

Meeting #1 Public Comments

From: [BECKY MERJA](#)
To: [NICHOLS Darren](#); [Sam Imperati](#); [REDICK Daniel](#); [Benton County Talks Trash](#)
Cc: [AUGEROT Xanthippe](#); [WYSE Nancy](#); [MALONE Patrick](#)
Subject: Benton County Talks Trash work Group
Date: Thursday, September 1, 2022 10:17:10 PM

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Darren, Sam, Xan, Pat, Nancy, Daniel, Trash Talk BC,

Regarding Benton County Talks Trash, if public input is supposed to be an integral part of this process, then I have concerns about the meeting format. Taking public comment at the END of a 4 hour meeting is not conducive to the community hanging around to comment. There might be more participation from the public if comments were taken at the beginning AND the end of each session with that opportunity verbalized by the facilitator at the beginning, middle and end of each meeting.

I also have concerns about the meeting schedule, I thought the original focus of this group was supposed to be on the “future of solid waste”, and to guide a sustainable materials plan for Benton County. It appears that that is the smallest part of the meeting agenda. Does this work group know that the focus has changed? Why is a good portion of meeting time going to be spent touring the landfill? This group is supposed to be concentrating on the future, not the present or past.

Thank you for the opportunity to comment

Respectfully,
Becky Merja

Sent from [Mail](#) for Windows

From: [Mark Yeager](#)
To: [Sam Imperati](#); [REDICK Daniel](#); [NICHOLS Darren](#); [WYSE Nancy](#); [AUGEROT Xanthippe](#); [MALONE Patrick](#); [Benton County Talks Trash](#); [Mark Yeager](#)
Subject: BC Talks Trash Survey Monkey and Public Involvement
Date: Tuesday, September 6, 2022 7:59:23 AM

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Dear Mr Imperati, Mr Reddick, Mr Nichols, and Commissioners,

Considering the extreme amount of interest in this process and this topic among the public, the large number of community folks who applied to be on the workgroup (and were not selected), and the vital nature of the effort the work group is planning to undertake, I would request that the survey that is currently being circulated only to working group appointees be opened up to the general public as well (these are being undertaken via a "Survey Monkey").

The County has indicated that it is interested in getting the public engaged in planning the future of materials management, but the way this Talks Trash process is being rolled out sends the opposite message. First, by having the Survey Monkey only available to the Workgroup members excludes public input into development of workgroup priorities; second, scheduling the public input opportunity at the END of the planned meetings and forcing the public to wait 5 and a half hours to voice their ideas is disrespectful; and finally, the planned, rushed schedule for the process and meetings (8 extremely long meetings in 4 months) clearly says that you are just going through the motions with the appearance of wanting community members help in deciding the future of materials management for Benton County.

- Open the Survey Monkey to the public. Weigh the responses from the public, non members however the facilitator chooses, but I think it is imperative, and it has been emphasized in all formative County discussions regarding the workgroup, that meaningful public involvement is critical to developing a supported, long-term materials management plan for Benton County.
- Schedule public input at both the start and end of the meetings. It sends a clear message that you respect and value the public's input and involvement.

Thank you,

Mark Yeager

From: [Rollie Baxter](#)
To: [Benton County Talks Trash](#)
Subject: trash agenda
Date: Wednesday, September 7, 2022 10:27:36 AM

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The agenda suggested that citizens with questions send questions to this address.

My question is: Why was the Lane County landfill south of Eugene/Springfield not evaluated as a (comparable) landfill example?

In the "jurisdictions hosting landfills", Item 8 on page 61 of the "draft common understandings" you provide extensive info on the Gilliam County landfill. Why not a similar comparison of common understandings with the Lane County landfill?

I understand that the Gilliam County fill is apparently owned and operated privately. Perhaps the Lane County fill may be owned and operated by a government agency. However, there may still be some relevant info that would be useful to know. Even if a direct comparison is not appropriate, the reasons for differentiating because of ownership may be important to understanding the big picture. Any reasons for excluding the Lane County landfill from a comparison should be known.

Rolland Baxter

Meeting #2 Public Comments

From: [Rollie Baxter](#)
To: [Sam Imperati](#); [Benton County Talks Trash](#)
Subject: trash
Date: Thursday, September 8, 2022 12:37:21 PM

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Sam,

I appreciate all the hard work you and others are doing (and going to do) regarding solid waste disposal issues.

The web site said to send comments to you and / or this web site.

I am simply a citizen interested in solid waste and local government. I don't live anywhere near the existing waste disposal site and am not directly impacted by its adverse impacts on nearby residents. I am a rate payer. I live on the planet earth. I am a retired engineer with local government experience. I try to follow local issues of interest or importance that have what I consider an impact on community liveability.

I am trying to follow this issue but find it difficult (as an ordinary citizen). I received the County's mislabeled "newsletter" earlier this week and clicked on the link provided. The link in the newsletter took me to a page that was dated August 11. It was outdated and useless. So I called around and managed to get some information from some people that apparently are on a mailing list and get current information.

So I have some suggestions, comments and concerns.

1) Do you have a list of all citizens who have asked to be informed on this issue or who have made comments and do you automatically send out all communications to this list? Can I sign up for automatic email updates as reports, memos, meeting notices etc are posted? The City does this and it works well. If you have this, how do I sign up? If not, you might consider doing this. You need to actively promote, expand and advertise this opportunity....not wait for people to "discover" it later when they start finding out about the work group.

2) Can we get the addresses and backgrounds of the citizen members of the work group? I am concerned about the balance of the committee members and their background and experience. I know that work group

membership can be manipulated to exclude certain perspectives or experience or geographic representation. I am not accusing you or anyone of manipulation, but I can tell you with a great amount of certainty (experience) that this has (in the past) certainly happened in our community. I want to make sure that it isn't happening on this important issue. I am sure you THINK the committee is balanced, but ordinary citizens may disagree with you and we should be able to object.

3) This whole process seems hurried, poorly scheduled, unnecessarily compressed and just plain fraught with potential problems. Why is it so rushed? Why not take the time to get it right? The communications with the community are absolutely TERRIBLE. Your PR guy is incompetent or at least asleep at the switch or your whole team is quite poor at coordinating...or all of the above. This IS going to blow up in the face of the County Commissioners if the current course is not corrected. I guarantee. I am trying to read and understand the volumes of information (thank you for the hard work) but it is impossible to do so when the information is voluminous and it is put out hours before it will be discussed. This process is terrible. Better to take the time and bring everyone along at the same time or you will be constantly backtracking....or you will simply have to run over and ignore people like me who are very interested....and I suspect I am not alone.

4) I am now terribly confused. Initially it was my understanding that this work group would come up with some sort of vision or direction that the County (and others) should / could take in terms of ensuring an appropriate handling of solid waste for our community and immediately surrounding counties. But now I see that this group is (apparently) evaluating the existing landfill and going over the whole history and all the egregious errors that have been made. The group is apparently going to study Coffin Butte as a regional landfill and how to treat it or how to expand it? Isn't that the cart before the horse? Shouldn't we decide how waste should be handled in the future and THEN look at what role (if any) Coffin Butte should play? So I am confused.

5) I just waded through a long list of confusing notes you sent out - notes apparently submitted by members of the work group. The notes themselves are confusing, but I am apparently not supposed to have them...they were apparently meant for the work group only. But frankly, if citizens do not

have access to (an an understanding of) all the work documents, how are they to follow the process or sit in on meetings and understand the discussion? And after reading the comments submitted (apparently by work group members) they seem as confused as I am.

6) I found this in the Scope statement on the web site: *....identifying and implementing a constructive path forward relating to sustainable materials management and the future of solid waste disposal in the Mid-Willamette Valley, including at the Coffin Butte regional landfill.*

It seems notable that you include "sustainable" and "future". This obviously means that Coffin Butte will be closed at some point. So the future needs to lead the discussion. What sort of waste system will there be (either mandatory or self directed) in the future? The level of recycling / reuse / minimization / etc. I don't see a lot of that in your first meeting agenda. I see a lot about Coffin Butte. Not only is the cart before the horse, you haven't even hooked the horse up to the cart. You are going nowhere.

But then you go on to say: *This is a "bridge" process between past events and next steps. The process is designed to reset the current dynamics with the development of "common understandings" and recommended protocols for the future substantive consideration of the solid waste issues.* Yikes. You can't build a bridge unless you know where you are going and why you are going there. As an engineer (I was involved in a good number of bridge designs) the bigger issue was always where you were going to land the bridge. You almost always knew where you were (usually in trouble) but the hard part was where to go and THEN how to get there. When building a bridge, you almost always knew that where you were was not acceptable. And where we ARE with Coffin Butte is absolutely, unequivocally unacceptable. That is a known so why waste so much time trying to rationalize a problem that needs to go away? Or alternatively drop your "bridge" pretense.

But then you go on to say that this work group is going to make recommendations on landfill expansion, the land use review process, review criteria, legal aspects of a conditional use permit, and on and on. In other words, this work group is going to try to make recommendations on whether and how Coffin Butte will expand and under what conditions and time frame?.....without knowing where this "bridge" ends (ie what the long term plan / strategy is)? Looks to me like you are trying to "bridge" between

what Republic wants to do and what others would like to see done.....ie trying to negotiate a deal to satisfy Republic.

-*Clarifying existing criteria and information requirements for the land use review process for any proposed landfill expansion. Specifically:*
- ... *refer to Comprehensive Plan for policy guidance regarding interpretation of any ambiguous Development Code provisions (see, BCC 50.015,) and Review the Planning*

7) If you proceed as planned, I would like the work group to recommend that strict standards for recycling be enforced in all jurisdictions that haul (or case waste to be hauled) to coffin butte. The Washington County (and all other) haulers and City and County jurisdictions should be on the hook for significant penalties should standards not be met. The tipping fees need to be at or above the highest tipping fee in the state or perhaps the NW. All, any or other outside areas should adhere to very strict (and documented) recycling / reuse, etc standards. Punitive penalties should be applied to all haulers and licensing or franchising jurisdictions found not to meet strict standards. Further, punitive penalties should apply to Republic and its owners/subsidiaries for any hauler allowed to discharge at Coffin Butte in violation to standards. Further, Republic et al should have to pay for all County legal, administrative or professional costs to enforce recycling, reuse or any other standards of the County. And these standards need to be enforced. The fee that Benton County charges Republic to administer and enforce this standard should be in addition to all other fees. All these fees or penalties are in addition to the franchise fee which is essence a "tax", not a fee. The franchise tax needs to be the maximum permitted by law. The County needs to stop being stupid. Obviously I have not thought this through entirely, but you get the point.

Your time frame is not realistic given the importance and complexity of the issue. Benton County has a habit of setting unrealistic time frames and underestimating public interest and the time it takes to do things right.
Rolland Baxter

From: [Ken Eklund](#)
To: [Benton County Talks Trash](#)
Subject: Testimony: "Common Understandings"
Date: Thursday, September 8, 2022 7:08:52 PM
Attachments: [SWWG-commonunderstandings-memo.pdf](#)
[writerguy-cube2.png](#)

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Dear Workgroup:

I'm attaching here a PDF document mentioned during today's meeting, entitled:

**Common Understandings:
Subject Areas for Understanding
the Coffin Butte Landfill and the
Solid Waste Futures for Benton County,
Expressed as questions to be answered**

It should be distributed to the Workgroup members and included in the next meeting packet.
Thank you!

– Ken



Ken Eklund, writerguy

Creator of
World Without Oil
Ed Zed Omega
FutureCoast
and other storymaking games

Common Understandings:

Subject Areas for Understanding the Coffin Butte Landfill and the Solid Waste Futures for Benton County

Expressed as questions to be answered

Like the TrashTalk Workgroup, the Solid Waste Advisory Council and the Disposal Site Advisory Committee of Benton County seek “common understandings” about the landfill and the future of solid waste in Benton County, and they’re guided in this by the county community, county staff, and various citizens’ groups. I have compiled a list of the common understandings that members of SWAC and DSAC are seeking, which includes questions they’ve received from the community. The understandings being sought are best expressed as questions that must be answered before we can begin work on solving the issues themselves.

TABLE OF CONTENTS

Coffin Butte Landfill Capacity/Operating Life: “When is the landfill expected to close?”	3
Coffin Butte Landfill Environmental Impacts: “What is the environmental cost of the landfill?”	5
Coffin Butte Landfill Operational Impacts: “What are the rules that govern the landfill? Is it complying?”	10
Coffin Butte Landfill Public Safety Impacts: “What risks does the landfill create for the county?”	13
Coffin Butte Landfill Economic Impacts: “What are the economic effects of the landfill?”	16
Coffin Butte Landfill Future Directions: “What are our options as we move into the future?”	17
Coffin Butte Landfill Future Directions, Next Steps: “What are our next steps as we move toward a more desirable future?”	21

A key part of our quest for information is (a) we are seeking better, more future-oriented viewpoints and insights and (b) we are seeking better visualization of the information. What information exists is typically presented in “snapshots” when it would be more accurate to show it as flows from one state of being to another. What information exists is also typically presented in its hardest-to-parse form: a table of numbers rather than a graph, a sentence rather

than a photo, etc. For understandings to be common, they must be expressed in forms that make them commonly understood.

I hope these questions and the deep dives about them are useful to the Workgroup, and that the Workgroup can use its special status to highlight the need for better answers than we currently have for them, and persevere until those better answers emerge.

Ken Eklund

Member, Solid Waste Advisory Council

Member, Disposal Site Advisory Committee

Benton County resident

Coffin Butte Landfill Capacity/Operating Life: **“When is the landfill expected to close?”**

This fundamental bit of information has not been answered; there is currently no common understanding about when, under the status quo, the landfill will run out of capacity and close. My own working number is: 12 years from now (2034).

Four factors in answering this fundamental question:

1. Factor 1: What is the current capacity of the landfill?

Discussion: As established in the last DSAC meeting, the capacity stated in the most recent Coffin Butte Landfill annual report (17.6 M cubic yards left, 38.7M cubic yards total) is not accurate / is misleading: this capacity will only be available by the year 2030 at the earliest, and assumes that quarry operations have continued through those years (increasing capacity) without interference from landfill operations. This is inaccurate / misleading because the non-quarry part of the landfill is set to fill by the year 2025, and then landfilling must move into the quarry area and disrupt/end operations. So quarry operations are set to stop in 2024 or 2025, under the status quo – they will not continue through 2030.

As established in the last DSAC meeting, the capacity that Republic has reported to the Environmental Protection Agency is also suspect. That number for total metric ton volume changes from 26.7M in 2016 to 35.5M in 2017, and no one seems to be able to explain this sudden increase in capacity. The landfill representative stated the Republic corporate office provides those numbers to the EPA.

Clear understanding is also confounded due to the various metrics invoked. The core metric for capacity is volume, but you will hear capacity expressed in units of weight (tons) or of time (years), and these expressions contain hidden assumptions about esoteric conversion factors. How many tons in a cubic yard? for new garbage vs. emplaced garbage? What is the volume differential between a ton of quarried rock vs. a ton of garbage? What is the assumed intake rate for each “year” of volume? And so on.

Specific questions to be answered, to determine “When is the landfill expected to close”:

- How often are LIDAR volumetric assessments performed? Have these measurements been independently verified?
- What is the area of the open (active) cell?
- What is the current usable airspace volume of the open (active) cell?
- What is the current usable airspace volume of Cell 6 (quarry)?
- What is the volume extraction rate for Cell 6 due to ongoing quarry operations? What is its extraction history?
- What is the intake volume history?

- What is the expected intake volume over the remaining landfill lifetime?
- What is the delay time in tabulating intake volume by weight?
- What penalties if any will be applied if the annual tonnage cap is exceeded in the future? Are these penalties sufficient to disincentivize runaway intake?

2. Factor 2: What is the current fill rate of the landfill?

Discussion: To calculate its estimate of the life of the landfill, Republic uses an average disposal rate of 750K tons per year in the 2021 landfill annual report; the last year intake was that low, however, was 2016. After annual intakes of 853K tons (2017) and 937K tons (2019) the current fill rate (2022) appears to be on course for 1.1M tons – almost 50% over the “750K” estimate.

Specific questions:

- What is the intake volume history?
- What is the expected intake volume over the remaining landfill lifetime?
- How close each year has the intake come to the cap?

3. Factor 3: How will the capacity of the landfill likely change in the future?

Discussion: There are factors such as quarry operations and settlement that cause the landfill capacity to fluctuate over time.

4. Factor 4: How will the fill rate of the landfill likely change in the future?

Discussion: Theoretically, the landfill currently has an intake cap of 1.1M tons a year, but (a) it's unclear if that cap has actual penalties associated with it or is just on paper, and (b) by the 2020 franchise agreement, that cap is removed if any landfill expansion is permitted. Also (c), there appear to be loopholes by which garbage can be taken in yet not count toward the cap.

Coffin Butte Landfill Environmental Impacts:

“What is the environmental cost of the landfill?”

This fundamental part of the cost-benefit analysis of the landfill is not commonly understood at all. I'm not sure if a list even exists of what all the harms are.

Not unexpectedly, environmental factors typically do not appear in official communications about the landfill. The word “methane” for example does not appear in the latest landfill annual report, nor the acronym “PFAS.”

It's important here to differentiate the environmental costs of the landfill from the environmental regulations on the landfill. It's insufficient, in other words, to claim that “regulations were followed” and therefore to assert no significant environmental harm is taking place. Laws and policies are imperfect; they lag behind actual conditions on the ground; judging compliance with laws is fraught with error; and so on; this is all commonly understood.

A salient example: an expansion attempt by the Riverbend landfill in Yamhill County failed because, although the landfill asserted that it was following regulations regarding flyaway trash, the courts determined that trash was still flying away and neighboring properties were being actively harmed. That landfill has stopped operations and the local community has initiated proceedings to force it to close.

A partial list of environmental cost areas, to answer this fundamental question:

1. Leachate: the landfill produces leachate, which is toxic. What are the costs of leachate?
 - a. What is the generated volume of leachate? How much of this comes from the primary collection system and how much from the secondary?
 - b. What is the composition of leachate?
 - c. What are the levels of PFAS (“forever chemicals”) in leachate?
 - d. How much does it cost to process (pump out, store, ship, etc.) leachate?
 - e. How much does it cost to have leachate disposed of? Where is it taken to be treated? (City of Corvallis? Salem?) What is ‘Plan B’ if the leachate can no longer be disposed of locally?
 - f. How long will the landfill be generating leachate? How will the rate of leachate production change year by year in the future?
 - g. Who will be paying the costs of leachate over time?
 - h. How much leachate is bypassing the collection system? How much is or will be polluting the groundwater?
2. Waste gases: the landfill generates landfill gas, which contains methane, carbon dioxide, hydrogen sulfide and other gases. Some of this gas is recovered; whatever is not recovered leaks into the atmosphere. Landfill experts estimate that recovery systems only collect around a quarter of landfill gas produced, on average, and Coffin Butte

seems to be no different.

The landfill also operates a cogeneration plant, which burns landfill gas and produces exhaust. The landfill also operates two flare stacks, which burn landfill gas and produce waste gases. What are the costs of all these landfill, exhaust, and waste gases?

- a. What are the volumes and composition of gaseous emissions of the landfill?
- b. Presence of water increases the anaerobic activity that generates landfill gas. How does the output of the Coffin Butte Landfill, which is in an area of moderate rainfall, compare with landfills in low-rainfall areas?
- c. Methane: methane is a potent, destructive short-term greenhouse gas, and methane emissions from landfills are a significant contributor to global warming worldwide. Unit for unit, methane is considered to be 86x more destructive in short-term greenhouse effects than carbon dioxide. The EPA has estimated that methane emissions from landfills are understated by at least a factor of two, and considers landfills to be one of the three major sources of this potent greenhouse gas in the US, along with agriculture and the oil and gas industry. The Benton County Board of Commissioners has identified addressing methane pollution from the landfill as a priority going forward.
 - i. How much methane is generated in all by the landfill (daily / monthly / yearly)? How much of this is captured?
 - ii. What methods are being used to quantify how much methane is being generated / being captured / leaking from the landfill? Methane detection is notoriously difficult: are there more accurate methods available? Are there direct measurement technologies now available, from aerial or satellite surveys for example?
 - iii. Landfills convert solid waste to methane over time; a ton of solid waste will continue to generate significant methane for over a decade, usually two. Given the input history of the landfill and the projected intake, what is the projected methane output over the next 40 years?
 - iv. New environmental regulations in the Inflation Reduction Act enable the EPA to regulate greenhouse gases as pollutants. What measures has the landfill taken to reduce its emissions of greenhouse gases?
 - v. New environmental regulations in the Inflation Reduction Act impose a waste emissions penalty of \$1500 a ton on methane leaks in the oil and gas industry. If a similar waste emissions fee is imposed on the landfill, what will the effect be?
- d. Carbon dioxide: carbon dioxide is a greenhouse gas; carbon dioxide emissions are the prime driver of climate damage. Carbon dioxide is a slow-acting but long-lived greenhouse gas.

