>I support the continued ban on all land application of biosolids in the CRD, including at Hartland.</p>

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2024/05/
30 –
4:52pm

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.
I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

2024/05/
30 –
5:33pm

Tier 1 - I support thermal conversion and ask that you accelerate the timeline. I support processing that does not involve the use of fossil fuels, incineration, or other method that disperses chemicals into the air. I expect that all toxic chemicals will be removed from the biochar.

Tier 2 options 1, 2, 3, 4 and Tier 3 option 1, 2, 3 - I do not support any land application, anywhere at any time. There is too much evidence of the dangers of contamination. CRD doesn't take nearly enough care to rigorously test the areas impacted by Hartland. Slow contamination is impossible to reverse.

Tier 2 option 5, 6 - Until Tier 1 can be achieved, I support prioritizing the use of biosolids at the Lafarge plant or similar as originally intended. I trust CRD will inform us of and solve the problems that suspended this use.

Tier 3 option 3 - Given the existing pressures on landfill capacity, the use of biosolids as coverage on the filling face of Hartland must be eliminated as an option. If all else fails, biosolids must be safely biocelled at a site other than Hartland.

It makes sense that Biocelled material can be beneficially used as fuel when Tier 1 becomes available.

2024/05/
30 –
5:39pm

I am opposed to any land application either in region or out of region. The biosolid spread at Hartland must stop. The landfill has too much already.

There is significant evidence that biosolids are toxic and that over time cause serious harm. Thermal conversion without incineration is the only option. In the meantime you must do your utmost to fix the problems with LaFarge and pursue that option. We are skeptical that you have not said why this option is not working.

We think that biocells are a good option to store the waste until thermal conversion is available

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2024/05/
30 -
6:03pm

I'm very concerned with these two items from the Tier 2 plan:

2. Forest fertilization
3. Production of biosolids growing medium and/or feedstock in soil production

Putting human waste, no matter how it's pretreated, onto our forests is reckless to say the least. Our forests are a precious biome, already in danger from other hazards, whether man or climate related. Our forests are vital for our survival. Forests will not respond well to human waste, especially with all the hazard material in it (pharmaceuticals, hormones, poisons, whatever someone decides to flush down their toilet).

The same comments relate to using these biosolids as a growing medium or feedstock for soil production. Really? There needs to be some very serious questions raised about where such outrageous ideas came from. Certainly not from qualified scientific sources.

2024/05/
30 -
7:28pm

Don't re invent the wheel; go with a working gasification system and get on with disposing of biosolids. Spreading it around as "fertilizer" is compounding the harm from toxic substances. Your crd sewage sludge does not belong in my jdfea back yard, contaminating my water sources.

2024/05/
30 -
8:42pm

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.

I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

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<p>2024/05/ 30 – 10:17pm</p>	<p>Biosolids contain toxic 'forever chemicals' that disperse when they adhere to microplastics, so I don't support Tier 3 of the Plan. There is recent research from the UCLA pollution lab on this issue, and I therefore do not support the land application of biosolids anywhere under any circumstances. I do support Tier 1, but until a thermal conversion plant is operational, biosolids must be safely stored for future beneficial use in a biocell facility at a location other than Hartland. Furthermore, like airports across Canada are starting to do, because biosolids have been over-applied at Hartland against provincial approval, when the thermal plant is operational, the Hartland Landfill must be remediated for PFAS and other forever chemicals. Until then, a long term detailed monitoring program like what CRD has underway with the Raincoast Foundation needs to continue. Lastly, CRD's consultation and public education on the issue of biosolids has not been accurate or adequate. The public needs to understand this issue so they can make an informed decision and support building the infrastructure needed to safely handle our region's biosolids. The results of the two surveys that CRD recently did show the importance of public education. Residents who were cold called by IPSOS and who did not know any better, assumed that provincial regulations were adequate and therefore agreed with land application. This was not informed support and frankly, this type of survey is not ethical given the issue involves public health, environmental risk and a huge amount of public money. Please truthfully educate the public and make the right infrastructure investment...no matter what the outdated and inadequate OMRR direct. The Province is wrong , and for the sake of our children, it's time to start pushing back so CRD can deliver what it's citizens want.</p>
<p>2024/05/ 31 – 6:59am</p>	<p>I support new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland Dump and surrounding lands.</p>
<p>2024/05/ 31 – 9:55am</p>	<p>More recent research appears to call into question the safety of using biosolids on land. This new information means that the precautionary principle must be followed. I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.</p> <p>I support the continued ban on all land application of biosolids in the CRD, including at Hartland.</p>