- i. How much carbon dioxide is generated by the landfill (daily/monthly/yearly)?
 - ii. Landfills convert solid waste to carbon dioxide over time; a ton of solid waste will continue to generate CO₂ for over a decade, usually two. Given the input history of the landfill and the projected intake, what is the projected CO₂ output over the next 40 years?
 - e. Hydrogen sulfide: this gas has a strong disagreeable odor, even in trace amounts. Its common name is “stinkdamp.”
 - i. Homeowners in the region of the landfill undergo “dump days” when the landfill smell is heavy and it’s unpleasant to go outdoors. What are the atmospheric conditions that cause “dump days”? Will these atmospheric conditions occur more often in a climate-changed future?
 - ii. Landfills convert solid waste to hydrogen sulfide (H₂S) over time; a ton of solid waste will continue to generate H₂S for over a decade, usually two. Given the input history of the landfill and the projected intake, what is the projected H₂S output over the next 40 years?
 - f. Other gases: what other gases are produced by the landfill? What are their health and environmental effects?
 - g. Particulate emissions: waste gases and exhaust from flaring/burning landfill gas.
 - i. What is the volume and composition of particulate emissions?
 - ii. Are there health or environmental effects from these gases?
 - iii. Will output of these waste gases increase as we move into the future?
 - h. Particulate emissions: dust from alternate daily cover, including Covanta ash.
 - i. What is the volume and composition of dust and other particulates generated by the landfill?
 - ii. Are there health or environmental effects from these particulates?
 - iii. Do these effects increase over time, as dust and particulates accumulate around the landfill?
 - iv. Are studies being done to measure these accumulations in organisms around the landfill? If not, why not?
3. Wildlife impacts: the landfill disrupts the natural environment. What are the costs of disrupting the area ecosystems?
- a. We have heard reports of abandoned nests/young at the northern heron rookery earlier this year. What were the results of heron rookery monitoring during 2022? Have these results been reported to ODFW?

4. Environmental impacts through traffic generation: the landfill generates vehicle travel, which in turn produces traffic costs, exhaust pollution, greenhouse gases, and other environmental impacts. What are the costs of these? How do alternatives compare?
 - a. What is the total number of landfill-related vehicle miles generated by the landfill? What is the environmental cost and other costs of these trips?
 - b. What do we learn from an origin and destination study of landfill-related traffic? i.e., looking at both where vehicles are coming from / returning to, as well as the number and types of vehicles. This should be created as a coded and keyed map.
5. Impacts on the visual environment: the landfill is both monumental and an eyesore. What is the cost of this?
 - a. What is the viewshed of the landfill (past, present, and future)? Displayed as a map.
 - b. What will the landfill look like over time? Displayed as photo-visualizations of the landfill 5, 10, 15 years in the future.
 - c. What will the landfill look like when post-operational? Displayed as a photo-visualization.
6. Long-term impacts (impacts that last 100 or 1000 years or more)
 - a. The landfill creates a “dead zone” hundreds of acres big, where no other land use can take place. What is the long-term cost of that?
 - b. The landfill creates a “avoidance zone” possibly thousands of acres big, where land uses are proscribed due to the inevitability that leachate will enter the groundwater and create an underground plume of contamination. What is the long-term cost of that?
 - c. The landfill creates an enduring maintenance situation. One example: leachate. Rain falls on the landfill every year and creates more leachate, which must be pumped out and disposed of properly, or else it will overflow into the surrounding land and its groundwater. There are similar effects for landfill gases and microplastics. How long must these maintenance tasks continue? What is the long-term cost of these and other maintenance?
 - d. The landfill creates an enduring replenishment situation. Its wells for leachate and gas processing, for example, have relatively short lives and must be regularly replaced. How long must these maintenance tasks continue? What is the long-term cost of these and other maintenance?
 - e. The landfill creates an enduring public security situation. Its supporting systems must be continuously protected from vandalism and unintentional damage and from natural degradation. Each breach in its cap, for example, will let in more rainwater, thus adding to the maintenance burden. Misguided or rogue drilling or mining could breach the bottom liner layer. What is the long-term risk of this?

- f. Long-term risks and costs like these are subject to a “future discount,” i.e., a degree to which they are reduced because it is assumed that our descendants will be better able to handle the burdens than we are. Long-term risks and costs like these are also often minimized or dismissed because our descendants are not here yet and therefore cannot speak up in their own defense. If a future discount is being applied to these costs, what is it? How was that number derived? Or are these costs and risks being discounted for the second reason?

THIS PLACE IS A MESSAGE.
AND PART OF A SYSTEM OF MESSAGES. PAY ATTENTION TO IT!
SENDING THIS MESSAGE WAS IMPORTANT TO US.
WE CONSIDERED OURSELVES TO BE
A POWERFUL CULTURE.
THIS PLACE IS NOT
A PLACE OF
HONOR.
NO HIGHLY ESTEEMED DEED
IS COMMEMORATED HERE.
NOTHING VALUED IS HERE.
WHAT IS HERE WAS DANGEROUS
AND REPULSIVE TO US.
THIS MESSAGE IS A WARNING ABOUT DANGER.
THE DANGER IS IN A PARTICULAR LOCATION.
IT INCREASES TOWARDS A CENTER.
THE CENTER OF
DANGER IS HERE.
OF A PARTICULAR SIZE AND SHAPE,
AND BELOW US.
THE DANGER IS STILL PRESENT,
IN YOUR TIME, AS IT WAS IN OURS.
THE DANGER IS TO THE BODY, AND IT CAN KILL.
THE DANGER IS UNLEASHED IF YOU
SUBSTANTIALLY DISTURB THIS PLACE PHYSICALLY.
THIS PLACE IS BEST SHUNNED
AND LEFT UNINHABITED.

Warning sign text for long-term waste disposal sites

Coffin Butte Landfill Operational Impacts:

“What are the rules that govern the landfill? Is it complying?”

The landfill currently operates as a regulated nuisance, or disamenity – that is, its operations are known to negatively affect neighbors, visitors, the community and the region, but these impacts are theoretically kept at or below tolerable levels, and the community and public-at-large protected, by regulations pertaining to the landfill’s various permits to operate. Compliance (or not) with these regulations is a fundamental part of the cost-benefit equation of the landfill.

Permitted operation of the landfill relies on effective oversight and enforcement of the regulations that pertain to its operations – this is also a fundamental part of the cost-benefit equation of the landfill.

It’s important, therefore, for there to be a common understanding of the legal and economic envelopes that the landfill operates in, both as a theoretical construct and how it actually plays out in reality.

It’s especially important for there to be a common understanding of how the legal and economic envelopes of the landfill extend and change into the future, because the landfill will be a negative presence on the community and the region for hundreds or thousands of years.

Specific questions related to understanding regulations on and compliance status of the landfill:

Coffin Butte Landfill Impact: Benton County Resources and Infrastructure

1. How do the current landfill traffic volumes (vehicles per day by type and total transported tonnage) compare to the baseline documented in the 2001 Baseline Study?

Coffin Butte Landfill Impact: Benton County Citizens and Landfill Neighbors

1. How do the sale prices of private properties sold to the Valley Landfills, Inc. over the past 40 years compare to similar properties not located near the landfill?

Regulatory: EPA & Oregon DEQ

1. What are the current governing permits and regulations?
2. What expected operational lifetime is on record with EPA and ODEQ for Coffin Butte?

Coffin Butte Landfill Closure: Process, Timeline, Operator Liability, Potential Franchisee Resistance

1. What lead time is required for proper closure?
2. What are the primary process steps in closing a landfill such as Coffin Butte?
3. What are the documented costs of closing landfills similar in size to Coffin Butte (e.g. slope and terrain restoration, continued monitoring, containment or removal of toxic material, compensation for damages resulting from environmental hazards, fires, etc.)?
4. What guarantees are in place that the owner will close the landfill upon substantial completion? (i.e., not drag out the process, as is happening with the Riverbend landfill)

5. What guarantees are in place that the landfill owner will not declare bankruptcy and abandon the landfill?

Franchisee Business Impact

1. What is the gross profit ratio for Republic Services landfill operations nationwide in the US? For the Coffin Butte Landfill?
2. What is the annual gross revenue for Republic Services landfill operations in the US, and how does this compare to the annual gross revenue for nationwide collection operations?

Business and Legal Envelopes

1. What are the current hours of operation (i.e. daily first employee arrival time – last employee leave time - daily)? What are the hours in which heavy equipment is active? What are the permitted hours of operation according to the current franchise agreement? What is the process by which these regulations are enforced?
2. What solid waste management plans has Benton County produced since the landfill was first permitted in 1974? What is the history of compliance to those plans?
3. What intake content monitoring measures are used (per load, sampling, open cell deposits, etc.)? How soon are those measurements released to the county and the public?
4. What are the current controlling documents for landfill operations (franchise agreement(s), site development plans, etc.)?
5. What are the inflow sources with weight and distance metrics (map form would be helpful)?
6. In the previous CUP application, Valley Landfills Inc. was listed as the applicant even though the application was submitted by Republic Services Inc. Which company is legally responsible, in perpetuity, for remediation of any environmental problems that may arise in the future? In other words, if Republic eventually sells or otherwise divests its financial interest in VLI, would Republic remain liable? Or would the liability be spun off to VLI?
7. Is Republic legally obligated to honor commitments made by its subsidiaries (VLI, Allied Waste etc.) during the application process for previous expansions that were allowed by the county?
8. What are the terms of Republic's lease agreement with Knife River Corporation, in terms of time period for excavation?
9. Knife River Corporation operates multiple quarries in the mid-Willamette Valley region. Are production rates at these other quarries reported to the state and/or counties? Or can the company make the numbers for recent years available to the Benton County working group?

10. What are the rules that govern the post-operational state of landfill components? What is the final grading plan and when will it be implemented?
11. What are the plans for reclamation of the 700+ acres of landfill? When does Republic plan to establish native vegetation on existing cells of the present landfill? Are there plans / Is there an obligation to make the area a wildlife habitat? Are there plans to make fishing ponds?

Coffin Butte Landfill Public Safety Impacts:

“What risks does the landfill create for the county?”

An operation as large as the Coffin Butte Landfill creates risks on a similar scale. These risks pose a conundrum, because they are often quite easy to hide or downplay, and it can be quite profitable to do so. It’s a common understanding that entire industries exist because they successfully acquire profit while generating risk and shifting it away from themselves, to other people, other places, other legal entities or to the future.

It’s vital therefore to establish a common understanding of the risks created by the landfill’s existence and operation, and how those risks will change over time. It’s especially vital to acknowledge that the modern landfill carries with it a large amount of unknown risk, because it contains materials that have never been landfilled before in such quantities or in combination, it contains materials whose toxic properties are not understood, and the landfill structures themselves are recent innovations and have not been field-tested for the timespans that this landfill will undergo.

Specific questions about landfill risks:

1. Risks of Fire, including persistent fire

- a. What is the fire history of the landfill?
- b. What is the risk of a subsurface fire that could persist for months or years?
(Example: the multi-year, \$200M fire at the Bridgeton landfill in Missouri. How did that dump fire start?)
- c. What gaseous and particulate emissions typically result from landfill fires?
- d. Given that methane is a flammable gas, what is the relationship between methane generation and fire risk?
- e. Does methane generation increase with warmer weather? Will an increasing number of hot days cause a corresponding increase in fire danger?
- f. What emergency plans are in place in case of fire? What precautions have been taken?
- g. What training is necessary to limit risk to fire crews when fighting a landfill fire?
- h. Does the risk of fire increase if the landfill expands?

2. Risks of Earthquake

- a. What magnitude earthquake are the slopes of the landfill expected to withstand? Specifically, will an earthquake collapse the south slope onto Coffin Butte Road? How susceptible is the landfill to liquefaction?

- b. How susceptible is the landfill infrastructure (gas collection systems, leachate collection systems, cogeneration plant, and so on) to earthquake? What are the harms if systems are damaged or destroyed?
 - c. What emergency plans are in place in case of earthquake?
- 3. Risks from Hazardous Waste**
- a. How is hazardous waste officially defined?
 - b. How much hazardous material is received annually and what is it constituted of?
 - c. What safeguards are in place to prevent hazardous materials from entering the landfill?
- 4. Risks from PFAS, a class of persistent organic pollutants (“forever chemicals”) commonly used since 1940 in items that are commonly landfilled. PFAS are an emerging focus of health concerns, as we now know that PFAS accumulates in human tissue and exposure to it has been linked so far to increased risk of decreased antibody response, dyslipidemia (abnormally high cholesterol), decreased infant and fetal growth, and increased risk of kidney cancer, and other health impacts are likely to emerge. Concerns include health harms and economic harm from litigations**
- a. What studies have been done to identify the level of PFAS in the landfill? in leachate?
 - b. What plans are in place to prevent more PFAS from entering the landfill?
 - c. Do PFAS escape the landfill in leachate? In landfill gas? In other ways?
- 5. Risks from Flood – especially extreme flood conditions, which are becoming more prevalent as the climate changes**
- a. What level of rainfall will overwhelm the landfill’s leachate collection systems?
 - b. Will an “internal flood” cause stress to or overflow the landfill’s liner system? Will it potentially lead to leachate leaking into groundwater?
 - c. What plans are in place to prevent internal flooding of the landfill?
 - d. Have studies been done to pre-visualize the effects of extreme flooding (and other extreme weather) on landfill integrity and operations?
 - e. Does the risk of flooding increase if the landfill expands?
- 6. Risks of Extended Power Outages**
- a. What are the effects of power outages on landfill operations, especially necessary operations such as gas collection and leachate pumping? What studies or plans have been done to prepare for an extended power outage?
- 7. Risks of Concatenating Disasters**

- a. What studies or plans have been done to prepare for situations where more than one disaster is happening, i.e., if a heat dome causes a power failure which starts a wildfire that jumps to the methane leaks of the landfill? Or an earthquake causes an extended power failure, critical damage to the landfill infrastructure, and a wildfire, which prevents emergency response?

8. Groundwater contamination

- a. Groundwater contamination is not a risk, it is an inevitability – the liner and other barriers to contamination will fail in time, and leachate and other contaminants from the landfill will enter the groundwater directly (the landfill currently sits directly on the water table). What are our best estimates as to that risk level currently? How does the probability increase over time?
- b. What are examples of liner failures at other landfills?
- c. What happens when this failure occurs? How will this failure be detected? How will the damage spread?
- d. What is the history of groundwater contamination at the landfill site?

Coffin Butte Landfill Economic Impacts: **“What are the economic effects of the landfill?”**

Customer Interests: “What effect does the landfill currently have on collection rates in the county? On recycling rates? What are the alternatives to landfilling and how do their rates compare?”

1. How do Benton County garbage collection rates compare to other Oregon counties?
2. How do Benton County recycling rates compare to other Oregon counties?
3. How do Benton County per-capita waste disposal volumes compare to other Oregon counties?
4. What rate changes did the residents of Yamhill county experience once the Riverbend landfill closure was underway?

Coffin Butte Landfill Future Directions:

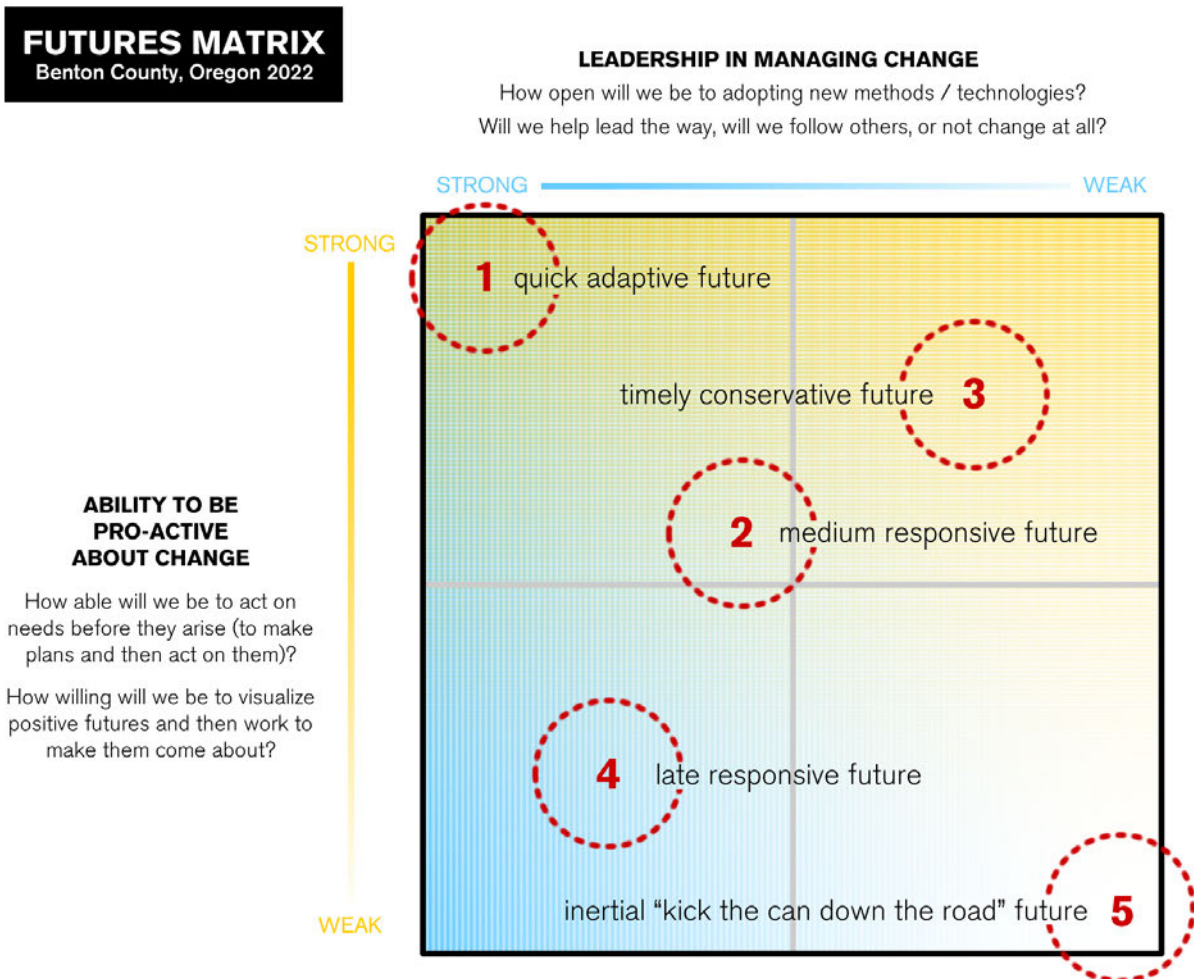
“What are our options as we move into the future?”

Another fundamental (perhaps the most fundamental) bit of information about the county’s solid waste future is: what are our options? In other words, what happens if we do nothing? What happens if we do something? What happens if we do a third thing? And so on.

Like Rome, all roads of this document lead here: all the other understandings lead us to favor choosing one possible future over another. If the landfill is generating significant amounts of climate-damaging methane, for example, we favor choosing a future which generates less.

In my experience, it can be difficult to arrive at common understandings about possible futures, because (a) people have widely varying comfort levels with even thinking about possible futures, (b) people have widely varying comfort levels with imagining possible futures, and (c) possible futures are best made understandable as part of narratives, and creating good narratives is a fairly rare skill. Futurethinking is hard, and telling complex stories is hard, which empowers overly simplistic options such as doing nothing.

THE FUTURES MATRIX



The “futures matrix” is a tool to help people begin futurethinking about a situation. In the matrix, you identify two major forces in the situation, and then you plot the four possible binary outcomes based on whether these forces will prove to both be strong, or one is strong and the other weak, or both are weak.

For Benton County’s solid waste future, the two key drivers are (1) our collective ability to be open to making changes and (2) our collective ability to be pro-active toward making changes. You can think about these as:

1. **Will the county lead, or will it follow (or not choose change at all)? and**
2. **Will the county make changes on its own schedule or when forced to by outside circumstances?**

You’ll notice the question about expanding the landfill doesn’t appear on this matrix. That’s because expansion/no expansion is not really a futures question – that is, it doesn’t directly address the future of solid waste in Benton County. Whether or not a landfill expansion is approved, the county community still faces the challenges posed in this matrix. The expansion would just “kick the (trash) can down the road” (see Futures 4 and 5, below).

Let’s look at the five futures called out in circles on the matrix:

FUTURE 1: the quick adaptive future

In this future, the county is strongly pro-active about changing the way it manages solid waste and strong in showing leadership in evaluating and adopting new methods for sustainable materials management.

- a. Benton County knows the landfill is filling up... and also:
 - i. The county realizes the risks that the landfill may close prematurely (by legislation, litigation, shifting economics, and so on)...
 - ii. The county realizes the risks that the landfill may be closed (by fire, toxics breach, systems failure, and so on)...
 - iii. The county begins to quantify the future costs of the landfill.
- b. ...so it begins an aggressive program of waste reduction as a transition to its post-landfill future, as a way to pre-emptively reduce the amount of trash the county produces, which the county will have to deal with when the landfill closes for whatever reason. This also is the county’s best course of action to be resilient in the event of landfill closure.
- c. ...the county begins to assess its post-landfill options, such as building a truck-to-rail transfer station, so that it has a way to gather competitive bids for the solid waste that cannot be recycled or reprocessed or otherwise diverted from the wastestream. This also increases the county’s resilience in the event of landfill closure.

FUTURE 2: the medium responsive future

In this future, the county is somewhat pro-active about changing the way it manages solid waste and middle-of-the-pack in evaluating and adopting methods for sustainable materials management.

- a. Benton County knows the landfill is filling up, so it works toward waste reduction as a transition to its post-landfill future, as a way to reduce the amount of trash the county produces (and will have to deal with) when the landfill closes.
- b. Benton County knows the landfill is filling up, so it begins to assess its post-landfill options, such as building a truck-to-rail transfer station, so that it has a way to gather competitive bids for the solid waste that it cannot recycle or reprocess or otherwise divert from the wastestream.

FUTURE 3: the timely conservative future

In this future, the county is strong in showing leadership in evaluating and adopting new methods for sustainable materials management, but weak in actually implementing those changes. It splashes around in the shallow end of change.

- a. Benton County knows the landfill is filling up, so it develops a robust plan for transition to its post-landfill future, but is unable or unwilling to make the plan effectual, and still has a large amount of county trash to manage as the landfill closes.
- b. Benton County knows the landfill is filling up, so it assesses its post-landfill options (such as building a truck-to-rail transit station), but is unable or unwilling to make the post-landfill plan a reality.

FUTURE 4: the late responsive future

In this future, the county is weak in being pro-active about the necessity for change, but at some point the crisis cannot be ignored any longer, and then the county is quite willing to adopt bold new methods for sustainable materials management. It's asleep at the wheel at first, but then wakes up.

- a. Benton County knows the landfill is filling up, but it dithers in implementing a robust plan for transition to its post-landfill future until the last minute. It therefore has a large amount of county trash to manage all the way along and as the landfill closes.
- b. Benton County knows the landfill is filling up, but it is late in assessing its post-landfill options. Its options with long lead times (such as building a truck-to-rail transit station) are therefore off the table when it comes time to act.

FUTURE 5: the inertial, “kick the can down the road” future

In this future, the county is weak in showing leadership in evaluating and adopting new methods for sustainable materials management, and weak in being pro-active and anticipating the necessity of change. If this future seems familiar, it's because we are currently in this future: ten years ago, Benton County chose Future 5; twenty years ago, Benton County chose Future 5; and so on. That's the reason the county does not have a current Solid Waste Management Plan nor a coherent assessment of the landfill's risks and costs.

A key aspect of this future has been the county's loss of control over data about the landfill, especially independently derived data, and a lack of vision about alternatives to landfilling and ways to reduce landfilling.

- a. Benton County doesn't act as the landfill fills up.
- b. Benton County has no roadmap for its post-landfill options.

To return to the question we started with: “What are our options as we move into the future?”

1. **The Benton County community can decide to lead the way in evolving how it manages solid waste; or it can decide to follow as others lead the way; or it can do nothing. Which should it do?**
2. **The Benton County community can decide to be pro-active in its evolution away from landfilling; or it can wait until the situation becomes more urgent; or it can do nothing. Which should it do?**

Coffin Butte Landfill Future Directions, Next Steps: “What are our next steps as we move toward a more desirable future?”

One way to make it easier to futurethink about solid waste management is to break down each possible future into discrete steps, and then to focus on just the next steps for each. That way you don't have to be daunted by the exact route, you just need to be reasonably sure you're moving in the right direction. And you can remain open to new opportunities as they arise.

Specific ideas about next steps for the landfill and beyond:

1. Obtain independent, third-party, reliable data about key parameters relating to our waste stream and its effects.
2. Communicate with others who are also evaluating their options for their waste streams. Other counties in Oregon (and other entities across the nation and the world) are already operating successfully without a local landfill, and others are in the process of making the transition to post-landfill living. We can learn from their experience.
3. Study possible actions to take, and share that information. Some examples for Benton County: an intermodal transfer facility (which enables waste to be shipped more efficiently by rail); a materials recovery facility for construction debris; a materials recovery facility for advanced recycling; a waste-to-energy facility; upstream waste materials reduction policies; and so on. Net Zero and other strategies already exist, and they use policy and technology to begin to control and minimize damage from the county waste stream.
4. Hire a consultant who specializes in these transitions, to advise us.
5. Don't be afraid to engage the public at large. Asking “what if” is a game that anyone can play, and our ideas and values matter when envisioning a future and taking the first step, and then the next, and then the next, on the path to get there.



EPILOG

Thanks for making it all the way to the end of the list. Again, the understandings being sought here are questions that we feel must be answered before we can begin working to solve the issues themselves. And they should be answered with better, more future-oriented viewpoints and insights, and they should be presented in better visualizations, if they are to be truly commonly understood.

I hope these questions and the deep dives about them are useful to the Workgroup, and that the Workgroup can use its special status to highlight the need for better answers than we currently have, and persevere until those better answers emerge.

- end -

From: [Ken Eklund](#)
To: [Benton County Talks Trash](#)
Subject: Testimony: Imagining futures with a futurethinking workshop
Date: Thursday, September 8, 2022 7:32:03 PM
Attachments: [TTWG-futuresworkshop.pdf](#)
[writerguy-cube2.png](#)

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Dear Workgroup:

I'm attaching here a PDF document relevant to the discussions about the future of solid waste management in Benton County. It should be distributed to the Workgroup members for their consideration and included in the next meeting packet. Thank you!

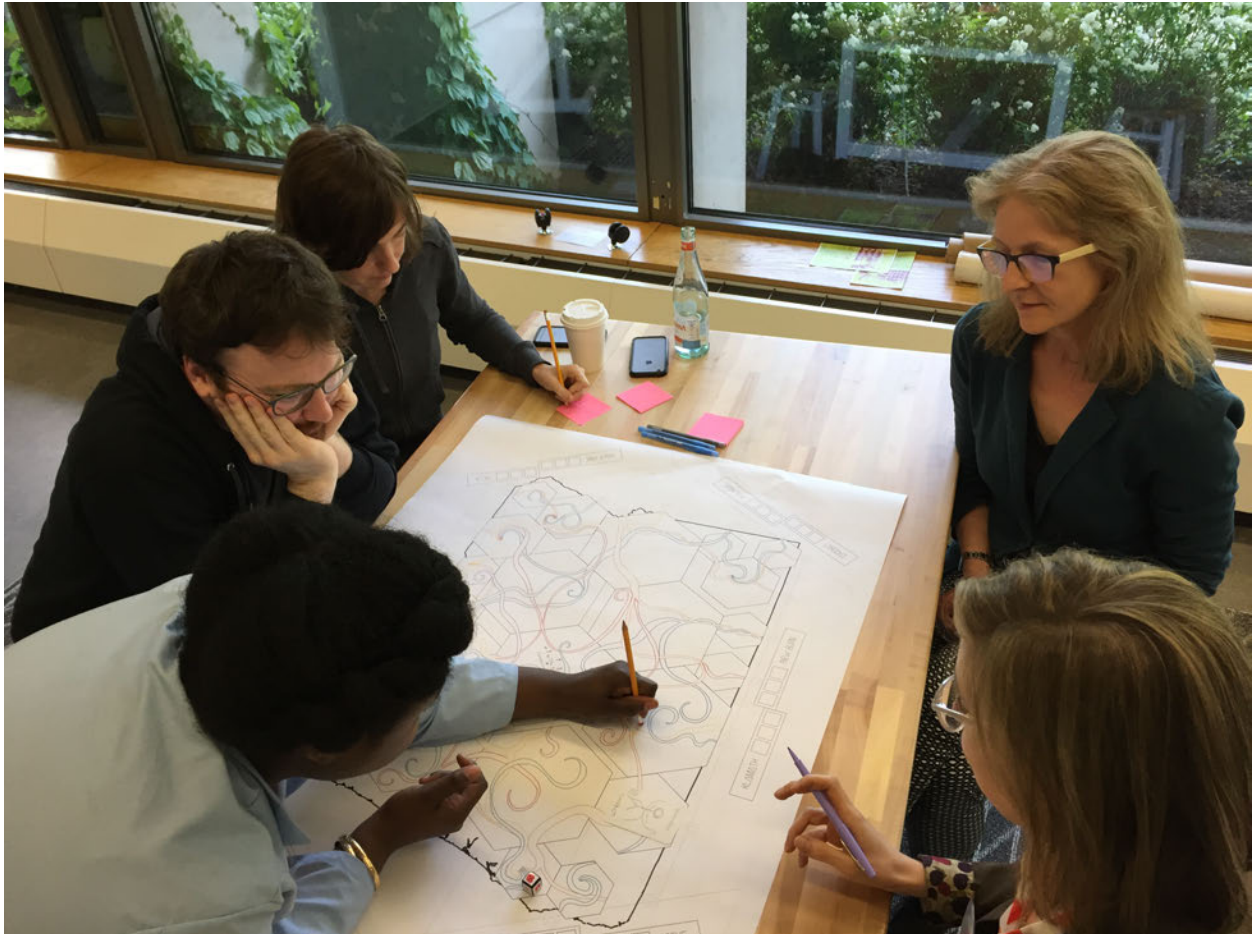


Ken Eklund, writerguy

Creator of
World Without Oil
Ed Zed Omega
FutureCoast
and other storymaking games

Dear Members of the Sustainable Materials Management Workgroup:

As you refine and prioritize the goals and agendas of the Workgroup, I'm recommending you include a futures workshop in your timeline. By "futures workshop" I mean a session or sessions in which a specialist in collaborative futurethinking helps the Workgroup visualize the alternate futures ahead for the county.



Workshop on Oregon Futures, University of Chicago

It's hard for people to think about the future: it seems so unknown, so vague. It's no wonder that, without guidance, people stick to the shallows close to the present and avoid the deeper waters of 5, 10, 20 years out. Futures workshops tackle this problem head-on: they use synthesis, sensemaking, creativity, and visualization techniques to create plausible stories about possible futures, grounded in present-day facts. Their goal is to evoke narratives that resonate with the present-day situation and inspire collaboration that builds toward a future aligned with shared values.

I'm familiar with futures workshops – they are adjacent to / overlap my own future work – and it's apparent to me that they are an excellent fit with what the Workgroup has been asked to accomplish. Establishing a platform of shared understandings about the sustainability of the region's solid waste future, and voicing the values that citizens hold about their communities – these goals require us to step up to the next level in how we think about the common path forward.

Many groups offer futures workshops – here are two that I know best:

ARIZONA STATE UNIVERSITY is noted worldwide for its focus on futures studies. I was Resident Artist at the School for the Future of Innovation in Society in 2017-8. Contact: professor Lauren Keeler at SFIS, who specializes in foresight methods for complex governance challenges in sustainability: lauren.withycombe@asu.edu

INSTITUTE FOR THE FUTURE, a non-profit headquartered in Palo Alto, CA, “the world’s leading foresight education and futures organization.” They offer custom futures workshops and already have wide-ranging research on national and global issues including solid waste. Contact: start with John Clamme, jclamme@iftf.org

There are other providers as well. I’ve already emailed the facilitator, Darren Nichols and the County Commissioners about this idea.

If I had to pick a word to sum up what a futures workshop can contribute to the process, that word would be *imagination*. We know there are better ideas / better plans / better worlds out there – we just haven’t imagined how to get there. To ever get beyond the false binary of big vs. bigger landfill, imagination is the first step.

I’m happy to answer any questions or provide more information or, just chat.

Best wishes for the future,

Ken Eklund

Member, Solid Waste Advisory Council
Member, Disposal Site Advisory Committee
Benton County resident

From: [GROGAN Cory](#)
To: "Mark Yeager"
Cc: [NICHOLS Darren](#); [REDICK Daniel](#); [Sam Imperati](#); [Benton County Talks Trash](#); [AUGEROT Xanthippe](#); [WYSE Nancy](#); [MALONE Patrick](#); [STOKES JonnaVe](#)
Subject: RE: Lack of Public Outreach
Date: Friday, September 9, 2022 8:38:04 AM
Attachments: [image001.png](#)

Thanks, Mark,

To clarify your last question, Darren was just pointing out some of the published material. We send this information to Eugene, Springfield, Albany, Corvallis, Lebanon media and that includes Democrat Herald/Gazette-Times and their individual reporters. We can also send info statewide and national media if necessary.



Cory Grogan
Public Information Officer
O: 541-766-6843 C: 541-745-4468
Email: cory.grogan@co.benton.or.us
www.co.benton.or.us

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From: Mark Yeager [REDACTED]
Sent: Friday, September 9, 2022 8:29 AM
To: GROGAN Cory <cory.grogan@Co.Benton.OR.US>
Cc: NICHOLS Darren <darren.nichols@Co.Benton.OR.US>; REDICK Daniel <daniel.redick@Co.Benton.OR.US>; Sam Imperati <samimperati@icmresolutions.com>; Benton County Talks Trash <bentoncountytalkstrash@Co.Benton.OR.US>; AUGEROT Xanthippe <Xanthippe.Augerot@Co.Benton.OR.US>; WYSE Nancy <nancy.wyse@Co.Benton.OR.US>; MALONE Patrick <Pat.Malone@Co.Benton.OR.US>; STOKES JonnaVe <JonnaVe.Stokes@Co.Benton.OR.US>
Subject: Re: Lack of Public Outreach

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Thank you Darren and Cory for the follow-up emails.

I understand that there have been several Board of Commissioner meetings to discuss this process. Frankly, most people do not pay any attention to those meetings unless they know there is something directly applicable to them or their lives. And while it gives you some cover and comfort to say that all these public meetings were held, it is not very effective particularly when you have an interested group (those who participated in the expansion CUP process) and that group has not been actively addressed.

As I pointed out in my original email to Darren, I think that it is imperative that the final email list from the previous CUP be used to publicize this effort. The path you are on now (not

directly reaching out to the people most interested in this issue) seems destined to fail because by the time they learn what is going on, it will be too late. Thank you Darren for committing to reaching out to that group. Please do so immediately.

Just a comment on the list of media presented in the email from Darren, I am struck by the fact that neither the Gazette Times or the Democrat Herald are on your list. Is this a reason for that?

Thank you,

Mark Yeager

On Fri, Sep 9, 2022 at 7:28 AM GROGAN Cory <cory.grogan@co.benton.or.us> wrote:

Thanks, Darren and Mark,

Benton County will be releasing an update today that recaps the meeting and has information about how the public can participate, the workgroup, and the coordination process. This will be shared with media, on the BC website, with our public distribution lists, and on social media. As Darren mentioned we plan to provide updates twice weekly throughout the process.

Public can sign up for updates and our monthly newsletter by clicking on [this hyperlink](#)

Respectfully,



Cory Grogan
Public Information Officer
O: 541-766-6843 C: 541-745-4468
Email: cory.grogan@co.benton.or.us
www.co.benton.or.us

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From: NICHOLS Darren <darren.nichols@Co.Benton.OR.US>
Sent: Thursday, September 8, 2022 10:01 PM
To: 'Mark Yeager' [REDACTED] REDICK Daniel <daniel.redick@Co.Benton.OR.US>; Sam Imperati <samimperati@icmresolutions.com>; Benton County Talks Trash <bentoncountytalkstrash@Co.Benton.OR.US>; AUGEROT Xanthippe <Xanthippe.Augerot@Co.Benton.OR.US>; WYSE Nancy <nancy.wyse@Co.Benton.OR.US>; MALONE Patrick <Pat.Malone@Co.Benton.OR.US>
Cc: GROGAN Cory <cory.grogan@Co.Benton.OR.US>; STOKES JonnaVe <JonnaVe.Stokes@Co.Benton.OR.US>
Subject: RE: Lack of Public Outreach

Hi Mark,

Thanks for attending this evening and following up. By my informal count, we had between 20 and 30 members of the public in attendance in person and online. Together with

workgroup members that made between 40 and 50 community members dedicating their time and attention to an important issue.

As we mentioned in the meeting, anyone who is interested in participating/observing in the Benton County Talks Trash workgroup effort is welcomed and encouraged to send their interest to bentoncountytalkstrash@co.benton.or.us and we will gladly add them to the list.

We have an outreach plan and have been increasing outreach over since last spring. What I did not know on the spot was who all is on the list; we also don't know (yet) how and where the outreach communications are best received or most effective. That is one element of the Workgroup Charge and (we hope) a constructive result of the effort, to develop a more intentional communications plan going forward.

Thank you for the suggestion to reach out again to the previous CUP participation list. We included that group early on to let them know about the Assessment; we will reach out to them again.

Here are the elements of the communications plan currently in place:

- Multiple public Board hearings between April and August to develop and authorize the Assessment and subsequent Charter
- [Media release](#) soliciting interest/applications for workgroup membership; the article also appeared in the:
 - o [PhHilomath News](#)
 - o [Corvallis Advocate](#)
 - o [Public Technologies](#)
- BC Social media platforms
- BC BOC media releases planned after each Workgroup Meeting
 - o Including requests from interested organizations to help amplify the messages
- Twice monthly BOC updates recapping and previewing the Workgroup's efforts
- [BCTT website](#) with meeting materials, recordings and all public comments
- SWAC meetings and agendas announcing the Assessment, Report and Workgroup formation
- Informal communications with those who have reached out and asked to be added to the BCTT list

We hope these forums will reach most of the interested community. We are open to additional suggestions.

I hope this helps.

Darren

From: Mark Yeager [REDACTED]
Sent: Thursday, September 8, 2022 8:23 PM
To: REDICK Daniel <daniel.redick@Co.Benton.OR.US>; NICHOLS Darren <darren.nichols@Co.Benton.OR.US>; Sam Imperati <samimperati@icmresolutions.com>; Benton County Talks Trash <bentoncountytalkstrash@Co.Benton.OR.US>; AUGEROT

Xanthippe <Xanthippe.Augerot@Co.Benton.OR.US>; WYSE Nancy
<nancy.wyse@Co.Benton.OR.US>; MALONE Patrick <Pat.Malone@Co.Benton.OR.US>
Subject: Lack of Public Outreach

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Hello - I attended the first meeting of the Talking Trash workgroup today.

I was surprised that so few members of the "public" showed up to the meeting.

Discussing my concern with County staff at the meeting, they revealed that they don't really have an outreach plan.

Might I suggest that, for starters, everyone that participated in or sent comments as part of the CU-21-047 be notified of this process and these meetings. There is an email list readily available from that proceeding, and the folks that participated in that process clearly are interested in what is going on with solid waste and the landfill.

Please confirm that you received this email and let me know what the public outreach plan is going forward so that folks can participate before this process concludes.

Thanks

Mark Yeager

From: [REDACTED] Chuck Gilbert
To: [Benton County Talks Trash](#)
Cc: ["Sam Imperati"](#); [REDICK Daniel](#); ["Ken Eklund"](#)
Subject: Waste to Energy Conversion Benton County Talks Trash Workgroup
Date: Sunday, September 11, 2022 7:07:16 PM
Attachments: [Waste to Energy Benton County Landfill Resource - Benton County Talks Trash Workgroup.docx](#)

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Hi Daniel

If you would be kind enough to include my letter for the next meeting of Benton County talks trash workgroup, I would appreciate it.

Thanks.

Chuck

Chuck Gilbert

Member of Benton County

9/11/2022

Waste to Energy Conversion

Benton County Talks Trash Respectfully Workgroup

Via email: bentoncountytalkstrash@co.benton.or.us

Merit aside, sustainability is the tenet and goals of Counties of Oregon as well as the State of Oregon.

“Sustainability” is simply defined as using, developing, and protecting resources in a manner that enables people to meet current needs and provides that future generations can also meet future needs, from the joint perspective of environmental, economic, and community objectives. ([ORS 184.421](#))

In supporting sustainable communities, state agencies shall seek to enable and encourage local communities to, in part, [ORS 184.423](#) subparagraph (j) efficient use and reuse of resources and minimization of harmful emissions to the environment.

Merit aside, landfills are a resource of the State of Oregon.

Oregon DEQ shifted from Solid Waste Management to Materials Management for sustainability.

Oregon DEQ’s [materials management](#) takes a holistic view of environmental impacts across the full life cycle of materials, as well as actions that can be taken to reduce those impacts. It includes resource extraction and use of recovered materials, the design and production of materials, their use, and end-of-life management, including solid waste disposal and recovery.

Stepping back for a moment, landfills possess the synergy for the integration of solid waste disposal and green energy recovery.

A landfill is simply a solid waste battery that has the potential energy of converting waste to energy.

One ton of solid waste has the potential to produce 60 gallons of fuel.

With an average of 1 million tons of solid waste being slated for delivery to Coffin Butte landfill, then the potential is to produce 60 million gallons of fuel.

Alternatively, one ton of solid waste has a similar net effect of producing megawatts of electrical power.

Equally important in the solid waste disposal and energy recovery are technologies that can convert waste to energy with acceptable net-zero emissions goals.

Put simply, the term net zero applies to a situation where global greenhouse gas emissions from human activity are in balance with emissions reductions. At net zero, carbon dioxide emissions are still generated, but an equal amount of carbon dioxide is removed from the atmosphere as is released into it, resulting in zero increase in net emissions.

As a model, the City of Lancaster in California, host, and co-owner with 2% of a 50-million-dollar plasma gasification plant being built, owned, and operated by SGH2 Energy for wastepaper and waste plastics from municipal solid waste for conversion to hydrogen fuel.

The model also brings Iwatani, Japan's leading hydrogen industrial gas company and a developer of hydrogen refueling stations (HRS) in California for the [launching](#) of California's first closed-loop green hydrogen ecosystem for transportation.