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<p>2024/05/ 31 - 9:57am</p>	<p>I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.</p> <p>I support the continued ban on all land application of biosolids in the CRD, including at Hartland.</p>
<p>2024/05/ 31 - 11:46am</p>	<p>I do not support any land application of existing biosolids generated at Hartland whatsoever including the continuing application at Hartland landfill</p> <p>I do support alternate solutions including thermal conversion and processes to generate a benign product for potential value added applications</p>
<p>2024/05/ 31 - 12:20pm</p>	<p>I am opposed to spreading biosolids on our lands. Please consider other beneficial strategies like gasification and energy production. Please also consider the possible extraction of elements and metals for beneficial use.</p>
<p>2024/05/ 31 - 1:03pm</p>	<p>We must live within our own means - Rescind the rules that ban land application in the CRD: This rule is outdated at best. A vocal minority of conspiracy theorists with the luxury of plenty of non-working time have the confidence of the CRD Board. This confidence is misguided and will not age well. You, CRD Board, should know better. The more inclusive survey of the CRD voters, taxpayers and ratepayers reports the opposite views. The overworked, inflation weary, underhoused and too-exhausted-to-pay-attention-to-the-rabbit-holes-the-vocal-minority-have-dug majority will eventually get the bill for the only facilities for biosolid vapourization this side of Alpha Centauri and vote accordingly. The funds should go to address their aforementioned hyphenated issues. The CRD needs to take responsibility for the products it buys and the food it eats. Eventually the outside communities the CRD expects to accept it's biosolids (because they are too frightening for the CRD but are good enough for colonization of other areas) will pass their own rules banning biosolids from the CRD. I expect the CRD will partner with Space X and stop funding anything else at that point. Humans, dinosaurs and insects have been using land application for waste products since the single cell organism began metabolizing. Just like breathing uses air. If legislation can control the manufacture of ozone damaging chemicals, pesticides and mutagenic antinausea drugs for pregnancy why is the untested wasteful technology something the CRD ratepayers need to fund? Even if the conspiracy theorists are correct, the impact will not be felt in their lifetime and these individuals has expressed little concern for anyone but there own group. The conduct is cultlike. Provenance of BC. Please act in an equable manner. And for heavens sake, burning assets for cement plants is not sustainable either. With all that, thank you for your service.</p>

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2024/05/ 31 - 4:12	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/ 31 - 7:44pm	Current research indicates that persistent organic compounds, or emerging pollutants, found in pharmaceuticals and personal care products, microplastics, and per- and polyfluoroalkyl substances (PFAS) have the potential to contaminate ground and surface water, and the uptake of these substances from soil amended by the land application of biosolids can result in contamination of food sources (e.g. fish, berries) and ecosystems that have provided a home for the indigenous flora and fauna and birds and pollinators for centuries and the air that we all breathe when we walk in the woods. Advanced technologies to remove these contaminants from wastewater treatment plant influent, effluent, and biosolids destined for land application along with tools to detect and quantify emerging pollutants are critical for human health protection.
2024/06/ 01 = 5:08am	I oppose the land application of bio-solids. The ban of this practice must stay in place. I support the strategy of gasification of bio-solids and believe this should be pursued more aggressively.

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2024/06/
01 -
9:01am

Dear CRD,

Biosolid Free BC strongly opposes the land application of biosolids, whether it's in the CRD, at Hartland landfill, or in any other jurisdiction. The available academic evidence makes it evident that due to the large concentration of toxic chemicals found in sewage sludge - which include PFAS, microplastics, pharmaceuticals, PAHs, dioxins and other chemicals of emerging concern - there is no way to avoid significant negative impacts on the environment and public health inevitably associated with the land application of biosolids, nor the associated legal liability for the CRD.

In light of these harms, Biosolid Free BC strongly supports alternative approaches that make beneficial use of biosolids in waste-to-energy applications, including industrial uses that displace the use of fossil fuels such as powering cement manufacturing and/or the development of local thermal conversion opportunities in the CRD.

We note that despite the significant implications associated with the implementation of effective strategies for the long term management of biosolids, the CRD public consultation process has been completely inadequate and flawed by the lack of balanced, unbiased evidence-based information. Decisions on this file have significant financial, public health and environmental implications, and the general public as well as local First Nations should have been provided with far better opportunities to engage in the decision-making around this issue.