It is not the intent here to opine the merits of one company over the other now, but merely give credence to the fact that viable technologies are at hand for working collectively with Benton County's landfill resources to convert waste to energy.

In this respect of reducing waste, the life expectancy of the landfill will be increased.

As the workgroup progresses, I appreciate the opportunity to hopefully provide positive alternatives for the workgroup's consideration for reaching their goals.

Thank you.

From: [Debra Higbee-Sudyka](#)
To: [Benton County Talks Trash](#)
Subject: The future of solid waste
Date: Monday, September 12, 2022 10:55:22 AM

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi,

Could you please provide me with the information of who the members in the Benton County Talks Trash workgroup are? Also, it would be helpful to know the dates that they will be meeting. I am very concerned that this is going to be a cheerleading group for continuing to support a regional landfill. Corvallis will be burdened with 100% of the environmental toxins and poor land and air quality due to the trash brought here from all over Oregon. Benton County only adds between 6 to 12% to the landfill. It will be a sad day when Coffin Butte becomes the second largest landfill in the state of Oregon.

I am also concerned with the messaging in your email. It is not true that "The County offers some of the most robust rural solid waste and recycling services in Oregon." If it is true, you're doing a bad job of getting the word out, or it's a poor reflection of what's happening with recycling in the state.

I appreciate your consideration of my request,
Debra

From: [Phil Hays](#)
To: [Benton County Talks Trash](#)
Subject: Benton County landfill
Date: Monday, September 12, 2022 9:55:44 AM

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

I have been following the discussions on the landfill and here are my thoughts.

1. The landfill is in Benton County and should serve the needs of the residents of this county (and neighboring counties). That is the primary concern.
2. We should be planning for the future of the residents of Benton County. What do we do when the landfill is full and cannot accept more trash from Benton County? What will be the increase in cost of living for the citizens of the county (or region) to send our garbage somewhere else?
3. What can we do to delay this increase in cost of living?

County government should only consider the needs of the residents of this area, and should not worry about the profits of some out of state company. The garbage company is bringing in trash from far away in order to increase its profits. In so doing they have been filling our landfill faster than should ever have been allowed to happen. When the landfill is full they will take their money and run, leaving the citizens of the county to pick up the bill.

We should limit input to our landfill to this and the neighboring counties (Polk and Linn) only.

If changes or expansion of the landfill are needed the only consideration should be the benefit to the citizens, and not to any company's profits.

Phillip Hays PhD

From: [Paul Nietfeld](#)
To: [Benton County Talks Trash](#)
Cc: samimperati@icmresolutions.com
Subject: Citizen input for Workgroup meeting Sep. 15
Date: Monday, September 12, 2022 9:26:01 PM
Attachments: [Nietfeld comment input Workgoup Meeting2_15Sep2022.pdf](#)

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

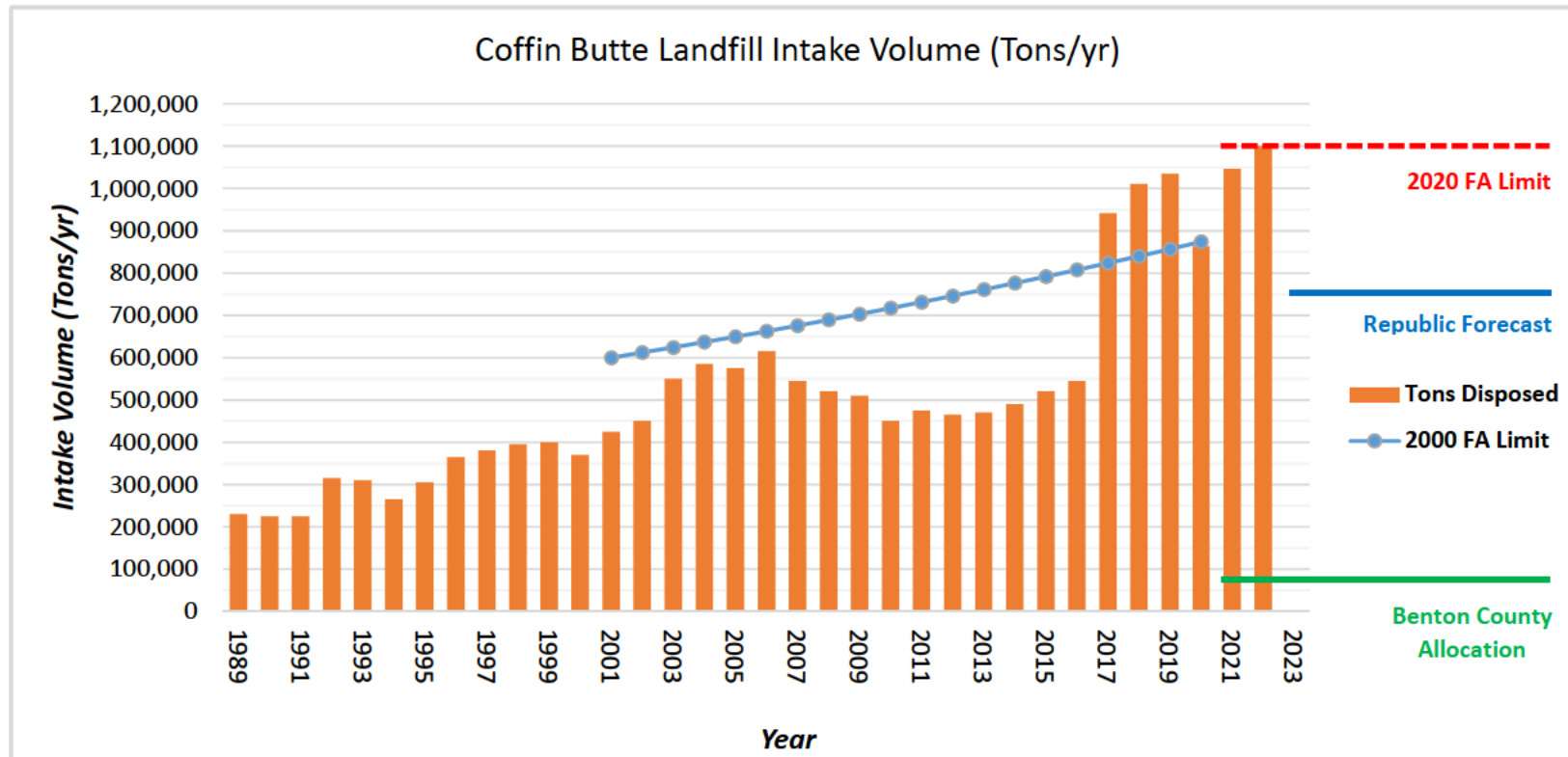
The attached document covers three areas that I believe should be included in the Common Understandings section of the workgroup recommendations document:

1. Coffin Butte intake volume history (graph).
2. Coffin Butte landfill life comparative estimates
3. Summary of the Coffin Butte "Quarry Problem" that is stated by the franchisee to be driving the need for an additional landfill cell.

This document presents basic information on each topic, with comments and questions that may drive further discussion. I would be happy to work with CDD staff and/or the workgroup to verify the underlying data and calculations for formal inclusion in the workgroup document.

Thank you
Paul Nietfeld

Coffin Butte: Intake Volume History



- Large-scale industrial operation: 1.1 M Tons/year => 7,000,000 lbs/day, 6 days/week
- Dramatic growth starting in 2017 – *What happened to cause and sustain this?*
- The 2000 Franchise Agreement intake limit was violated in years 2017–2019 – *Why no County action?*
- 2022 volume is estimated from first half 2022 filings with DEQ.
- Recent years show sustained high demand for landfill volume – *Does Republic plan to maintain this level?*
- Even a 5,000,000 cubic yard expansion cell would fill in less than 5 years at the current intake rate

This plot shows why we (workgroup, staff, administration, the public and the franchisee) are here: Large intake volume in the last 6 years is quickly depleting the available Cell 5 volume.

Coffin Butte: Estimate of Remaining Life

Assumptions:

1. Remaining capacity is 16,066,982 yd³ at the end of 2022 [17,299,778 yd³ at end of 2021 per Annual Report – 1.1 MTons @ 0.93T/yd³ (three year average density per 2021 Annual Report)].
2. Simple estimate - not including daily and intermediate cover, intended to provide general guidance.
3. Density over remaining life assumed to be 0.93T/yd³, consistent with the 2021 Annual Report value.

Landfill life:

Volume (Tons/year)	Operating Life (years, beyond 2022)	Year Capacity is Reached	Notes
75,000	199	2221	Benton County volume
500,000	29.9	2051	Approx. 2008 volume
750,000	19.9	2041	Republic forward estimation volume
1,100,000	13.6	2035	Current rate and 2020 Franchise Agreement cap

Coffin Butte: The Quarry Problem

Problem statement:

Per Republic Services, Coffin Butte landfill intake volume is consuming available space at a rate which will outstrip the capacity of the existing cell (Cell 5) in approximately 4 years, about 4 years before quarry mining (to be used for Cell 6) is complete.

Causes:

- High intake rate (73% Y/Y increase in 2017, continued very high intake from then; why?)
- Lack of planning by franchisee and/or business motivations to maintain high intake even with looming space problem and/or unavoidable or difficult-to-avoid disposal needs. *None of these are the responsibility of Benton County government, staff, or citizens.*
- Slow quarry excavation – approx. 250k yd³ per year? *Is this additional space actually permitted for landfill?*

Options:

1. Lower intake volume until Cell 6 is ready (if deficit is ~1M yd³, a decrease to about 750,000 Tons/year over the next 4 years should work).
2. Accelerate quarry extraction and stockpile.
3. Write off the additional (unmined) Cell 6 space.
4. Expansion cell in current landfill area, similar to the East and West triangles in 2003.
5. Expansion cell south of Coffin Butte road – effectively establishing a new landfill site.
6. Other(s)?

Meeting #3 Public Comments

REDICK Daniel

From: Sam Imperati <samimperati@icmresolutions.com>
Sent: Saturday, September 17, 2022 9:15 AM
To: Debbie P
Cc: Benton County Talks Trash
Subject: RE: Next scheduled TrashTalk talk workgroup meetings?

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Debbie,

I'm using this email to respond to the three from this morning.

- 1) The meetings will start at 3:00 PM unless the Agenda says otherwise.
- 2) Info and RSVP request for the 9/24 tour will go out early this coming week and appear on the project website.
- 3) The 9/1 date was a typo. Joel's tour is currently scheduled for 10/1.
- 4) Please copy the above email on our correspondence so everyone will get the information.

Happy to chat.

Thanks, Sam

ICM **Sam Imperati, JD | Executive Director**
resolutions 11524 SW Vacuna Ct. | Portland, OR 97219-8901
 (P) 503.244.1174 | (C) 503.314.1156 | (F) 503.244.1038
SamImperati@ICMresolutions.com
ICMresolutions.com

From: Debbie P [REDACTED]
Sent: Saturday, September 17, 2022 7:51 AM
To: Sam Imperati <samimperati@icmresolutions.com>
Subject: Re: Next scheduled TrashTalk talk workgroup meetings?

Also... confirming the workgroup meetings start at 3pm... the last one started at 3:30 so want to be sure.

On Sep 17, 2022, at 7:27 AM, Debbie P <[REDACTED]> wrote:

I hope you mean that Joel's neighborhood tour is OCTOBER 1st... Sept 1st has already passed.

On Sep 16, 2022, at 11:10 AM, Sam Imperati <samimperati@icmresolutions.com> wrote:

Debbie,

The next meeting is on 10/6 at 3PM.

9/1 is the likely date of Joel's neighborhood tour.

10/27 is the date of the fourth meeting.

My 71st birthday is on 12/3!

Enjoy the weekend.

Thanks, Sam

<image001.png>

-----Original Message-----

From: Debbie Palmer [REDACTED]

Sent: Thursday, September 15, 2022 7:11 PM

To: Sam Imperati <samimperati@icmresolutions.com>

Subject: Next scheduled TrashTalk talk workgroup meetings?

Hi Sam,

I was listening in on today's workgroup meeting and it went by too quickly regarding what the dates and times were for the next couple of workgroup meetings. I got that the Landfill tour will be 10 AM Saturday, September 24 and that some sort of an RSVP is going to go out for that. But then the next workgroup meeting... I think is Thursday, September 29 at 3 PM? But then I also heard October 6 at 3 PM. Is it both, or one or the other? If you could please clarify that would be great.

Thanks,
Debbie Palmer

Sent from my iPhone

REDICK Daniel

From: CAROLYN PETERSON <[REDACTED]>
Sent: Saturday, September 17, 2022 11:26 AM
To: Benton County Talks Trash
Cc: Carolyn Peterson
Subject: Stop expansion of Coffin Butte Landfill

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

To whom it may concern,

I live in Corvallis, Benton County, OR.

Please do not expand the Coffin Butte Landfill. Landfills are a recipe for disaster, as they can continue to pollute our air, streams, and groundwater for thousands of years. The liners and caps are only insured for thirty years and are unlikely to be effective much past the required minimum.

Benton County does not need to receive more trash. Benton County needs to do more reuse and recycling and thus negate the need for any landfills.

Carolyn Peterson

Corvallis, OR 97330

REDICK Daniel

From: [REDACTED] on behalf of [REDACTED]
Sent: Monday, September 19, 2022 9:07 PM
To: Benton County Talks Trash
Subject: Say "No" to landfill expansion

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Greetings Solid Waste Process Work Group,

First, thanks for your time and service regarding the issue of waste in our County. As a resident of Corvallis I would like to request you say "no" on expanding the Coffin Butte Landfill.

Under no circumstances should this expansion occur if we as a community are truly committed to a more sustainable future. Among other things sustainability means a carbon free future with less transportation of goods and services, including services such as waste management. Expanding the landfill to accommodate municipalities farther away, like Washington County is not a good plan for anyone involved. It does nothing to encourage less waste production and the added waste will generate more methane and use up more land that may be a critical asset in our future. Honestly, if we accept Washington County waste, what is their incentive to cut down on their trash generation? Also, the landfill already struggles to contain the waste it currently has. Countless times I have driven on Hwy 99 and seen litter all over the sides of the highway. My husband and I have even spent time picking up garbage alongside the road of McDonald Forest. Our land is far more valuable to *everyone* than a waste repository.

Thanks again for your time.

Sincerely,
Andrea Heidinger

1140 NW Maple Avenue,
Corvallis, OR 97330

REDICK Daniel

From: [REDACTED]
Sent: Monday, September 19, 2022 7:13 PM
To: Benton County Talks Trash
Subject: Say No to Coffin Butte Expansion

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Dear Trash Talks Work Group,

Thank you for taking the time to read this email. Please consider voting no on the Coffin Butte Landfill expansion. The benefits of a few more tax dollars are FAR outweighed by the detriment to Benton County the expansion will cause. Last year I spent several months commuting on highway 99 and invariably found myself behind a garbage truck. I was amazed and horrified by the amount of plastic garbage that constantly flies out of these trucks. It is a major source of pollution.

We are not, nor should we be, responsible for garbage from other counties and it is environmentally unsustainable to transport it all the way to Corvallis. LET THEM DEAL WITH THEIR OWN WASTE!

Don't let your legacy to Benton County become a valley filled entirely filled with garbage.

Thanks for your efforts to make this a great place to live,
Michael Heidinger

REDICK Daniel

From: Sam Imperati <samimperati@icmresolutions.com>
Sent: Tuesday, September 20, 2022 1:02 PM
To: Ken Eklund
Cc: Benton County Talks Trash; NICHOLS Darren; REDICK Daniel
Subject: RE: Details on the Landfill Tour this Saturday?

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Ken,

I'll see where staff is at on posting details by copying them above.

Here is what I think I know!

Meet at Republic Services office, 110 NE Walnut Blvd in Corvallis.

Participants will receive PPE (hard hat, high visibility vest, protective eye glasses)

Bus will leave promptly at 10 AM

Closed-toe shoes

Bus will return to Corvallis Office

Thanks, Sam



ICM Sam Imperati, JD | Executive Director

11524 SW Vacuna Ct. | Portland, OR 97219-8901

(P) 503.244.1174 | (C) 503.314.1156 | (F) 503.244.1038

SamImperati@ICMresolutions.com

ICMresolutions.com

From: Ken Eklund [REDACTED]
Sent: Tuesday, September 20, 2022 12:49 PM
To: Sam Imperati <samimperati@icmresolutions.com>
Subject: Details on the Landfill Tour this Saturday?

Hi Sam,

I'm interested in going on the Landfill Tour this Saturday, and so are other members of the Solid Waste Advisory Council. On the Workgroup website, there are still no details available about how to attend:

<https://www.co.benton.or.us/cd/page/solid-waste-process-work-group>

Can you supply the details (10 am? Where do we meet?) ~

Thanks,

Ken



Ken Eklund, writerguy

writerguy.com

Creator of

World Without Oil

Ed Zed Omega

FutureCoast

and other storymaking games

408-623-8372

REDICK Daniel

From: Sam Imperati <samimperati@icmresolutions.com>
Sent: Tuesday, September 20, 2022 4:36 PM
To: Debbie Palmer; Ken Eklund
Cc: Benton County Talks Trash
Subject: RE: Landfill tour question

Importance: High

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hot Off the Presses FYI: <https://myemail.constantcontact.com/Benton-County-Solid-Waste-Workgroup.html?soid=1126287250436&aid=AjQh640WiZU>

ICM **Sam Imperati, JD | Executive Director**
resolutions 11524 SW Vacuna Ct. | Portland, OR 97219-8901
 (P) 503.244.1174 | (C) 503.314.1156 | (F) 503.244.1038
SamImperati@ICMresolutions.com
ICMresolutions.com

From: Sam Imperati
Sent: Tuesday, September 20, 2022 1:55 PM
To: Debbie Palmer [REDACTED]
Cc: Benton County Talks Trash <BentonCountyTalksTrash@Co.Benton.OR.US>
Subject: RE: Landfill tour question

Debbie, please see attached email to Ken on the same topic. I just saw some staff traffic on this issue and will follow-up with them. Yes, the public is invited. Thanks, Sam

ICM **Sam Imperati, JD | Executive Director**
resolutions 11524 SW Vacuna Ct. | Portland, OR 97219-8901
 (P) 503.244.1174 | (C) 503.314.1156 | (F) 503.244.1038
SamImperati@ICMresolutions.com
ICMresolutions.com

-----Original Message-----

From: Debbie Palmer [REDACTED]
Sent: Tuesday, September 20, 2022 1:19 PM
To: Sam Imperati <samimperati@icmresolutions.com>
Subject: Landfill tour question

Sam: still no details on the county website about how to participate in the Landfill tour, especially if you are *not* a member of the workgroup... just a member of the public. My understanding was there were supposed to be some sort of RSVP. Today is already Tuesday and the tour is Saturday. Please if you could let me know about this ASAP so I can share it with the public who wants to attend.

Thank you,
Debbie Palmer

Sent from my iPhone

REDICK Daniel

From: Sam Imperati <samimperati@icmresolutions.com>
Sent: Tuesday, September 20, 2022 1:02 PM
To: Ken Eklund
Cc: Benton County Talks Trash; NICHOLS Darren; REDICK Daniel
Subject: RE: Details on the Landfill Tour this Saturday?

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Ken,

I'll see where staff is at on posting details by copying them above.

Here is what I think I know!

Meet at Republic Services office, 110 NE Walnut Blvd in Corvallis.

Participants will receive PPE (hard hat, high visibility vest, protective eye glasses)

Bus will leave promptly at 10 AM

Closed-toe shoes

Bus will return to Corvallis Office

Thanks, Sam



ICM Sam Imperati, JD | Executive Director

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(P) 503.244.1174 | (C) 503.314.1156 | (F) 503.244.1038

SamImperati@ICMresolutions.com

ICMresolutions.com

From: Ken Eklund [REDACTED]
Sent: Tuesday, September 20, 2022 12:49 PM
To: Sam Imperati <samimperati@icmresolutions.com>
Subject: Details on the Landfill Tour this Saturday?

Hi Sam,

I'm interested in going on the Landfill Tour this Saturday, and so are other members of the Solid Waste Advisory Council. On the Workgroup website, there are still no details available about how to attend:

<https://www.co.benton.or.us/cd/page/solid-waste-process-work-group>

Can you supply the details (10 am? Where do we meet?) ~

Thanks,

Ken



Ken Eklund, writerguy

writerguy.com

Creator of

World Without Oil

Ed Zed Omega

FutureCoast

and other storymaking games

408-623-8372

REDICK Daniel

From: REDICK Daniel
Sent: Wednesday, September 21, 2022 3:22 PM
To: 'Debbie P'
Cc: Sam Imperati
Subject: RE: quick clarifying question

Hi Debbie,

We are happy to help. Yes, the Community Development Department has completed the move to the Kalapuya Building (4500 SW Research Way, 2nd floor), and are open for business. Several departments have already moved into the Kalapuya Building (Board of Commissioners, Records and Elections, Assessment, and IT), and additional departments are going to also be moving to the building.

Have a great week,



Daniel Redick *he/him*
Solid Waste & Water Quality Program Coordinator
Community Development
Phone: 541-766-6819
Email: daniel.redick@co.benton.or.us
www.co.benton.or.us

From: Debbie P [REDACTED]
Sent: Wednesday, September 21, 2022 3:08 PM
To: REDICK Daniel <daniel.redick@Co.Benton.OR.US>
Cc: Sam Imperati <samimperati@icmresolutions.com>; Benton County Talks Trash <bentoncountytalkstrash@Co.Benton.OR.US>
Subject: Re: quick clarifying question

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Thank you Daniel!

BTW, is the “move” of your offices done yet? If not, do you have an idea of when you’ll all be settled in and doors-open-for-business again? (And I forget... is it just the CDD that’s moving?)

Appreciate your prompt responses - you are always good that way.

Cheers,
Debbie

On Sep 21, 2022, at 2:41 PM, REDICK Daniel <daniel.redick@Co.Benton.OR.US> wrote:

Hi Debbie,

The Benton County Talks Trash email address, bentoncountytalkstrash@Co.Benton.OR.US, currently forwards received emails directly to the following Benton County staff members: myself, Darren Nichols (Community Development Department Director), and Greg Verret (Deputy Community Development Department Director). Comments from work group members and the public are combined into a PDF and shared with the work group ahead of each meeting, as seen in [this example from the most recent meeting](#).

Sam has requested to be cc'd on emails to bentoncountytalkstrash@Co.Benton.OR.US, as emails to that address are not automatically forwarded to him.

Best,

<image001.png>

Daniel Redick *he/him*

Solid Waste & Water Quality Program Coordinator
Community Development

Phone: 541-766-6819

Email: daniel.redick@co.benton.or.us

www.co.benton.or.us

From: Debbie P [REDACTED]
Sent: Wednesday, September 21, 2022 2:30 PM
To: Sam Imperati <samimperati@icmresolutions.com>
Cc: REDICK Daniel <daniel.redick@Co.Benton.OR.US>; Benton County Talks Trash <bentoncountytalkstrash@Co.Benton.OR.US>
Subject: Re: quick clarifying question

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Sam,

Yes if you could please get clarification from Daniel on who all is on the receiving end of this email address, that would be appreciated. I see you have copied Daniel on this email, so maybe he can respond directly.

Meanwhile... do you at least get ccd when someone emails that address, or do you only receive emails at samimperati@icmresolutions.com?

Thanks,
Debbie

On Sep 21, 2022, at 2:18 PM, Sam Imperati <samimperati@icmresolutions.com> wrote:

Debbie,

I'll have to ask Daniel on who gets messages forwarded to them immediately.

I do know they are "bundled" and sent as "comments" to the Workgroup a day or so before the next scheduled meeting.

Thanks, Sam

PS Hope to meet you in person on Saturday!

<image001.png>

From: Debbie P [REDACTED]
Sent: Wednesday, September 21, 2022 2:13 PM
To: Sam Imperati <samimperati@icmresolutions.com>
Subject: quick clarifying question

Hi Sam,

Who all is on the receiving end of the email address bentoncountytalkstrash@co.benton.or.us

Thanks,
Debbie Palmer

REDICK Daniel

From: Kevin Kenaga [REDACTED]
Sent: Thursday, September 29, 2022 8:49 AM
To: Benton County Talks Trash; WYSE Nancy; AUGEROT Xanthippe; MALONE Patrick
Subject: Fwd: Coffin Butte Landfill Neighborhood Tour

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Begin forwarded message:

From: Kevin Kenaga [REDACTED]
Date: September 29, 2022 at 8:19:35 AM PDT
To: cory.grogan@co.benton.or.us
Cc: darren.nichols@co.benton.or.us, BentonCountyTalksTrash@co.benton
Subject: Coffin Butte Landfill Neighborhood Tour

Hi Corey,

As Benton County's Public Information person I'm expecting you can get a more accurate reminder sent out immediately.

I am emailing you regarding yesterday's - REMINDER - Benton County's Solid Waste Process.

Which - Invites the public to tour "Adair Village along Arnold Rd".

That is not an accurate description.

Lots of time and energy is being put into a tour of the Neighborhoods that surround the Coffin Butte Landfill and the reminder needs to be accurate. The individuals involved in putting together the tour deserve Benton County's support in the effort. So an updated reminder accurately describing the tour is deserved.

A more accurate reminder would be:

Reminder - Benton County's Solid Waste Process Workgroup invites the public to tour the Neighborhoods that surround the Coffin Butte Landfill.

Can you please get an accurate reminder sent out immediately?

Thanks
Kevin Kenaga

REDICK Daniel

From: GROGAN Cory
Sent: Thursday, September 29, 2022 11:37 AM
To: 'Debbie P'
Cc: *Benton Web PIO; Benton County Talks Trash; Sam Imperati
Subject: RE: Reminder - Workgroup invites the public to tour Neighborhoods surrounding the Coffin Butte Landfill

Thanks Debbie,

I believe it has been pointed out to the Workgroup, but will double check.



Cory Grogan

Public Information Officer

O: 541-766-6843 C: 541-745-4468

Email: cory.grogan@co.benton.or.us

www.co.benton.or.us

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From: Debbie P [REDACTED]
Sent: Thursday, September 29, 2022 11:33 AM
To: GROGAN Cory <cory.grogan@Co.Benton.OR.US>
Cc: *Benton Web PIO <Piinfo@Co.Benton.OR.US>; Benton County Talks Trash <bentoncountytalkstrash@Co.Benton.OR.US>; Sam Imperati <samimperati@icmresolutions.com>
Subject: Re: Reminder - Workgroup invites the public to tour Neighborhoods surrounding the Coffin Butte Landfill

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

I'm not on the workgroup myself, I was just wondering. So thanks for your quick reply.

If RSVP is 'required', I hope someone is pointing that out to the workgroup members in particular (and ASAP, since time to do so ends at 5 today), as I don't believe it is at all clear that they know they need to RSVP as well.

Debbie

On Sep 29, 2022, at 11:30 AM, GROGAN Cory <cory.grogan@Co.Benton.OR.US> wrote:

Thanks for asking! Yes please RSVP, we need to get a head count for the buses.

<image001.png>

Cory Grogan
Public Information Officer

O: 541-766-6843 C: 541-745-4468

Email: cory.grogan@co.benton.or.us

www.co.benton.or.us

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From: Debbie Palmer [REDACTED]
Sent: Thursday, September 29, 2022 11:14 AM
To: *Benton Web PIO <Piinfo@Co.Benton.OR.US>
Subject: Re: Reminder - Workgroup invites the public to tour Neighborhoods surrounding the Coffin Butte Landfill

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Hi there, quick question: do work group members need to RSVP or are they automatically on the list?

Debbie

Sent from my iPhone


On Sep 29, 2022, at 11:09 AM, Benton County <piinfo@co.benton.or.us> wrote:





Reminder - Workgroup invites public to tour Neighborhoods surrounding the Coffin Butte Landfill

Sept. 28, 2022



This is a final reminder to RSVP for Saturday's, Oct. 1, tour of neighborhoods surrounding the Coffin Butte Landfill. Send RSVPs by 5 p.m., today, Sept. 29 to pioinfo@co.benton.or.us

- Transportation will leave promptly at 10:00 a.m. and will return at approximately 12:15 p.m. on Saturday, Oct. 1.
- Meet at Adair County Park (off of Arnold Ave., go to the north end of the park by softball fields).
- Please RSVP to pioinfo@co.benton.or.us by 5:00 p.m. today, Sept. 29.

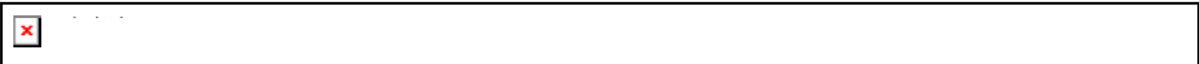
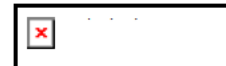
###

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CONTACT INFORMATION

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541-745-4468
cory.grogan@co.benton.or.us



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REDICK Daniel

From: Sam Imperati <samimperati@icmresolutions.com>
Sent: Sunday, October 2, 2022 10:35 PM
To: Ken Eklund
Cc: N Whitcombe; Benton County Talks Trash
Subject: RE: Ken Eklund presentation on futures at the next (October 6, 2022) workgroup meeting
Attachments: 10/6/22 Workgroup Meeting Agenda and Materials

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Ken,

You do not need to ask Nancy to ask me to be placed on an Agenda. As I said previously, there was/is no time available on Thursday's WG agenda. I have attached the agenda and materials for your review.

The Board of Commissioners may have time to consider my following inquiry at their Tuesday Board meeting. It reads, "I recently received a suggestion from a Workgroup member to reach out to a non-member and ask them how much time they need on our next meeting agenda as they would like a slot. I have not done that yet because I would like your direction on this precedent-setting request. Is this something for which you would like me to create agenda time?"

If they say, yes, I will consider such requests in the context of the overall workplan timing, but certainly not before knowing the topic. For what it's worth, the Public Comment period is designed specifically to give an opportunity for non-members to address the group. I also note the Workplan includes the opportunity for SWAC/DSAC and the Planning Commission comments after the 10/17 Workgroup meeting.

I suggest you address any concerns you have to the Board before/at its Tuesday's meeting, so your voice is heard before they respond to my inquiry. I have supplied the meeting details below.


AGENDA:

www.co.benton.or.us/sites/default/files/fileattachments/board_of_commissioners_office/meeting/7881/221004_tu.pdf

PACKET:

www.co.benton.or.us/sites/default/files/fileattachments/board_of_commissioners_office/meeting/7881/221004_tu_pckt.pdf

Thanks, Sam

ICM Sam Imperati, JD | Executive Director
resolutions 11524 SW Vacuna Ct. | Portland, OR 97219-8901
(P) 503.244.1174 | (C) 503.314.1156 | (F) 503.244.1038
 SamImperati@ICMresolutions.com
ICMresolutions.com

From: N Whitcombe [REDACTED]
Sent: Sunday, October 2, 2022 8:15 PM
To: Sam Imperati <samimperati@icmresolutions.com>
Cc: BentonCountyTalksTrash <bentoncountytalkstrash@co.benton.or.us>; Ken Eklund [REDACTED]
Subject: Re: Ken Eklund presentation on futures at the next (October 6, 2022) workgroup meeting

Mr. Eklund has asked me to ask you to be placed on the following meeting's agenda.

Thank you.

On Sunday, October 2, 2022, Sam Imperati <samimperati@icmresolutions.com> wrote:

Nancy,

As you have seen from the agenda I just sent, there is no time available during the next meeting. Ken is free to comment during the Public Comment period.

Thanks, Sam

ICM Sam Imperati, JD | Executive Director
resolutions 11524 SW Vacuna Ct. | Portland, OR 97219-8901
 (P) 503.244.1174 | (C) 503.314.1156 | (F) 503.244.1038
SamImperati@ICMresolutions.com
ICMresolutions.com

From: N Whitcombe [REDACTED]
Sent: Thursday, September 29, 2022 10:27 AM
To: Sam Imperati <samimperati@icmresolutions.com>
Cc: BentonCountyTalksTrash <bentoncountytalkstrash@co.benton.or.us>; Ken Eklund <writerguy@writerguy.com>
Subject: Ken Eklund presentation on futures at the next (October 6, 2022) workgroup meeting

Mr. Imperati,

Mr. Eklund would like an agenda slot at the next meeting. I suggest you get in touch with him to find out how much time he needs. If you provide your assistants' emails to me, I will copy them on this request.

Thank you very much

--

N J Whitcombe

--

N J Whitcombe

REDICK Daniel

From: Sam Imperati <samimperati@icmresolutions.com>
Sent: Tuesday, October 4, 2022 8:08 PM
To: Benton County Talks Trash
Subject: FW: Relative Path Forward - Benton County Talks Trash
Attachments: Relative Path Forward Benton County Talks Trash Waste to Energy 10-2-2022.docx

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

ICM Sam Imperati, JD | Executive Director
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 (P) 503.244.1174 | (C) 503.314.1156 | (F) 503.244.1038
SamImperati@ICMresolutions.com
ICMresolutions.com

From: [REDACTED]
Sent: Monday, October 3, 2022 11:26 AM
To: 'Daniel Redick' <daniel.redick@Co.Benton.OR.US>
Cc: Sam Imperati <samimperati@icmresolutions.com>; 'Darren Nichols' <darren.nichols@Co.Benton.OR.US>; Sam Imperati <samimperati@icmresolutions.com>
Subject: Relative Path Forward - Benton County Talks Trash

My apology for the belated email for Waste to Energy for a possible common understanding for the Benton County Talks Trash workgroup.

If it is possible for me to assist further with sub-committee 1) Landfill Size/Capacity/ Longevity Subcommittee, I greatly appreciate the opportunity.

Thanks.

Chuck

Chuck Gilbert
Cell [REDACTED]

Chuck Gilbert
Member of Benton County
10/02/2022
The Relative Path Forward
Benton County Talks Trash Workgroup

In the great dark void, God created the heavens and stars, and then She rested.

Zeus reached to the stars and received the gift of light.

Prometheus bequeathed a spark of light in the form of fire to mortals.

Thus, begins the resource of fire as a tenet of sustainability.

A lofty goal finally obtained for humanity.

But a price was ill paid with Pandora's box, yet hope remains, if only unchained.

“Sustainability” means using, developing, and protecting resources in a manner that enables people to meet current needs and provides that future generations can also meet future needs, from the joint perspective of environmental, economic and community objectives.

A. The Relative Path Forward

The relative path forward requires first to briefly revisit the common resources of solid waste in the memo “Synchronization of Solid Waste Disposal Resources and Alternative Path Forward”, dated 9/30/2022 and submitted to the workgroup.

If the axioms of resources stay consistent with the assumed timelines of Cells 5D/5E with service life expectancy of 4 years ending in 2025, and the need to push Knife River quarry operations out by 8 years for Cell 6 with a disposal start date of Year 2029 is still necessary, then a relative path forward may be examined with the cause-effect relationship with the common resources first.

1. Within this framework, the major common resource of the landfill north of Coffin Butte would expel the minor common resource of Knife River quarry operations and assume disposal operations in Year 2026, after Cells 5D/5E close in Year 2025.

This would allow continuity of disposal in Cell 6 in start of Year 2026 for only 13 years.

This action however at first glance appears myopic, that lost instead valuable resources which are aggregates for the community at present and future with disposal capacity equally diminished by the early expulsion of Knife River.

In the long run, the solid waste disposal capacity to be reached is shorter than Year-2039 or 13-years life expectancy, rather than if equilibrium was maintained between the two resources for full life expectancy and thereby preserve the sustainability of the resources to their maximums.

2. The second resource is the landfill area south of Coffin Butte Road. This area appears limited in design and focus not currently reflecting any engineering conceptual plans for considering sustainability of solid waste disposal goals and tenets.

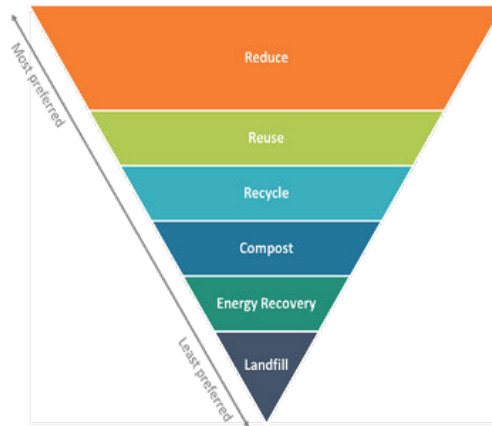
In other words, the enumeration of cells, statuses, and capacities eventually needs documented in a similar report as presented by Geo-Logic Associates, professional engineers of Bend, Oregon for the site development plan of Coffin Butte Landfill - North, updated December 2021 for Valley Landfills. The report is electronically filed with Benton County solid waste management library.

The above report sets the standard for the Coffin Butte Landfill – South with the needed attributes for considering a review and approval of any Landfill expansion plan which may require an issuance of a letter of acceptance, hopefully, by SWAC/DSAP to Benton County Planning Commission, Benton County Commissioners, and Oregon Department of Environmental Quality, if conditions warrant advancement.

The common resources referenced above are not superior nor was it the intent to diminish or exclude natural resources, aquatic-life resources, atmospheric resources, farmland resources, timber land resources, wildlife resources, or fresh-water resources for the review process, but instead first examine the cause-effect relationship between specific resources and their attributes to determine a common understanding of the processes of solid waste management collectively within sustainable goals and tenets which all resources would need to be considered with an expansion of the landfill and would need to be included in a plan set were conditions of resources prevail with equilibrium.

B. Waste to Energy Conversion

The sustainability mantra is reduce, reuse, recycle, compost, recovery, and then landfill.



The U.S. Environmental Agency as well as State of Oregon agencies are providing a waste management plan which includes material handling goals for sustainability.

The need is to stretch goals beyond just recycling, in order to use material sustainability upstream to reduce raw material manufacturing into products as well as downstream at the landfills to reduce refuse going into landfills by using waste to energy technologies.

This creates alternative paths forward through energy recovery of waste stream resource into an economical, sustainable, and usable energy resource stream.

Historically, legacy equipment still captures methane gas at landfills to use the gas to generate electricity. Nonetheless, EPA reports that methane gas releases at landfills are still problematic.

A paradigm shift now exists with a thermochemical conversion process known as “pyrolysis” which is being used for waste to energy conversion with newer technologies.

The term ‘pyrolysis’ has Greek roots and can be roughly translated as “fire separating”. Generally, substances, i.e., refuse in landfills, which are subjected to pyrolysis undergo a chemical decomposition reaction and break down into multiple useful product compounds.

1. Pyrolysis can be divided into three categories with differing temperature ranges.
 - a. Low temperature (700 - 900 c) fire with abundant oxygen (air) present.
 - b. Low- medium (1000 -1600 c) temperature fire with controlled oxygen (air) present.
 - c. High temperature (3500 -5000 c) plasma with controlled oxygen(air) present.
2. Open Pit Burning

Open pit garbage burning is generally in the low temperature range with unrestrained emissions into the air.

Likewise, a campfire burning alder wood with campers surrounding the campfire in camp chairs roasting marshmallows, smoke follows beauty, is still open pit burning in the low temperature range.

Both examples still use pyrolysis to decompose the feedstock of garbage or alder wood rendering charcoal or ash as residue.

3. Incinerators

Incinerators is an apparatus with conveyors, burner, bag house filters, heat exchanger for steam generator for producing electricity, and emission chimney with scrubbers.

Incinerators burn solid waste with low to low-medium temperatures rendering bottom ash and fly ash as residue.

Covanta is an incinerator in Marion County, Oregon that processes solid waste for energy conversion of electricity to the electrical grid.

4. Agricultural Bio-char, charcoal, is generally produced by a burner apparatus with Low-to-Low Medium temperatures without oxygen present thereby not burning the feedstock material but with pyrolysis to decompose the feedstock to residue of charcoal. Although, there are other processes such microorganisms that are also used to manufacture Bio-char, these processes are not yet to commercial scale.
5. Plasma torches - plasma torches are a result of over 30 years of development. In the 1980's the technology was initially developed in collaboration with NASA to simulate space vehicle re-entry conditions of high temperatures. Plasma torch technology is used for a variety of applications, including the gasification of municipal and hazardous waste.
6. Gasification - Gasification is a process that converts biomass or fossil fuel-based carbonaceous materials into gases, including as the largest fractions: nitrogen (N₂), carbon monoxide (CO), hydrogen (H₂), and carbon dioxide (CO₂).

This is achieved by reacting the feedstock material at high temperatures (typically >700 °C), without combustion, via controlling the amount of oxygen and/or steam present in the reaction.

The resulting gas mixture is called syngas (from synthesis gas) or producer gas and is itself a fuel due to the flammability of the H₂ and CO of which the gas is largely composed.

Power can be derived from the subsequent combustion of the resultant gas and is considered to be a source of renewable energy if the gasified compounds were obtained from biomass feedstock.

7. Transfer Station - means a fixed or mobile facility other than a collection vehicle where solid waste is deposited temporarily after being removed from the site of generation but before being transported to a final disposal location.

In the event of an interruption of common resources at Coffin Butte, a transfer of solid waste requires an alternate plan such as but not limited to a transfer of solid waste to another landfill or energy conversion facility.

C. Plasma Gasification

Plasma (from Ancient Greek πλάσμα (plásma) 'moldable substance') is one of the four fundamental states of matter.

It contains a significant portion of charged particles – ions and/or electrons. The presence of these charged particles is what primarily sets plasma apart from the other fundamental states of matter.

It is the most abundant form of ordinary matter in the universe, being mostly associated with stars, including the Sun.

Plasma can be artificially generated by heating a neutral gas or subjecting it to a strong electromagnetic field.

A plasma gasifier is an oxygen-controlled vessel that is operated at the very high temperature (3,000 °C) easily achievable with plasma torches.

Because the environment inside the vessel is oxygen controlled, feedstock that is processed in the gasifier is not combusted.

Rather, the high temperature heat melts the feedstock down into gases, including as the largest fractions: nitrogen, carbon monoxide, hydrogen, and carbon dioxide.

The main gas that is created is called synthesis gas or “syngas”.

The primary products from plasma gasification are two: synthetic gas “syngas”, and slag/vitrified rock.

Both of these products have value, with syngas being the primary product with greater value.

Plasma gasification differs from non-plasma gasification in one key area – temperature. Non-plasma gasifiers typically operate between 800 and 900 °C.