Despite the reluctance of senior CRD staff to dutifully provide the Board and the public with the available evidence regarding unavoidable harms and legal liability associated with the land application of biosolids, or to ensure that Synagro's current practices - which have resulted in a number of criminal investigations and lawsuits in the US and Canada - don't endanger our region's environment and public health, we strongly commend the CRD Board for upholding the longstanding and popular regional ban on the land application of biosolids, and will continue to support alternative strategies that don't threaten the future health of our region.

2024/06/
01 -
9:31am

I am concerned about the wisdom of using bio solids on food producing fields. I would prefer to err on the side of caution now rather than find too late that this was a mistake.

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2024/06/
01 -
12:10 pm

I strongly support the continued ban on all land application of biosolids in the CRD, including at Hartland. I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate or at least reduce toxic chemicals and produce beneficial use in biochar and fossil free energy.

2024/06/
01 -
6:50pm

1) Above all we should keep waste processing as low tech and as simple as possible. Future energy use (thermal treatments) will be harder to implement, more and more expensive, fuel more and more scarce. Given these future issues, I support land fertilization and creation of compost for farming and use in urban settings. 2) A portion of our community waste stream could be managed locally, within neighborhoods. Waste processing could be more evenly and locally distributed by popularizing the use of composting toilets, neighborhood-located composting sites, and redistribution of finished composted material back within the same neighborhood. This strategy would also avoid the energy use required for transportation to more distant locations.

2024/06/
02 -
7:50am

Do not spread biosolids anywhere on Vancouver Island! I'm shocked that you would even consider doing this with the repercussions in the news from south of the border!

2024/06/
02 -
8:24am

I strongly support development of a demonstration facility for advanced thermal processing.
I am opposed to biosolids being used as a growing medium for agricultural - human or livestock.
I am opposed to biosolids being used for forest fertilization.
I strongly support the CRD addressing the region's sewage waste in the region as opposed to off loading to another region.
Accordingly, I strongly support the CRD retaining its policy banning biosolid land application which it has had in place since 2011.
Now is the time for the CRD to prove itself as an environmental leader, and adhere to the guiding policies of its Regional Growth Strategy and protect the region's ecosystems.
As stated by the CRD, " We all live in a watershed, regardless of how far we are from a body of water; therefore, the activities we do on land impact our water quality."

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2024/06/
02 -
10:35am

Thank you for the opportunity to comment. I live near the Hartland landfill and have a well drawing water from the same aquifer as that o Hartland. I don't support applying biosolids on the landfill or other CRD land. Our CRD population is set to increase significantly and the CRD land base outside urban areas and parks is not huge. Although we don't have a lot of industry, we do have a lot of domestic sources of the forever chemicals. Unless source control of forever chemicals is in place (and I don't see that happening), then I support thermal conversion of biosolids into a non-toxic beneficial safe product such as biochar. I am pleased that a trial of this technology is planned. At an earlier on-line information session, a member of the public asked if the CRD had tested for concentrations of some of these forever chemicals in the biosolids. The response was yes but the CRD was not willing to share the results. This lack of transparency does not engender trust in the CRD professionals.

2024/06/
02 -
11:26am

Pls move away from incineration and chemicals . We are being poisoned. Our hearts and health compromised.

2024/06/
02 -
12:07pm

Burn it as energy. Do not use as fertilizer please.

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2024/06/
02 –
1:00pm

Comments in response to the long term plan for managing biosolids in the CRD area Thermal Conversion Full support of Tier 1 options for thermal conversion with the following components • expedite planning and construction of demonstration plant • prepare for seamless transition from demonstration plant to fully operational facility • utilize and expand on existing research completed by GHD Environmental to minimize time needed to complete RFP • insure contract agreement with Lafarge is functioning or explore and commit to other industrial facilities using biosolids as fuel • explore biocell specifically designed to store biosolids until they can be effectively thermally processed Land Application Remove land application of biosolids as an acceptable option unless it can be proven that land application is safe in terms of human and environmental health. This position applies to both application within the CRD, including Hartland Landfill and also out of region and is necessary until • scientific literature and legal liability reviews of land application are publicly released and independently reviewed • Raincoast Conservation Society has released it's water quality monitoring data for the Tod Creek Watershed, specifically the areas around Hartland Landfill • Raincoast Conservation has independently commented on CRD data on chemicals of concern especially concerning bio-accumulation • BC Environment has modernized OMRR, and specifically addresses chemicals of emerging concern and long term impacts Public Consultation The CRD has been directed by the Ministry of Environment to submit a long term plan by mid June although the province itself has not provided the necessary information and resources in a timely manner. • public consultation has been impacted and restricted by the ministry requirements and out of date regulations. • critical research, information and education are missing from the consultation dialogue • many stakeholders including environmental groups, farmers and First Nations have had minimal consideration. • the final phase of the public consultation, which closes June, 3 is inadequate in terms of public promotion, access and education. • a robust and ongoing consultation process is necessary as the long term plan evolves especially with respect to thermal conversion options

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2024/06/
02 –
3:50pm

I live in Shirley, JDF EA. There are a lot of former forest lands here that were removed from TFL. When I hear the term "forest fertilization" in reference to biosolids disposal, I rightly or wrongly presume that means forests in JDF EA.

Residents in Shirley are dependent on wells and water licences for domestic water supply. Drought conditions mean that both of those sources are threatened. There is not a comprehensive aquifer study of the area, and many of the water courses are unmapped or not completely mapped. There is no assurance that dumping of biosolids on the forest floor will not leach into our watersheds.

There is nothing in this for residents of rural areas such as Shirley that are not on piped water. It is ironic that CRD water is obtained from water bodies in JDF EA but much of the district is not serviced. We are responsible for obtaining and maintaining our water supplies with no help from the CRD. Likewise, rural areas of JDF EA are not on sewer and have to build and maintain our own septic systems with no help from the CRD. Those in the CRD who are on sewers should just pay up and establish the best system of disposing of biosolids, thermal processing, and not dump on other communities. I'm against the dumping of biosolids on the forest floor, that just is adding insult to injury.

How about starting the conversation about extending CRD water to rural areas of JDFA???? That could change the scenario. Or how about getting Acquirer Studies done for the area west of Sooke? Ensuring the creeks are accurately mapped to get a better picture of where the water flows??

2024/06/
02 –
5:30pm

I am concerned about the environmental and health risks associated with spreading biosolids on the land as well as potential legal liability in future.

2024/06/
02 –
5:32pm

There are too many unknowns to risk spreading biosolids on the land.

2024/06/
02 –
6:05pm

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.

I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

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<p>2024/06/02 – 7:14pm</p>	<p>I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.</p> <p>I support the continued ban on all land application of biosolids in the CRD, including at Hartland.</p>
<p>2024/06/02 – 7:15pm</p>	<p>I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.</p> <p>I support the continued ban on all land application of biosolids in the CRD, including at Hartland.</p>
<p>2024/06/02 – 7:15pm</p>	<p>I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.</p> <p>I support the continued ban on all land application of biosolids in the CRD, including at Hartland.</p>
<p>2024/06/02 – 7:33pm</p>	<p>I fully support the Tier 1 options for thermal conversion of biosolids. In the interim while the pilot plant is under construction, I support the use of biosolids as fuel for cement plants or similar industrial applications. The land application ban in place in the CRD since 2011 must be upheld, especially as the scientific evidence of the harmful and long term impacts of "forever chemicals" such as PFASs in biosolids continues to mount. In other jurisdictions, governments have been held liable for the devastating impacts that contaminants in biosolids have had on agricultural lands (crops and livestock), and drinking water as a result of land application.</p> <p>The public consultation on this critically important topic has been woefully minimal. People in the capital region deserve better.</p>
<p>2024/06/02 – 7:51pm</p>	<p>I oppose the land application of biosolids! My research found that biosolids contain a complex mix of contaminants including PFAS, microplastics, synthetic organics, pharmaceuticals, in addition to the organic human waste. It is shameful for the CRD to consider this as an option after only recently ceasing the practice of ocean dumping due to the very same pollutants! The CRD should expedite the plan for alternate disposal methods such as incineration with energy recovery or biochar and abandon the environmental disaster of land distribution. I live in the JDF area to enjoy the ocean and forests, not to destroy either simply because it's cheaper and easier than doing the right thing!</p>

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2024/06/
02 -
8:13pm

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.

I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

2024/06/
02 -
8:14pm

hello -- I support the continued ban on all land application of biosolids in the CRD, including at Hartland. and, I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. Thank you for your on-going work on finding best solution for the safest means of dealing with this toxic waste product.