The temperatures inside Plasma's gasifier reach over 3000 °C. The syngas exits the gasifier at 950 °C.

The slag flows out of the gasifier at 1650 °C.

The higher temperatures inside the plasma gasifier result in the complete destruction of tars, something that is not achievable with non-plasma technologies.

It is not feasible to remove tars downstream of the gasifier and therefore the utility of the syngas produced by non-plasma gasifiers is very limited.

Cross Section of Plasma Vessel



Products and Yields

The plasma gasifier within a plasma gasification plant produces syngas which can subsequently be converted into numerous types of energy including electricity and liquids fuels.

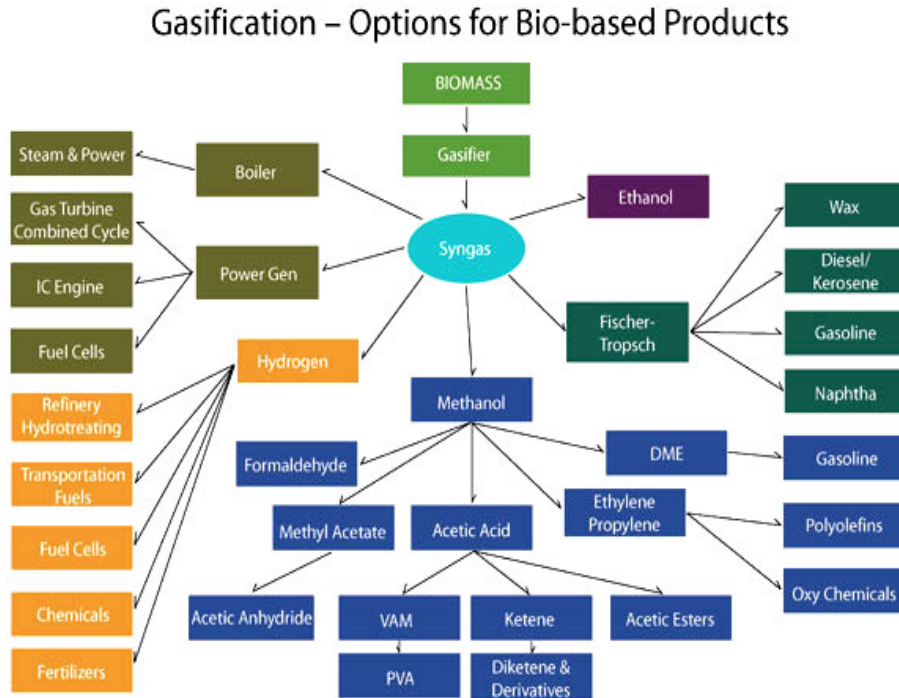
The amount of end product, such as electricity, depends on the type of feedstock used and the capacity of the plant. Higher energy feedstocks such as tires will produce more units of energy products than lower energy value feedstocks such as municipal solid waste.

As an example, a plasma gasification plant that processes a municipal solid waste that has undergone a rough sorting to remove inorganics like metal and glass could send to the electricity grid about 900-1000 kWh per ton of feedstock.

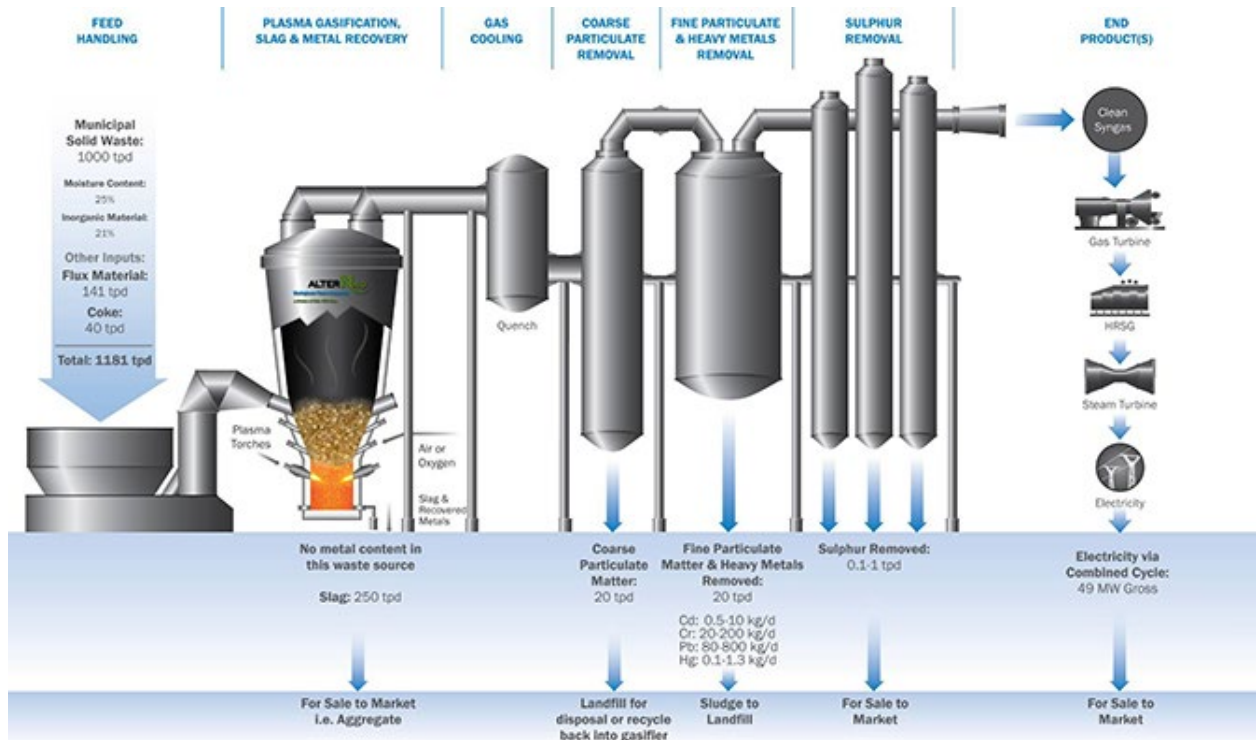
Inorganics, like metals, glass, and concrete, within the feedstock are melted and converted into a glassy aggregate. The amount of aggregate depends on the amount of inorganic material in the feedstock. A plasma gasification plant that processes municipal solid waste that has

undergone a rough sorting to remove inorganics like metal and glass, could produce about 200-250 kg (550lbs) of slag per ton of feedstock.

The diversification of products that can be produced with gasification of biomass are reflected in the following depiction.



A typical cross-section of a plasma gasification facility production per 1,000 tons per day of MSW being processed.



Case Study – The City of Lancaster, Ca. signed an agreement to host and co-own with SGH2 Energy to process solid waste scrap paper and scrap plastics using plasma gasification to produce hydrogen fuel.

Because of time restraints a more in-depth coverage of the Case Study can be made under another memo report topic.

D. Benton County Solid Waste Management - Relative Path Forward

The need is to stretch goals beyond just recycling, in order to use material sustainability upstream to reduce raw material manufacturing into products as well as downstream at the landfills to reduce refuse going into landfills by using waste to energy technologies.

- Disposal Sites and Solid Waste Facilities
- a. Coffin Butte Landfill - Corvallis OR 97330

- b. Columbia Ridge Landfill – Arlington, OR 97812
- c. Finley Buttes Regional Landfill – Boardman, OR
- d. Roosevelt Regional Landfill - Roosevelt , WA
- e. Georgia-Pacific Juno Technology Waste Recovery – Toledo, OR

Because of time restraints, another more in depth coverage of comparable landfill resources can be made in the event of possible solid waste transfer needed for interrupts of service at Coffin Butte.

REDICK Daniel

From: Sam Imperati <samimperati@icmresolutions.com>
Sent: Tuesday, October 4, 2022 8:10 PM
To: Benton County Talks Trash
Subject: FW: Feedback/ Neighborhood Tour

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

ICM **Sam Imperati, JD | Executive Director**
resolutions 11524 SW Vacuna Ct. | Portland, OR 97219-8901
 (P) 503.244.1174 | (C) 503.314.1156 | (F) 503.244.1038
SamImperati@ICMresolutions.com
ICMresolutions.com

From: NICHOLS Darren <darren.nichols@Co.Benton.OR.US>
Sent: Monday, October 3, 2022 8:50 AM
To: Sam Imperati <samimperati@icmresolutions.com>
Subject: FW: Feedback/ Neighborhood Tour

Sam,

Here is my communication from and to Ms Merja last evening and this morning.

Darren

From: NICHOLS Darren
Sent: Monday, October 3, 2022 8:49 AM
To: 'BECKY MERJA' [REDACTED]
Subject: RE: Feedback/ Neighborhood Tour

Good morning Becky,

It was good to meet you as well.

Thank you for sharing your concerns. I take statements like these seriously; I called Sam early this morning to share the concerns and asked him to explain. Sam recalls meeting you, thanking you for the good food and offering to help clear the dishes/load your pickup.

He believes that was the extent of the interactions; if you can share specific details or comments I would welcome those and will share them with the Board of Commissioners.

Respectfully,
Darren

Community Development has moved to the Kalapuya Building at [4500 SW Research Way, 2nd Floor](#).
Come see the new space; we are officially open for business!



Darren Nichols

Community Development
Director

Phone: 541-766-6394

Email: darren.nichols@co.benton.or.us

www.co.benton.or.us

From: BECKY MERJA [REDACTED]
Sent: Sunday, October 2, 2022 9:50 PM
To: NICHOLS Darren <darren.nichols@Co.Benton.OR.US>
Subject: Feedback/ Neighborhood Tour

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Good morning Darren,

It was good to meet you in person on Saturday, and to hear a little more about who you are and how you ended up in Benton County, welcome to the community!

I also had the opportunity to meet Sam Imperati in person for the first time. My initial impression was not favorable. The more I thought about this, the more I felt I needed to communicate my concerns.

While I know that a neighborhood gathering is an informal setting, I found him to be less than professional. Some of his comments were flippant, disregarding the effort community members were putting into the process. He also appears to be behind the times when it comes to knowing his audience. The backroom bar "humor" is distasteful and inappropriate. For decades, I was the only woman in my work group, I can assure you that I don't have a thin skin.

Corvallis / Benton County is a highly educated population, that actively participates in public process. This contractor is currently representing your department, and the Board of Commissioners. My experience with this community is, impressions matter.

Respectfully,
Becky Merja

Sent from [Mail](#) for Windows

Meeting #4 Public Comments

From: [Judy Sundquist](#)
To: [Benton County Talks Trash](#)
Subject: Coffin Butte Landfill Expansion - Neighbor comment
Date: Thursday, October 6, 2022 12:11:57 PM

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi:

I am a nearby neighbor of the Coffin Butte Landfill and wanted to provide a comment to this committee. First of all, I appreciate the work committee's dedication to encouraging and allowing community's reaction to the expansion of the Coffin Butte Landfill. I wish I could join the meeting in person today but unfortunately I have a conflict. I would like to join you next month if that is possible. In the meantime, here are some of my comments/questions for the record:

I think this is a formidable task to stop and consider what this expansion could mean to the future of the North Corvallis Community. My concerns are about both short-term and long-term (many are difficult to foresee given other colliding/evolving changes) ecological impacts of the expansion. Accepting garbage from over 20 other counties as Oregon's population is growing with ineffective recycling programs and with unrelenting climate change is an obvious formula for disaster and definitely not compatible with quality of life for humans as well as other species in our community. Clearly landfill expansion is a statewide issue that should not be shunted onto one county or one remote community. The analysis to understand the issues at the community level really needs expertise and infrastructure that is more likely available at the State level.

Here are my asks:

1. Since there is a long history of negotiations and actions impacting this matter that requires more analysis, I would like to see a 20 year analysis distilled into a infographic that can be shared with the public to increase our understanding of these changes.
2. Since this is a growing national issue, I would like to see an analysis of how other communities in the last 5-10 years sort through landfill expansion requests and develop their solutions. What are the various solutions available to us?
3. With this being a statewide issue as evidenced by accepting garbage from most of the state, I would like to see our State representatives informed and engaged in this process. I would like them to answer: How can the Department of Environmental Quality or other State department assist with this issue? What do our state legislators think the State of Oregon should do with this looming problem of garbage management in light of a growing population? What are useful metrics to use throughout the State for landfill management?

Thank you for this opportunity to provide input and ask questions.

Judy Sundquist
Neighbor on Arboretum Rd



From: [Doug Pollock](#)
To: [Benton County Talks Trash](#)
Cc: [NICHOLS Darren](#); [Joel Geier](#); [Ken Eklund](#); [AUGEROT Xanthippe](#); [WYSE Nancy](#); [MALONE Patrick](#)
Subject: Fwd: Input for DSAC & SWAC re: Coffin Butte Landfill Operations in 2022
Date: Thursday, October 6, 2022 10:53:15 AM

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Dear Benton County Trash Talks Work Group,

I am forwarding this message I sent yesterday to the DSAC, SWAC, and various community leaders, in case I am unable to attend today's "Trash Talks" meeting. Frankly, the prospect of attending a 4-hour meeting that is part of a bureaucratic system that appears to have a strong underlying agenda is daunting and repulsive to me. The fact that your consultant only interviewed ONE neighbor in doing his initial report spoke volumes about this agenda. I don't trust the process or have much hope that you will come up with any meaningful or objective conclusions. It seems designed to discourage community members from participating in order to attain a predetermined outcome (in favor of landfill expansion). It is a system devised by the "powers that be" in order to support and legitimize their agenda.

Thanks for considering my input,

Doug Pollock
(Soap Creek neighbor)

----- Forwarded message -----

From: Doug Pollock [REDACTED]
Date: Wed, Oct 5, 2022 at 3:02 PM
Subject: Input for DSAC & SWAC re: Coffin Butte Landfill Operations in 2022
To: RAY Linda <linda.ray@co.benton.or.us>
Cc: Ken Eklund [REDACTED], vneqs [REDACTED] REDICK Daniel <daniel.redick@co.benton.or.us>, AUGEROT Xanthippe <xanthippe.augerot@co.benton.or.us>, WYSE Nancy <nancy.wyse@co.benton.or.us>, MALONE Patrick <pat.malone@co.benton.or.us>, <mayorandcouncil@corvallisoregon.gov>

Hi Linda,

Would you please share this input with both DSAC and SWAC, as well as Benton Co. staff who deal with solid waste issues?

Thanks!

Doug Pollock

Dear DSAC and SWAC members,

I have been actively monitoring dumpsters throughout Corvallis for a couple of decades, with a particular focus on those used by the Corvallis School District (CSD). I have done this because of a personal interest in sustainability, and as a member of the Corvallis Eco-School

Network (a group of parents who worked on sustainability issues in our schools). I also worked on environmental issues in my previous career at Hewlett-Packard, where I served as their product steward for inkjet manufacturing. I would like to share some details of my work and the implications for managing solid waste at the Coffin Butte regional landfill. With my decades of hands-on experience, I have a better view than most people when it comes to what's actually going into the landfill.

When I first began my position at HP, they were dumping enormous quantities of defective inkjet cartridges in the landfill. HP was permitted to do this because their site environmental folks argued the plastic cartridge bodies *contained* the ink, thus preventing the chemicals from leaking into the landfill/leachate. I was determined to put a stop to this practice and started developing a recycling process for the scrap cartridges. One of my first steps was to visit the landfill and watch what actually happened to the cartridges. I took a video of a giant dozer crushing huge boxes of them (with ink spraying everywhere) to raise awareness and build support for my recycling process. Soon after word got out about my video, the landfill operators stopped accepting all of HP's waste cartridges. This helped provide the incentive to develop my recycling process (which was eventually expanded worldwide). But for a period of well over a decade, HP dumped substantial quantities of inkjet cartridges in the Coffin Butte landfill. This is part of the landfill's toxic legacy that people should know about.

Over the past ~15 years, I've also documented a large number of violations concerning waste in Corvallis school dumpsters. This includes numerous violations of Oregon's electronic waste law (e.g. a large television in a dumpster at Crescent Valley High School), and various hazardous waste violations (e.g. 5-gallon buckets of paint, refrigerators, fluorescent light tubes, etc.). In many cases, I provided pictures and sent emails to school district staff (including the facilities manager, principals, superintendent and school board members). My offers to meet with the previous superintendent and her staff to help them improve their recycling and waste disposal processes were consistently ignored. Surprisingly, many of the worst waste violations occurred in the dumpster located at the school district facilities office. In my initial discussion with the CSD custodial manager, I was appalled to discover that he wasn't even aware of Oregon's electronic waste law. He also admitted that the Corvallis School District had never developed process documentation governing the disposal of hazardous waste. Ignorance of the law is no defense, especially when you work for a public institution!

Almost without exception, the responses I've received from school district leaders over the years have been exceptionally poor. Their first response is almost always denial: "*That couldn't have come from our school!*". In nearly every case, further investigation showed that, indeed, the material in question did come from the school. Their second response is usually defensive in nature: "*What were you doing looking in our dumpster?!*". The former principal at Mountain View Elementary warned me, "*We just can't have parents looking in dumpsters!*" and implied she could take away my volunteer role managing the school garden. Eventually, the CSD responded to my dumpster complaints by installing locks on all of the dumpsters. They "solved" their waste disposal violations by simply hiding them from the general public.

Earlier this year, I discovered fluorescent light tubes in a large, open dumpster at Crescent Valley High School. The superintendent largely dismissed my email, speculating the bulbs came from a contractor working at the school. I explained this latest incident was part of a pattern of violations I'd documented over the past ~15 years, but neither the superintendent nor

school board seemed to care. Over the following weeks, I documented repeated violations (including more fluorescent tubes in a large glass terrarium that presumably came from a science class). In each case, I filed an official complaint with DEQ about the incidents. Despite asking for a follow-up to my complaints, no one from DEQ contacted me until I called a manager and complained. Despite my substantial follow-up efforts (both with school district leaders and DEQ managers), my complaints were predictably dismissed. The DEQ staff person deferred to the CSD facilities manager who provided the usual excuses and knee-jerk responses. The DEQ person noted, "*The school district is going to reinforce locking of dumpsters at their properties to avoid further illegal dumping... This is the extent of DEQ's evaluation of your complaint. Thank you again for your concern. I will close complaint #22-0653 in DEQ's records.*" I was particularly frustrated by DEQ's dismissive response because I had provided the case manager (Cathy Brown) with a lot of background information (about the CSD's history of waste violations). She was clearly unwilling to ask hard questions and hold the CSD manager accountable for the violations I had documented.

I've also frequently found waste violations in dumpsters on the OSU campus and at a Philomath school. This includes significant quantities of hazardous chemicals (e.g. epoxies, paints and solvents), a refrigerator, and electronic devices. I'd be remiss if I didn't also mention the enormous quantities of perfectly functional items that I've observed in dumpsters at our local schools: chalkboards, paper cutters, file cabinets, furniture, scores of bulletin boards, tables, projectors, books, large volumes of clothing (including brand new school T-shirts), science equipment, video cameras, copper wire, new electrical conduit and receptacles, motors, and hundreds of similar items. All of these items could have been easily diverted to Habitat for Humanity's ReStore or OSU's used equipment auction. The CSD's former sustainability coordinator also reported that an entire container load of chairs from Lincoln Elementary was sent to the landfill earlier this year. He had found an organization that was able to reuse them, but the CSD's facilities manager overruled him and had them crushed and sent to the landfill. Sadly, this is how the CSD has operated for decades.

I wanted to share these stories with you because they help to illustrate a number of very important points:

- **There are enormous opportunities to reduce solid waste, but our community leaders and public institutions seem to lack the political resolve to anything about it.** In many cases, 70-80% of the waste in dumpsters consists of items and materials that could be easily diverted for recycling or reuse.
- As my dumpster finds and the history of HP's inkjet cartridge disposal show, **we must assume there's a considerable amount of hazardous waste going into the landfill on a regular basis.** This hidden, hazardous waste stream has been going on for many decades, without acknowledgement by either the landfill operators, county staff, or DEQ (as far as I'm aware).
- **I believe the waste violations I've documented constitute a breach of the landfill's operating permit with DEQ.** In the most recent case involving the dumpster at CV, the dumpsters were apparently still hauled to the landfill even though I reported they contained fluorescent light tubes (which had not been removed). **Without regular audits to ensure compliance, Republic Services has no idea whether or not they are**

violating their DEQ operating permit.

- **There are considerable procedural and bureaucratic hurdles to reporting violations to DEQ concerning the landfill and waste disposal.** I spent a lot of time making phone calls and filling out DEQ complaints - and yet they were largely unresponsive and unwilling to take corrective action. This bureaucratic indifference discourages people from submitting complaints.

Though I've focused this message on violations of our laws governing waste disposal, the landfill operation has impacted my life in numerous, adverse ways. This includes offensive odors (on hundreds of occasions through the years), substantial quantities of litter on the roadway and along the roads leading to the landfill, dangerous loads being hauled to the landfill (a neighbor's wife was killed when she was hit by a trailer that came loose from someone returning from the landfill), increased traffic volumes and wear on our roads, and the substantial, irreversible changes to the character of our surrounding community due to the growing size of the landfill operation.