2024/06/
02 -
8:28pm

You should have thought about this problem before you built the plant.

2024/06/
02 -
9:20pm

support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

2024/06/
02 -
9:30pm

I don't believe that the CRD has investigated the safety of biosolids enough to consider them "safe" or "beneficial". There continues to be new evidence of harm. I am sure that the State of Texas does not take legal action just because it can. The biosolids project has been bungled from the start. You must be sure without a doubt that you are doing no further harm. The Hartland landfill is already well past what was intended for biosolid disposal, I am strongly opposed to any further land application there or anywhere else. The biocell storage is a hopeful option until you can get Tier 1 thermal but not incineration in place. Incineration doesn't seem a good option at all, why put more toxins into the air? Richmond plant may be one option in the interim but it is suspicious that CRD won't say why this option can't be sorted out. You must do more rigorous testing to protect the land, water and air around Hartland. So close to farms, parks , aquifers and so many people in the area. It's ridiculous that CRD continues to expand Hartland right next to a park and heavily used lake. I won't let my kids swim in that lake anymore, not since the pipeline went in, not while to odours and spills continue.

Engagement Summary

Draft Long-term Biosolids Management Strategy

Capital Regional District | June 2024

2024/06/02 - 9:59pm	<p>As an advocate for sustainable practices, I endorse the adoption of innovative technologies that steer clear of incineration or fossil fuels in the thermal conversion of biosolids. By doing so, we can effectively eliminate harmful chemicals and simultaneously generate valuable biochar and fossil-free energy.</p> <p>Furthermore, I remain steadfast in my support for maintaining the ban on land application of biosolids within the CRD, including the Hartland area.</p>
2024/06/02 - 10:23pm	<p>I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.</p> <p>I support the continued ban on all land application of biosolids in the CRD, including at Hartland.</p>
2024/06/02 - 10:29pm	na
2024/06/02 - 11:51pm	I oppose the land application of biosolids
2024/06/02 - 11:58pm	I support using new technologies that DO NOT involve incineration of fossil fuels for the thermal conversion of biosolids. I support the continued ban on all land application of biosolids in the CRD including Hartland.

Engagement Summary

Draft Long-term Biosolids Management Strategy

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2024/06/
03 –
6:13am

To say that I am deeply disappointed in what is currently happening at Hartland landfill is a huge understatement. When this project was proposed and information meetings were held, we were PROMISED by the representatives at the meeting that the biosolids would not be remaining at Hartland. So, I do not find any of these solutions ideal, but we are forced to move ahead and find the best solutions for a poorly planned project. I support using new technologies that DO NOT involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I urge you to accelerate the establishment of this process at Hartland.

I support the CONTINUED BAN on all land application of biosolids in the CRD, including at Hartland.

Until Tier 1 thermal conversion can be achieved, I support fuel combustion in Richmond (Tier 2 Option 5) or similar as a less harmful / risky choice. I ask that it be made to work, or to tell us why isn't working. (This option was the original plan and has not yet worked, leaving all biosolids to be spread at Hartland.)

If the T2 Op 5 fuel combustion won't work, I support environmentally safe storage (biocelling). Biocelling stores the material until Tier 1 is available, when it can be converted. Given the existing capacity pressures at Hartland, I do not support biocell storage at Hartland.

2024/06/
03 –
7:06am

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.

I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

2024/06/
03 –
9:00am

I believe the only use of the biosolids should be incineration or gasification.

Please do not spread this product on the land. The risks are too great.

Engagement Summary

Draft Long-term Biosolids Management Strategy

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2024/06/
03 –
9:28am

I support thermal conversion processes but not incineration. I ask that you accelerate the timeline for Tier 1. Incineration disperses toxins into the air. Using fossil fuels only adds to greenhouse gasses.

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.

I oppose land application of any kind, anywhere. This may release toxins into our ecosystem. Therefore, I oppose further biosolids spread at Hartland. Hartland's capacity is already over target from regional growth, with drastically greater than planned dumping of biosolids.

Until Tier 1 thermal conversion can be achieved, I support fuel combustion in Richmond (Tier 2 Option 5) or similar as a less harmful / risky choice. I ask that it be made to work, or explain why it isn't working. (This option was the original plan and has not yet worked, leaving all biosolids to be spread at Hartland—without adequate consultation with nearby communities or First Nations.

2024/06/
03 –
9:33am

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

2024/06/
03 –
11:41am

I have read a detailed response to the biosolids strategy from my friend [REDACTED NAME] and agree completely with that feedback. It is a very well researched outline that approves of Tier One and has excellent changes to recommend in some other aspects, It seems I can just say yes or no, so I'll go for yes below

2024/06/
03 –
12:08pm

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

Engagement Summary

Draft Long-term Biosolids Management Strategy

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2024/06/
03 –
12:32pm

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.
I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

2024/06/
03 – 1:57
-m

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.
I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

2024/06/
03 –
2:48pm

YES to Tier 1 options for thermal conversion
NO to land application unless proven safe for the environment

Engagement Summary

Draft Long-term Biosolids Management Strategy

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2024/06/
03 –
2:58pm

The proposed strategy is not unreasonable. What is depressing is how long it has taken the CRD to even get to this point. Advanced thermal processing of the anaerobic digestate has to be the ultimate goal of the CRD biosolids plan. I have been looking into issues around biosolids management for the past 20+ years. At one time, I felt that the benefits of land application outweighed the risks, in line with CRD staff thinking, EPA guidelines, etc., as long as long as metals contents were below critical thresholds. Research done through the University of Washington in particular has been unable to demonstrate unwanted impacts of land application to soil and streamwater chemistry, at least for the chemicals examined. Potential benefits of land application of Class A biosolids to managed forest lands on eastern Vancouver Island include greater tree productivity, increased soil organic matter and soil carbon sequestration, and improved soil moisture retention- an important consideration as growing seasons become longer, warmer, and drier with climate change. For the past 10 years, I've become convinced that "advanced thermal processing", specifically pyrolysis, is what the CRD needs to be doing. Compared to anaerobic digestion, appropriate pyrolysis produces biochar, in addition to energy as gas, oil, electricity, and / or hydrogen. Pyrolysis should destroy many/most contaminants not addressed in the dated EPA and Province of BC guidelines that we rely on; certainly micro- and nanoplastics and, potentially, PFAs and their relatives, although that is the subject of much active research. Metals can concentrate in biochar, compared to anaerobic digestate, but studies to-date suggest those metals are much less mobile in soil. Biochar is a very recalcitrant form of carbon and is a better way (than are biosolids) to increase long-term soil carbon sequestration when applied to land. Like biosolids, application of biochar can increase soil health and productivity on managed forest lands, in reclamation, and even in degraded urban soils. Other feedstocks which may be compatible with biosolids for pyrolysis could include organic "wastes" which are problematic to compost (animal products, invasive vegetation?). Where land application of biochar is considered especially risky, its use in other applications (e.g., concrete and asphalt, wastewater and stormwater filtration and cleanup) show promise. There is a considerable research literature underpinning biochar production, characteristics, and applications. That said, there are many questions that need to be answered by the CRD before using pyrolysis to complete the treatment of its sewage sludge. What are the contaminants in our biosolids and how does pyrolysis influence them? What forms of energy can be produced via pyrolysis? These are not new issues of concern and have been studied intensively in Europe, Australia, Asia, and much less so in North America. I was not impressed by the "process" that CRD followed when previously looking into thermal processing of biosolids (e.g., ca. 2015-2018?). Nor have I been impressed by provincial approaches on this file. Much of the CRD process since 2015 seemed almost backwards in its approach. And I think the province is behind on understanding and regulating biochar as a soil amendment. A part of the problem likely is that biochar manufacture and applications cuts across many disciplines, but is a tiny part of any given discipline, at least to those who work in a given discipline.

Engagement Summary

Draft Long-term Biosolids Management Strategy

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2024/06/03 – 4:12pm	The original plan to use this as a source of energy and concrete component sounded like a good way to invest in a billion dollars of debt for taxpayers but dumping it on land in any form defeats the original purpose entirely. This project reeks of incompetence.
2024/06/03 – 5:13pm	Do not proceed with the plan to distribute biosolids throughout the lands of the CRD. Look at the experience of other jurisdictions like Texas, which is dealing with toxicity issues everywhere biosolids were spread onto the land.
2024/06/03 – 6:03pm	Stop wasting money and land apply like everyone else.
2024/06/03 – 6:05pm	Land application in region is by far the most responsible option from a climate change perspective. Shame on the CRD for pursuing options that maximize GHG production.
2024/06/03 – 7:25pm	I live in the JDF area and am opposed to the CRD taking any action to dumping biosolids on land in our region. This is not safe, nor is it acceptable for us to have to accept contamination and dangerous chemical filled waste from an urban centre in our wild/rural land.
2024/06/03 – 8:01pm	<p>We oppose further biosolids being spread at Hartland Landfill. Capacity at Hartland is already over target and the dumping of biosolids is drastically greater than planned.</p> <p>We support fuel combustion in Richmond until Tier 1 thermal conversion can be achieved. We were promised this in the beginning. Why isn't it working at Hartland and why is the company that built the plant not responsible for making it work properly?</p> <p>Everyone is concerned about the chemicals in biosolids and its harm to the environment.</p> <p>We support the continued ban on all land applications of biosolids in the CRD, including Hartland.</p> <p>Thank you for your attention to this matter.</p>