Thanks for considering my input,

Doug Pollock



Corvallis

From: [Ken Eklund](#)
To: [Benton County Talks Trash](#)
Subject: I volunteer for the subcommittee working on Common Understandings
Date: Thursday, October 6, 2022 12:09:27 PM
Attachments: [writerguy-cube2.png](#)

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hello Workgroup:

Looking over your charter, under Scope & Charge, I see a charge to Develop Common Understandings and in particular, two items, Assumptions and Economics:

II. Scope & Charge

A. **Develop Common Understandings...**

1. A chronological history...

...

f. Assumptions (e.g. when will the landfill close)

g. Economics (i.e. Benefit – Cost, etc)

...

These are significant subject areas and seem to have received relatively little attention or documentation so far (I'm looking now at the draft "Common Understandings Table of Contents" 9/29/22). What little is there seems to come from a document I contributed to the workgroup.

I'd like to be helpful in filling in these gaps. Is there a subcommittee tasked with these areas? If so, I volunteer to join. If not, can one be formed?

Thank you for your attention,

Ken Eklund



Ken Eklund, writerguy

Creator of
World Without Oil
Ed Zed Omega
FutureCoast
and other storymaking games

From: [Ken Eklund](#)
To: [Benton County Talks Trash](#)
Subject: "Common Understandings" document for the Workgroup and appropriate subcommittees
Date: Thursday, October 6, 2022 10:34:11 AM
Attachments: [SWWG-commonunderstandings-SWAC.pdf](#)

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hello,

On behalf of the Solid Waste Advisory Council I am providing you our “Common Understandings” document, for use in your draft products. This is the same document as provided to the Facilitator’s staff earlier at their request, just in a different format (this is in PDF format). This “official” version should supplement an earlier version. In particular it should be provided to the subcommittee addressing Common Understandings.

Thanks,

Ken Eklund
Chair, Solid Waste Advisory Council

Ken Eklund, writerguy

Creator of
World Without Oil
Ed Zed Omega
FutureCoast
and other storymaking games

Common Understandings:

Subject Areas for Understanding the Coffin Butte Landfill and the Solid Waste Futures for Benton County

Expressed as questions to be answered

Like the Solid Waste Workgroup, the Solid Waste Advisory Council and the Disposal Site Advisory Committee of Benton County seek “common understandings” about the landfill and the future of solid waste in Benton County, and we’re guided in this by the county community, county staff, and various citizens’ groups. For the Workgroup, we have compiled a list of the common understandings that we are seeking, which includes questions we’ve received from the community. The understandings being sought are best expressed as questions that must be answered before we can begin work on solving the issues themselves.

TABLE OF CONTENTS

Coffin Butte Landfill Capacity/Operating Life: “When is the landfill expected to close?”	3
Coffin Butte Landfill Environmental Impacts: “What is the environmental cost of the landfill?”	5
Coffin Butte Landfill Operational Impacts: “What are the rules that govern the landfill? Is it complying?”	11
Coffin Butte Landfill Public Safety Impacts: “What risks does the landfill create for the county?”	14
Coffin Butte Landfill Economic Impacts: “What are the economic effects of the landfill?”	17
Coffin Butte Landfill Future Directions: “What are our options as we move into the future?”	18
Coffin Butte Landfill Future Directions, Next Steps: “What are our next steps as we move toward a more desirable future?”	22

A key part of our quest for information is (a) we are seeking better, more future-oriented viewpoints and insights and (b) we are seeking better visualization of the information. What information exists is typically presented in “snapshots” when it would be more accurate to show it as flows from one state of being to another. What information exists is also typically presented in its hardest-to-parse form: a table of numbers rather than a graph, a sentence rather

than a photo, etc. For understandings to be common, they must be expressed in forms that make them commonly understood.

We hope these questions and the deep dives about them are useful to the Workgroup, and that the Workgroup can use its special status to highlight the need for better answers than we currently have for them, and persevere until those better answers emerge.

Approved October 5, 2022
The Solid Waste Advisory Council of Benton County

Coffin Butte Landfill Capacity/Operating Life: “When is the landfill expected to close?”

This fundamental bit of information has not been answered; there is currently no common understanding about when, under the status quo, the landfill will run out of capacity and close.

Four factors in answering this fundamental question:

1. Factor 1: What is the current capacity of the landfill?

Discussion: As established in the last DSAC meeting, the capacity stated in the most recent Coffin Butte Landfill annual report (17.6 M cubic yards left, 38.7M cubic yards total) is not accurate / is misleading: this capacity will only be available by the year 2030 at the earliest, and it assumes that quarry operations have continued through those years (increasing capacity) without interference from landfill operations. The non-quarry part of the landfill is set to fill by the year 2025, however, and then presumably landfilling must move into the quarry area and disrupt/end operations.

As established in a past DSAC meeting, the capacity that Republic has reported to the Environmental Protection Agency is also suspect. That number for total metric ton volume changes from 26.7M in 2016 to 35.5M in 2017, and no one seems to be able to explain this sudden increase in capacity. The landfill representative stated the Republic corporate office provides those numbers to the EPA.

Clear understanding is also confounded due to the various metrics invoked. The core metric for capacity is volume, but you will hear capacity expressed in units of weight (tons) or of time (years), and these expressions contain hidden assumptions about esoteric conversion factors. How many tons in a cubic yard? for new garbage vs. emplaced garbage? What is the volume differential between a ton of quarried rock vs. a ton of garbage? What is the assumed intake rate for each “year” of volume? And so on.

Specific questions to be answered, to determine “When is the landfill expected to close”:

- How often are LIDAR volumetric assessments performed? Have these measurements been independently verified?
- What is the area of the open (active) cell?
- What is the current usable airspace volume of the open (active) cell?
- What is the current usable airspace volume of Cell 6 (quarry)?
- What is the volume extraction rate for Cell 6 due to ongoing quarry operations? What is its extraction history?
- What is the intake volume history?
- What is the expected intake volume over the remaining landfill lifetime?

- What is the delay time in tabulating intake volume by weight?
- What penalties if any will be applied if the annual tonnage cap is exceeded in the future? Are these penalties sufficient to disincentivize runaway intake?

2. Factor 2: What is the current fill rate of the landfill?

Discussion: To calculate its estimate of the life of the landfill, Republic uses an average disposal rate of 750K tons per year in the 2021 landfill annual report. The last year intake was that low, however, was 2016. After annual intakes of 853K tons (2017) and 937K tons (2019) the current fill rate (2022) appears to be on course for 1.1M tons – almost 50% over the “750K” estimate.

Specific questions:

- What is the intake volume history?
- What is the expected intake volume over the remaining landfill lifetime?
- How close each year has the intake come to the cap?

3. Factor 3: How will the capacity of the landfill likely change in the future?

Discussion: There are factors such as quarry operations and “settlement” (gasification of garbage) that cause the landfill capacity to fluctuate over time.

4. Factor 4: How will the fill rate of the landfill likely change in the future?

Discussion: Theoretically, the landfill currently has an intake cap of 1.1M tons a year, but (a) it’s unclear if that cap has actual penalties associated with it or is just on paper, and (b) by the 2020 franchise agreement, that cap is removed if any landfill expansion is permitted. Also (c), there appear to be loopholes by which garbage can be taken in yet not count toward the cap.

Coffin Butte Landfill Environmental Impacts:

“What is the environmental cost of the landfill?”

The environmental cost of the landfill is a fundamental part of the cost-benefit analysis of the landfill, but not commonly understood at all.

Not unexpectedly, environmental factors typically do not appear in official communications about the landfill. The word “methane” for example does not appear in the latest landfill annual report, nor the acronym “PFAS.”

It’s important here to differentiate the environmental costs of the landfill from the environmental regulations on the landfill. It’s insufficient, in other words, to claim that “regulations were followed” and therefore to assert no significant environmental harm is taking place. Laws and policies are imperfect; they lag behind actual conditions on the ground; judging compliance with laws is fraught with error; and so on; this is all commonly understood.

A salient example: an expansion attempt by the Riverbend landfill in Yamhill County failed because, although the landfill asserted that it was following regulations regarding flyaway trash, the courts determined that trash was still flying away and neighboring properties were being actively harmed. That landfill has stopped operations and the local community has initiated proceedings to force it to close.

A partial list of environmental cost areas, to answer this fundamental question:

1. Leachate: the landfill produces leachate, which is toxic. What are the costs of leachate?
 - a. What is the generated volume of leachate? How much of this comes from the primary collection system and how much from the secondary?
 - b. What is the composition of leachate?
 - c. What are the levels of PFAS (“forever chemicals”) in leachate?
 - d. How much does it cost to process (pump out, store, ship, etc.) leachate?
 - e. How much does it cost to have leachate disposed of? Where is it taken to be treated? (City of Corvallis? Salem?) What is ‘Plan B’ if the leachate can no longer be disposed of locally?
 - f. How long will the landfill be generating leachate? How will the rate of leachate production change year by year in the future?
 - g. Who will be paying the costs of leachate over time?
 - h. How much leachate is bypassing the collection system? How much is or will be polluting the groundwater?
2. Waste gases: the landfill generates landfill gas, which contains methane, carbon dioxide, hydrogen sulfide and other gases. Some of this gas is recovered; whatever is not recovered leaks into the atmosphere. (Landfill experts estimate that recovery systems only collect around a quarter of landfill gas produced, on average.)

The landfill also operates a cogeneration plant, which burns landfill gas and produces exhaust. The landfill also operates two flare stacks, which burn landfill gas and produces waste gases. What are the costs of all these landfill, exhaust, and waste gases?

- a. What are the volumes and composition of gaseous emissions of the landfill?
- b. Presence of water increases the anaerobic activity that generates landfill gas. How does the output of the Coffin Butte Landfill, which is in an area of moderate rainfall, compare with landfills in low-rainfall areas?
- c. Methane: methane is a potent, destructive short-term greenhouse gas, and methane emissions from landfills are a significant contributor to global warming worldwide. Unit for unit, methane is considered to be 86x more destructive in short-term greenhouse effects than carbon dioxide. The EPA has estimated that methane emissions from landfills are understated by at least a factor of two, and considers landfills to be one of the three major sources of this potent greenhouse gas in the US, along with agriculture and the oil and gas industry. The Benton County Board of Commissioners has identified addressing methane pollution from the landfill as a priority going forward.
 - i. How much methane is generated in all by the landfill (daily / monthly / yearly)? How much of this is captured?
 - ii. What methods are being used to quantify how much methane is being generated / being captured / leaking from the landfill? Methane detection is notoriously difficult: are there more accurate methods available? Are there direct measurement technologies now available, from aerial or satellite surveys for example? What should we make of the studies that show that collection systems are net-negative, because of their leakage?
 - iii. Landfills convert solid waste to methane over time; a ton of solid waste will continue to generate significant methane for over a decade, usually two. Given the input history of the landfill and the projected intake, what is the projected methane output over the next 40 years?
 - iv. New environmental regulations in the Inflation Reduction Act enable the EPA to regulate greenhouse gases as pollutants. What measures has the landfill taken to reduce its emissions of greenhouse gases?
 - v. New environmental regulations in the Inflation Reduction Act impose a waste emissions penalty of \$1500 a ton on methane leaks in the oil and gas industry. If a similar waste emissions fee is imposed on the landfill, what will the effect be?
- d. Carbon dioxide: carbon dioxide is a greenhouse gas; carbon dioxide emissions are the prime driver of climate damage. Carbon dioxide is a slow-acting but long-lived greenhouse gas.

- i. How much carbon dioxide is generated by the landfill (daily/monthly/yearly)?
 - ii. Landfills convert solid waste to carbon dioxide over time; a ton of solid waste will continue to generate CO₂ for over a decade, usually two. Given the input history of the landfill and the projected intake, what is the projected CO₂ output over the next 40 years?
 - e. Hydrogen sulfide: this gas has a strong disagreeable odor, even in trace amounts. Its common name is “stinkdamp.”
 - i. Homeowners in the region of the landfill undergo “dump days” when the landfill smell is heavy and it’s unpleasant to go outdoors. What are the atmospheric conditions that cause “dump days”? Will these atmospheric conditions occur more often in a climate-changed future?
 - ii. Landfills convert solid waste to hydrogen sulfide (H₂S) over time; a ton of solid waste will continue to generate H₂S for over a decade, usually two. Given the input history of the landfill and the projected intake, what is the projected H₂S output over the next 40 years?
 - f. Other gases: what other gases are produced by the landfill? What are their health and environmental effects?
 - g. Particulate emissions: waste gases and exhaust from flaring/burning landfill gas.
 - i. What is the volume and composition of particulate emissions?
 - ii. Are there health or environmental effects from these gases?
 - iii. Will output of these waste gases increase as we move into the future?
 - h. Particulate emissions: dust from alternate daily cover, including Covanta ash.
 - i. What is the volume and composition of dust and other particulates generated by the landfill?
 - ii. Are there health or environmental effects from these particulates?
 - iii. Do these effects increase over time, as dust and particulates accumulate around the landfill?
 - iv. Are studies being done to measure these accumulations in organisms around the landfill? If not, why not?
3. Wildlife impacts: the landfill disrupts the natural environment. What are the costs of disrupting the area ecosystems?
- a. We have heard reports of abandoned nests/young at the northern heron rookery earlier this year. What were the results of heron rookery monitoring during 2022? Have these results been reported to ODFW?

accumulates in large amounts in area properties and along roadways. What are the costs of this pollution? Who pays them?

8. Long-term impacts (impacts that last 100 or 1000 years or more)
 - a. The landfill creates a “dead zone” hundreds of acres big, where no other land use can take place. What is the long-term cost of that?
 - b. The landfill has “mature areas” already, in which garbage cells have been filled, covered over with plastic, and then covered with a layer of dirt and planted with grass. Do they require maintenance to prevent trees and other large plants from taking root there, and penetrating the landfill liner with their roots?
 - c. The landfill creates a “avoidance zone” possibly thousands of acres big, where land uses are proscribed due to the inevitability that leachate will enter the groundwater and create an underground plume of contamination. What is the long-term cost of that?
 - d. The landfill creates an enduring maintenance situation regarding pollutants and toxics. One example: leachate. Rain falls on the landfill every year and creates more leachate, which must be pumped out and disposed of properly, or else it will overflow into the surrounding land and its groundwater. There are similar effects for landfill gases and microplastics. How long must these maintenance tasks continue? What is the long-term cost of these and other maintenance?
 - e. The landfill creates an enduring replenishment situation. Its wells for leachate and gas processing, for example, have relatively short lives and must be regularly replaced. How long must these maintenance tasks continue? What is the long-term cost of these and other maintenance?
 - f. The landfill creates an enduring public security situation. Its supporting systems must be continuously protected from vandalism and unintentional damage and from natural degradation. Each breach in its cap, for example, will let in more rainwater, thus adding to the maintenance burden. Misguided or rogue drilling or mining could breach the bottom liner layer. What is the long-term risk of this?
 - g. Long-term risks and costs like these are subject to a “future discount,” i.e., a degree to which they are reduced because it is assumed that our descendants will be better able to handle the burdens than we are. Long-term risks and costs like these are also often minimized or dismissed because our descendants are not here yet and therefore cannot speak up in their own defense. If a future discount is being applied to these costs, what is it? How was that number derived? Or are these costs and risks being discounted for the second reason?

Warning sign text for long-term waste disposal sites

THIS PLACE IS A MESSAGE.
AND PART OF A SYSTEM OF MESSAGES. PAY ATTENTION TO IT!
SENDING THIS MESSAGE WAS IMPORTANT TO US.
WE CONSIDERED OURSELVES TO BE
A POWERFUL CULTURE.
THIS PLACE IS NOT
A PLACE OF
HONOR.
NO HIGHLY ESTEEMED DEED
IS COMMEMORATED HERE.
NOTHING VALUED IS HERE.
WHAT IS HERE WAS DANGEROUS
AND REPULSIVE TO US.
THIS MESSAGE IS A WARNING ABOUT DANGER.
THE DANGER IS IN A PARTICULAR LOCATION.
IT INCREASES TOWARDS A CENTER.
THE CENTER OF
DANGER IS HERE.
OF A PARTICULAR SIZE AND SHAPE,
AND BELOW US.
THE DANGER IS STILL PRESENT,
IN YOUR TIME, AS IT WAS IN OURS.
THE DANGER IS TO THE BODY, AND IT CAN KILL.
THE DANGER IS UNLEASHED IF YOU
SUBSTANTIALLY DISTURB THIS PLACE PHYSICALLY.
THIS PLACE IS BEST SHUNNED
AND LEFT UNINHABITED.

Coffin Butte Landfill Operational Impacts:

“What are the rules that govern the landfill? Is it complying?”

The landfill currently operates as a regulated nuisance, or disamenity – that is, its operations are known to negatively affect neighbors, visitors, the community and the region, but these impacts are theoretically kept at or below tolerable levels, and the community and public-at-large protected, by regulations pertaining to the landfill’s various permits to operate. Compliance (or not) with these regulations is a fundamental part of the cost-benefit equation of the landfill.

Permitted operation of the landfill relies on effective oversight and enforcement of the regulations that pertain to its operations – this is also a fundamental part of the cost-benefit equation of the landfill.

It’s important, therefore, for there to be a common understanding of the legal and economic envelopes that the landfill operates in, both as a theoretical construct and how it actually plays out in reality.

It’s especially important for there to be a common understanding of how the legal and economic envelopes of the landfill extend and change into the future, because the landfill will be a negative presence on the community and the region for hundreds or thousands of years.

Specific questions related to understanding regulations on and compliance status of the landfill:

Coffin Butte Landfill Impact: Benton County Resources and Infrastructure

1. How do the current landfill traffic volumes (vehicles per day by type and total transported tonnage) compare to the baseline documented in the 2001 Baseline Study?

Coffin Butte Landfill Impact: Benton County Citizens and Landfill Neighbors

1. How do the sale prices of private properties sold to the Valley Landfills, Inc. over the past 40 years compare to similar properties not located near the landfill?

Regulatory: EPA & Oregon DEQ

1. What are the current governing permits and regulations?
2. What expected operational lifetime is on record with EPA and ODEQ for Coffin Butte?

Coffin Butte Landfill Closure: Process, Timeline, Operator Liability, Potential Franchisee Resistance

1. What lead time is required for proper closure?
2. What are the primary process steps in closing a landfill such as Coffin Butte?
3. What are the documented costs of closing landfills similar in size to Coffin Butte (e.g. slope and terrain restoration, continued monitoring, containment or removal of toxic material, compensation for damages resulting from environmental hazards, fires, etc.)?
4. What guarantees are in place that the owner will close the landfill upon substantial completion? (i.e., not drag out the process, as is happening with the Riverbend landfill)

5. What guarantees are in place that the landfill owner will not declare bankruptcy and abandon the landfill?

Franchisee Business Impact

1. What is the gross profit ratio for Republic Services landfill operations nationwide in the US? For the Coffin Butte Landfill?
2. What is the annual gross revenue for Republic Services landfill operations in the US, and how does this compare to the annual gross revenue for nationwide collection operations?

Business and Legal Envelopes

1. What are the current hours of operation (i.e. daily first employee arrival time – last employee leave time - daily)? What are the hours in which heavy equipment is active? What are the permitted hours of operation according to the current franchise agreement? What is the process by which these regulations are enforced?
2. What solid waste management plans has Benton County produced since the landfill was first permitted in 1974? What is the history of compliance to those plans?
3. What intake content monitoring measures are used (per load, sampling, open cell deposits, etc.)? How soon are those measurements released to the county and the public?
4. What are the current controlling documents for landfill operations (franchise agreement(s), site development plans, etc.)?
5. What are the inflow sources with weight and distance metrics (map form would be helpful)?
6. In the previous CUP application, Valley Landfills Inc. was listed as the applicant even though the application was submitted by Republic Services Inc. Which company is legally responsible, in perpetuity, for remediation of any environmental problems that may arise in the future? In other words, if Republic eventually sells or otherwise divests its financial interest in VLI, would Republic remain liable? Or would the liability be spun off to VLI?
7. Is Republic legally obligated to honor commitments made by its subsidiaries (VLI, Allied Waste etc.) during the application process for previous expansions that were allowed by the county?
8. What are the terms of Republic's lease agreement with Knife River Corporation, in terms of time period for excavation?
9. Knife River Corporation operates multiple quarries in the mid-Willamette Valley region. Are production rates at these other quarries reported to the state and/or counties? Or can the company make the numbers for recent years available to the Benton County working group?

10. What are the rules that govern the post-operational state of landfill components? What is the final grading plan and when will it be implemented?
11. What are the plans for reclamation of the 700+ acres of landfill? When does Republic plan to establish native vegetation on existing cells of the present landfill? Are there plans / Is there an obligation to make the area a wildlife habitat? Are there plans to make fishing ponds?

Coffin Butte Landfill Public Safety Impacts:

“What risks does the landfill create for the county?”

An operation as large as the Coffin Butte Landfill creates risks on a similar scale. These risks pose a conundrum, because they are often quite easy to hide or downplay, and it can be quite profitable to do so. It’s a common understanding that entire industries exist because they successfully acquire profit while generating risk and shifting it away from themselves, to other people, other places, other legal entities or to the future.

It’s vital therefore to establish a common understanding of the risks created by the landfill’s existence and operation, and how those risks will change over time. It’s especially vital to acknowledge that the modern landfill carries with it a large amount of unknown risk, because it contains materials that have never been landfilled before in such quantities or in combination, it contains materials whose toxic properties are not understood, and the landfill structures themselves are recent innovations and have not been field-tested for the timespans that this landfill will undergo.