Engagement Summary

Draft Long-term Biosolids Management Strategy

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2024/06/
03 –
5:13pm

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.

I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

2024/06/
03 –
5:13pm

I STRONGLY oppose any land application of bio solids with the CRD and especially at the Hartland landfill. There is so much research that outlines the detrimental and dangerous implications of land application and I am shocked this is still being considered as an option. Please do the right thing and ban land application of bio solids . This is not a solution. Develop a way to use thermal techniques before further environmental damage occurs

2024/06/
03 –
5:13pm

Thank you for the opportunity for public comment. Spreading of human waste and the included chemicals is of great concern to all of us who work for the land and the viability and productivity of the land for current and future generations.

At this point in time Thermal Conversion seems the best option. Expensive, but much less expensive than the potential for contamination of our aquifers, watersheds and our forestry and land bases. Ministry of Environment has failed to be up to date with OMRR regulations, has inadequate studies of modern chemicals and the effects on our land and water and has failed to prove that land application is “beneficial use” in the long term. There are many issues in North America and Europe with land application of human sewage sludge (biosolids), Synagro processing, long-term polyflouroalkyls, heavy metals, etc. Cumulative effects are not yet adequately studied and monitored. “Class A” doesn’t really mean very much anymore.

(Comment continues on the following page)

Engagement Summary

Draft Long-term Biosolids Management Strategy

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Location, Location, Location.

Hartland Dump was a private garbage dump established "out in the bush" on the back side of DND land in the 1950's. CRD purchased it in 1975 and CRD Environmental Sustainability Services have managed the landfill since 1985. To their credit, they have greatly improved management. However, it is still very poorly situated at the top of key aquifers and Saanich Inlet watershed and has limited capacity. We need to have evolved from: "Out of sight, out of mind" and "Flush and Forget". CRD needs to be seriously siting a second land fill, particularly as the province is decreeing increased population densities in the area. Perhaps the site of a temporary bio-cell could be the impetus for a 2nd better-situated landfill/thermal conversion site in the CRD. It does not seem ethical or moral to move our waste to other regions. We create it we need to deal with it in a sustainable manner.

The contracts with CRD, Synagro, LaFarge, need to be looked at because CRD residents seem to be paying for a product that is not usable for the intended LaFarge use and is unproven to be safe for land application.

There seems to have been little contact with First Nations. I can't speak for First Nations, but Land managers from T'souke to T'sawout seem to have little knowledge and no enthusiasm of any possibility of land application, so public consultation and information seems to be lacking on many levels.

CRD Staff have frequently stated that land application of "Class A" biosolids is a "beneficial use" under OMRR, but the province has failed B.C. residents not having adequate information for cumulative effects of modern chemical to prove "beneficial use". One can only support thermal conversion options as soon as possible, and temporary bio-cell storage for future energy use at this time.

Engagement Summary

Draft Long-term Biosolids Management Strategy

Capital Regional District | June 2024

2024/06/
04 – 9:26
am

Dear CRD Board.

The Peninsula Biosolids Coalition (PBC) is pleased to submit the following comments on the long-term plan for managing biosolids in the CRD Region.

Thermal Conversion

PBC fully supports top priority is given to Tier 1 options for thermal conversion. There are four components to this Tier that PBC wishes to comment on.

1. Expedite RFP for demonstration plant

PBC supports a seamless transition from a demonstration plant to a fully operational facility so the initial plant is in place within two years after which there is continuous operation. The design and regulatory process should be run concurrently to reduce the approval time. The private sector should take the lead on operating the plant to manage the risk and expedite the approval process. The plant should be designed to process both biosolids and construction and demolition waste streams to enable the CRD meet its per capita waste disposal target of 250Kg/person/year in 10 years.

2. Make LaFarge contract work or seek compensation for a failed contract.

LaFarge is thermal conversion of biosolids so making its contract work is part of Tier 1. The public needs to know why the contract between CRD and LaFarge has failed to process biosolids and the accountability for this failure.

3. Explore other industrial facilities that can use biosolids as a fuel.

There are a number of other facilities such as cement and concrete plants in BC and nearby in other jurisdictions that should be considered in the interim before a thermal conversion plant is operational.

4. Explore a biocell specifically designed to temporarily store biosolids till they can be thermally processed outside Hartland. Again this option belongs to thermal conversion, as this is the ultimate application.

(Comment continues on the following page)

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Land Application of Biosolids

In view of a number of jurisdictions banning land application of biosolids because of chemicals of emerging concern, the PBC cannot support land application till it is assured that land application is safe in terms of potential impacts on public health and the environment. It is generally recognized that the Provincial OMRR is out of date in considering the latest peer reviewed science associated with the impacts of these chemicals on the environment.

This position applies both to application within the CRD including Hartland due to non-compliance with provincial regulations and also out of region.

The PBC will hold this position until:

- The scientific literature and legal liability reviews of land application are publicly released for public consultation
- Raincoast Conservation Society has released its water quality monitoring data around Hartland
- Raincoast Conservation Society has independently commented on CRD data on chemicals of concern especially concerning bioaccumulation.
- BC Environment has modernized OMRR, which specifically addresses chemicals of emerging concern.
- Testing the accumulated deposits of biosolids mixed with garbage at Hartland to ensure no release to the ambient environment.

(Comment continues on the following page)

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Draft Long-term Biosolids Management Strategy

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Public Consultation

We recognize that the CRD has not been given a time extension to submit its plan beyond mid- June and therefore is not able to engage in a comprehensive public consultation as required under Section 27 (2) of the Environment Management Act. However, we are aware that the public response to the CRD survey changed when the general public became aware of the toxicity embedded in biosolids compared when this information was missing from the initial survey. We are also concerned that only 3 of 19 First nations have responded to the opportunities to consult with CRD. Finally there has not been any meaningful opportunity for in person engagement, nor has any been planned before the submission of the long-term plan.

The current consultation process limited to a text box in the CRD website till June 3 is completely inadequate in light of the potentially serious financial, public health and environmental impacts of biosolids management on residents and businesses across the Region.

We request that CRD initiate a long term plan for public consultation as the plan continues to be developed over the coming years and include opportunities for in-person engagement. In this note, we have identified many issues that need to be addressed associated with the thermal conversion facility, independent assessments of risk associated with land application of biosolids and costs estimates for various management options.

We appreciate the ongoing collaboration with the Board and staff as we feel the ongoing engagement of public interests is essential for a properly functioning democracy.

Engagement Summary

Draft Long-term Biosolids Management Strategy

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2024/05/
23 -
11:24am

Email to CRDBoard@crd.bc.ca

Hello,

I recently learned more about the nature of biosolids and concerns regarding the dumping of biosolids at the Hartland Landfill. I wish to express concern about this practice and wish to state the I oppose the land application of biosolids in the CRD in general but especially now as it is happening at the Hartland Landfill.

I understand that a solution to this would be to consider a thermo-conversion plant to deal with biosolids which would be a healthy sustainable way to deal with biosolids. This should be an emergency situation and considered immediately by the CRD board.

Thank you for your attention to this serious matter,

[REDACTED NAME]

Resident of Saanich

Engagement Summary

Draft Long-term Biosolids Management Strategy

Capital Regional District | June 2024

2024/05/
27 -
12:54pm

Email to CRDBoard@crd.bc.ca

Dear Board members,

I am writing to log my absolute opposition to any land application of biosolids within CRD boundaries, ever. They are completely unhealthy and contaminate the soil for an inordinate amount of time. It is simply not the best way to deal with this product.

Biosolids can be used as a heat source, making biochar, as is done in many other jurisdictions like in Europe. This option deserves to be researched posthaste.

This is our region's opportunity to be a leader in this field in North America. Let's not miss it. Let's not shirk our prime responsibility to be good stewards of our land and water resources. And let's recognize our responsibility as citizens to future generations.

Thank you for your immediate attention to this matter.

[REDACTED NAME]

[REDACTED PHONE NUMBER]

Attachment for more information:

<https://www.youtube.com/watch?v=GFHXzz6NXN4>