Specific questions about landfill risks:

1. Risks of Fire, including persistent fire

- a. What is the fire history of the landfill?
- b. What is the risk of a subsurface fire that could persist for months or years? (Example: the multi-year, \$200M fire at the Bridgeton landfill in Missouri. How did that dump fire start?)
- c. What gaseous and particulate emissions typically result from landfill fires?
- d. Given that methane is a flammable gas, what is the relationship between methane generation and fire risk?
- e. The cogeneration plant actively extracts methane from the landfill, which draws air (oxygen) into the landfill. This is known to increase the danger of fire. What steps are in place to make sure a mistake or malfunction does not create an explosive situation? Does the cogeneration operation’s desire for profit cause increasing risk to the landfill and the area?
- f. Does methane generation increase with warmer weather? Will an increasing number of hot days cause a corresponding increase in fire danger?
- g. What emergency plans are in place in case of fire? What precautions have been taken?
- h. What training is necessary to limit risk to fire crews when fighting a landfill fire?
- i. Does the risk of fire increase if the landfill expands?

2. Risks of Earthquake

- a. What magnitude earthquake are the slopes of the landfill expected to withstand? Specifically, will an earthquake collapse the south slope onto Coffin Butte Road? How susceptible is the landfill to liquefaction?
 - b. How susceptible is the landfill infrastructure (gas collection systems, leachate collection systems, cogeneration plant, and so on) to earthquake? What are the harms if systems are damaged or destroyed?
 - c. What emergency plans are in place in case of earthquake?
- 3. Risks from Hazardous Waste**
- a. How is hazardous waste officially defined?
 - b. How much hazardous material is received annually and what is it constituted of?
 - c. What safeguards are in place to prevent hazardous materials from entering the landfill?
- 4. Risks from PFAS, a class of persistent organic pollutants (“forever chemicals”) commonly used since 1940 in items that are commonly landfilled. PFAS are an emerging focus of health concerns, as we now know that PFAS accumulates in human tissue and exposure to it has been linked so far to increased risk of decreased antibody response, dyslipidemia (abnormally high cholesterol), decreased infant and fetal growth, and increased risk of kidney cancer, and other health impacts are likely to emerge. Concerns include health harms and economic harm from litigations**
- a. What studies have been done to identify the level of PFAS in the landfill? in leachate?
 - b. What plans are in place to prevent more PFAS from entering the landfill?
 - c. Do PFAS escape the landfill in leachate? In landfill gas? In other ways?
- 5. Risks from Flood – especially extreme flood conditions, which are becoming more prevalent as the climate changes**
- a. What level of rainfall will overwhelm the landfill’s leachate collection systems?
 - b. Will an “internal flood” cause stress to or overflow the landfill’s liner system? Will it potentially lead to leachate leaking into groundwater?
 - c. What plans are in place to prevent internal flooding of the landfill?
 - d. Have studies been done to pre-visualize the effects of extreme flooding (and other extreme weather) on landfill integrity and operations?
 - e. Does the risk of flooding increase if the landfill expands?
- 6. Risks of Extended Power Outages**

- a. What are the effects of power outages on landfill operations, especially necessary operations such as gas collection and leachate pumping? What studies or plans have been done to prepare for an extended power outage?

7. Risks of Concatenating Disasters

- a. What studies or plans have been done to prepare for situations where more than one disaster is happening, i.e., if a heat dome causes a power failure which starts a wildfire that jumps to the methane leaks of the landfill? Or an earthquake causes an extended power failure, critical damage to the landfill infrastructure, and a wildfire, which prevents emergency response?

8. Groundwater contamination

- a. Groundwater contamination is not a risk, it is an inevitability – the liner and other barriers to contamination will fail in time, and leachate and other contaminants from the landfill will enter the groundwater directly (the landfill currently sits directly on the water table). What are our best estimates as to that risk level currently? How does the probability increase over time?
- b. What are examples of liner failures at other landfills?
- c. What happens when this failure occurs? How will this failure be detected? How will the damage spread?
- d. What is the history of groundwater contamination at the landfill site?

Coffin Butte Landfill Economic Impacts: **“What are the economic effects of the landfill?”**

Customer Interests: “What effect does the landfill currently have on collection rates in the county? On recycling rates? What are the alternatives to landfilling and how do their rates compare?”

1. How do Benton County garbage collection rates compare to other Oregon counties?
2. How do Benton County recycling rates compare to other Oregon counties?
3. How do Benton County per-capita waste disposal volumes compare to other Oregon counties?
4. What rate changes did the residents of Yamhill county experience once the Riverbend landfill closure was underway?
5. Is Republic’s profit motive (the desire not to end quarry operations) a driving factor in their quest for expanding the landfill? Is the company seeking new landfill area so that they can delay using the already approved landfill area?
6. If the landfill decides to pursue an alternate means of disposal, in order to protect the profitability of its surface mining (quarry), will the extra cost for that be imposed on Benton County residents? Will the county act to prevent that from happening? Does the county have the legal protections in place to be able to do so?

Coffin Butte Landfill Future Directions:

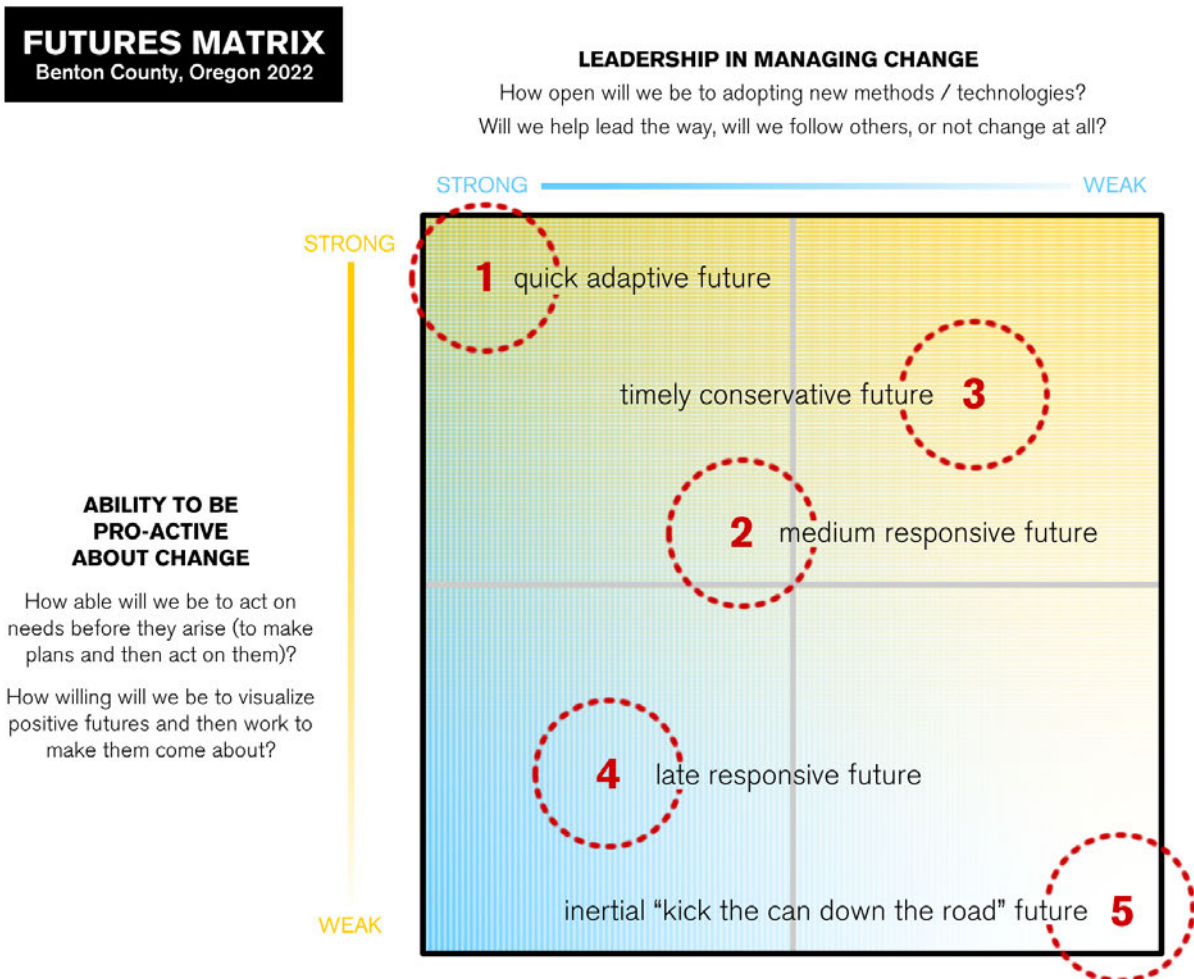
“What are our options as we move into the future?”

Another fundamental (perhaps the most fundamental) bit of information about the county’s solid waste future is: what are our options? In other words, what happens if we do nothing? What happens if we do something? What happens if we do a third thing? And so on.

All roads of this document lead here: all the other understandings lead us to favor choosing one possible future over another. If the landfill is generating significant amounts of climate-damaging methane, for example, we favor choosing a future which generates less.

It can be difficult to arrive at common understandings about possible futures, because (a) people have widely varying comfort levels with even thinking about possible futures, (b) people have widely varying comfort levels with imagining possible futures, and (c) possible futures are best made understandable as part of narratives, and creating good narratives is a fairly rare skill. Futurethinking is hard, and telling complex stories is hard, which empowers overly simplistic options such as doing nothing.

THE FUTURES MATRIX



The “futures matrix” is a tool to help people begin futurethinking about a situation. To use a matrix, first identify two major forces in the situation, and then plot the four possible binary outcomes based on whether these forces will prove to both be strong, or one is strong and the other weak, or both are weak.

For Benton County’s solid waste future, the two key drivers are (1) our collective ability to be open to making changes and (2) our collective ability to be pro-active toward making changes. You can think about these as:

1. **Will the county lead, or will it follow (or not choose change at all)? and**
2. **Will the county make changes on its own initiative or only when forced to by outside circumstances?**

The question about expanding the landfill doesn’t appear on this matrix. That’s because expansion/no expansion is not really a futures question – that is, it doesn’t directly address the future of solid waste in Benton County. Whether or not a landfill expansion is approved, the county community still faces the challenges posed in this matrix. The expansion would just “kick the (trash) can down the road” (see Futures 4 and 5, below).

Let’s look at the five futures called out in circles on the matrix:

FUTURE 1: the quick adaptive future

In this future, the county is strongly pro-active about changing the way it manages solid waste and strong in showing leadership in evaluating and adopting new methods for sustainable materials management.

- a. Benton County knows the landfill is filling up... and also:
 - i. The county realizes the risks that the landfill may close prematurely (by legislation, litigation, shifting economics, and so on)...
 - ii. The county realizes the risks that the landfill may be closed (by fire, toxics breach, systems failure, and so on)...
 - iii. The county begins to quantify the future costs of the landfill.
- b. ...so it begins an aggressive program of waste reduction as a transition to its post-landfill future, as a way to pre-emptively reduce the amount of trash the county produces, which the county will have to deal with when the landfill inevitably closes. This also is the county’s best course of action to be resilient in the event of “premature” landfill closure.
- c. ...the county begins to assess its post-landfill options, such as building a truck-to-rail transfer station, so that it has a way to gather competitive bids for the solid waste that cannot be recycled or reprocessed or otherwise diverted from the wastestream. This also increases the county’s resilience in the event of landfill closure.

FUTURE 2: the medium responsive future

In this future, the county is somewhat pro-active about changing the way it manages solid waste and middle-of-the-pack in evaluating and adopting methods for sustainable materials management.

- a. Benton County knows the landfill is filling up, so it works toward waste reduction as a transition to its post-landfill future, as a way to reduce the amount of trash the county produces (and will have to deal with) when the landfill closes.
- b. Benton County knows the landfill is filling up, so it begins to assess its post-landfill options, such as building a truck-to-rail transfer station, so that it has a way to gather competitive bids for the solid waste that it cannot recycle or reprocess or otherwise divert from the wastestream.

FUTURE 3: the timely conservative future

In this future, the county is strong in showing leadership in evaluating and adopting new methods for sustainable materials management, but weak in actually implementing those changes. It splashes around in the shallow end of change.

- a. Benton County knows the landfill is filling up, so it develops a robust plan for transition to its post-landfill future, but is unable or unwilling to make the plan effectual, and still has a large amount of county trash to manage as the landfill closes.
- b. Benton County knows the landfill is filling up, so it assesses its post-landfill options (such as building a truck-to-rail transit station), but is unable or unwilling to make the post-landfill plan a reality.

FUTURE 4: the late responsive future

In this future, the county is weak in being pro-active about the necessity for change, but at some point the crisis cannot be ignored any longer, and then the county is quite willing to adopt bold new methods for sustainable materials management. It's asleep at the wheel at first, but then wakes up.

- a. Benton County knows the landfill is filling up, but it dithers in implementing a robust plan for transition to its post-landfill future until the last minute. It therefore has a large amount of county trash to manage all the way along and as the landfill closes.
- b. Benton County knows the landfill is filling up, but it is late in assessing its post-landfill options. Its options with long lead times (such as building a truck-to-rail transit station) are therefore off the table when it comes time to act.

FUTURE 5: the inertial, “kick the can down the road” future

In this future, the county is weak in showing leadership in evaluating and adopting new methods for sustainable materials management, and weak in being pro-active and anticipating the necessity of change. If this future seems familiar, it's because we are currently in this future: ten years ago, Benton County chose Future 5; twenty years ago, Benton County chose Future 5; and so on. That's the reason the county does not have a current Solid Waste Management Plan nor a coherent assessment of the landfill's risks and costs.

A key aspect of this future has been the county's loss of control over data about the landfill, especially independently derived data, and a lack of vision about alternatives to landfilling and ways to reduce landfilling.

- a. Benton County doesn't act as the landfill fills up.
- b. Benton County has no roadmap for its post-landfill options.

To return to the question we started with: “What are our options as we move into the future?”

1. **The Benton County community can decide to lead the way in evolving how it manages solid waste; or it can decide to follow as others lead the way; or it can do nothing. Which should it do?**
2. **The Benton County community can decide to be pro-active in its evolution away from landfilling; or it can wait until the situation becomes more urgent; or it can do nothing. Which should it do?**

Coffin Butte Landfill Future Directions, Next Steps: “What are our next steps as we move toward a more desirable future?”

One way to make it easier to futurethink about solid waste management is to break down each possible future into discrete steps, and then to focus on just the next steps for each. That way you don't have to be daunted by the exact route, you just need to be reasonably sure you're moving in the right direction. And you can remain open to new opportunities as they arise.

Specific ideas about next steps for the landfill and beyond:

1. Obtain independent, third-party, reliable data about key parameters relating to our waste stream and its effects.
2. Communicate with others who are also evaluating their options for their waste streams. Other counties in Oregon (and other entities across the nation and the world) are already operating successfully without a local landfill, and others are in the process of making the transition to post-landfill living. We can learn from their experience.
3. Study possible actions to take, and share that information. Some examples for Benton County: an intermodal transfer facility (which enables waste to be shipped more efficiently by rail); a materials recovery facility for construction debris; a materials recovery facility for advanced recycling; a waste-to-energy facility; upstream waste materials reduction policies; and so on. Net Zero and other strategies already exist, and they use policy and technology to begin to control and minimize damage from the county waste stream.
4. Hire a consultant who specializes in these transitions, to advise us.
5. Don't be afraid to engage the public at large. Asking “what if” is a game that anyone can play, and our ideas and values matter when envisioning a future and taking the first step, and then the next, and then the next, on the path to get there.



Approved October 5, 2022
The Solid Waste Advisory Council of Benton County

- end -

From: [REDACTED]
To: [Benton County Talks Trash; "Sam Imperati"](#)
Cc: [REDICK Daniel](#); [NICHOLS Darren](#)
Subject: BCTT Sub-Committee-2 Coffin Butte - Size Capacity Longevity - Memo Non-consensus
Date: Sunday, October 9, 2022 2:25:57 PM
Attachments: [DRAFT Landfill Service Life Size Capacity Longevity Sustainability - Coffin Butte Landfill Sub-Committee 10-9-2022.docx](#)

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi all,

Thank you again for allowing me to participate in the BCTT SubCommitte-2 deliberations

Please find attached memo with hopefully reasonable information for the committee's further discussion on a consensus for Coffin Butte's size, capacity, and longevity.

Since I do not currently have the full list of the other members of the committee, I trust that you will forward the attached memo to them at the appropriate time.

Thank you for your assistance.

Chuck

DRAFT

10/9/2022

Memo

BCTT Sub-Committee 2

Benton County Talks Trash Workgroup

Coffin Butte Landfill Service Life

Size, Capacity, Longevity

Chuck Gilbert - Member

This memo functions as biased in the sense it does not represent the consensus of the Sub-Committee-2 but serves as reasonable information on the subject matter under consideration by the sub-committee.

“Sustainability” is simply defined as using, developing, and protecting resources in a manner that enables people to meet current needs and provides that future generations can also meet future needs, from the joint perspective of environmental, economic, and community objectives. (ORS 184.421)

Where Sustainability thrives, so does Longevity. Sustainability is the key to not only community longevity, but also community success and flourishing.

“Resource” is something that is available for use or that can be used for support or help

A. Common Resources – Synchronization – Cell Reservation - Coffin Butte Landfill

An inquiry and understanding by the Sub-Committee2 of the multiple resources that are interwoven with the rate of solid waste going into Coffin Butte’s landfill cells is needed.

In other words, there is a synchronization process of three resources that needs to be resolved in order to advert the comparable results with the prior Benton County’s land application LU-21-047 permit decision by the Planning Commission.

The first resource is the landfill with enumerated solid waste cells designed and allowed for solid waste disposal north of Coffin Butte Road. The cells are finite in number, space, and volume for solid waste disposal and are operationally divided into closed , active, and future active cells.

The enumeration of cells, statuses, and capacities is documented in a report by Geo-Logic Associates, professional engineers, of Bend, Oregon for the site development plan of Coffin Butte Landfill, updated December 2021 for Valley Landfills.

This report is in the materials management document library at Benton County's web address: <https://www.co.benton.or.us/cd/page/materials-management-document-library>

Excerpts from the report are listed below in this memo for convenience and illustrates the numbers for the active and future cells and their lifespans based on the design space and volume of each cell. (*Reference 1*)

The intent here for the first resource is not to weigh the solid waste going into the landfill cells into tons, pounds, and ounces. But hopefully the Sub-Committee instead may work on an agreeable cell life expectancy with the design volume capacities that are referenced in the aforementioned report.

Nonetheless, it is to also recognize any imbalances in the resources that may be resolved equitably and sustainability within the solid waste management of Benton County, which also includes the regional waste streams going into Coffin Butte landfill from neighboring counties and municipalities.

The second resource is the parcel of lands reserved for the landfill but not yet allowed for solid waste disposal that is geographically south of Coffin Butte Road which is also in part reflected in the aforementioned site plan for Coffin Butte but is limited in design and focus.

Customarily, expansion of a land fill is triggered when solid waste input exceeds reservation ability of disposal cells.

In other words, there are no rooms at the inn.

With no vacancies or limited vacancies of cells, it evokes expansion, which in part is the discourse of the workgroup and the sub-committee-2 to seek collective understanding of the processes of solid waste management by incorporating the overarching goals and tenets of sustainability for expansion or other practical options possible as an alternative to expansion of a landfill but realizing also that the landfill is a viable resource in both Benton County and neighboring counties and municipalities.

The third resource is the rock and gravel aggregates being quarried in Coffin Butte.

It is not the intent to value one resource over another, but instead seek a balance that assures equity and sustainability of all resources where equilibrium is possible.

Knife River supplies stone, sand, and gravel which are the aggregates of the foundation of Benton County's and Oregon's infrastructure for highways, bridges, railways, airport runways, or even sand for the sandbox at home. Within this context, Knife River is a major resource of aggregate in the community.

Conversely, Knife River appears as the minor resource when compared to Coffin Butte's major resource of municipal solid waste within the perimeters of the landfill.

Although a resource hierarchy comparison may assign one resource to be minor while another resource is major, the interdependency of each other makes the overall homeostasis functionable.

In other words, by design Knife River quarries the rock for the landfill cells to the required sub-grade elevation for Coffin Butte use.

Coffin Butte landfill then builds upon the sub-grade with geotextile fabric, bentonite, and courses of drain rock before placement of solid waste into the cell until filled, then finishing with soil and fabric top layers to the design elevation for closure of cells.

Equilibrium is kept as long as Knife River has adequate time to quarry the rock thereby keeping ahead of the landfill cells disposal operations.

However, an alleged disparity exists in the site development plan for Coffin Butte referenced below that the current use of Cells 5D/5E for placement of solid waste has a 4-year cell life reaching capacity in Year 2025.

Likewise, future compartmental Cells 6A -6I slated into the primary Cell 6 being also the Knife River quarry excavation site that needs a reported 8-year more excavation time, even though the site development plan reflects a start date of Year 2026.

Also, Cell 1a was the original garbage site that was used by the former US Army training center at Camp Adair working from 1942 through 1944.

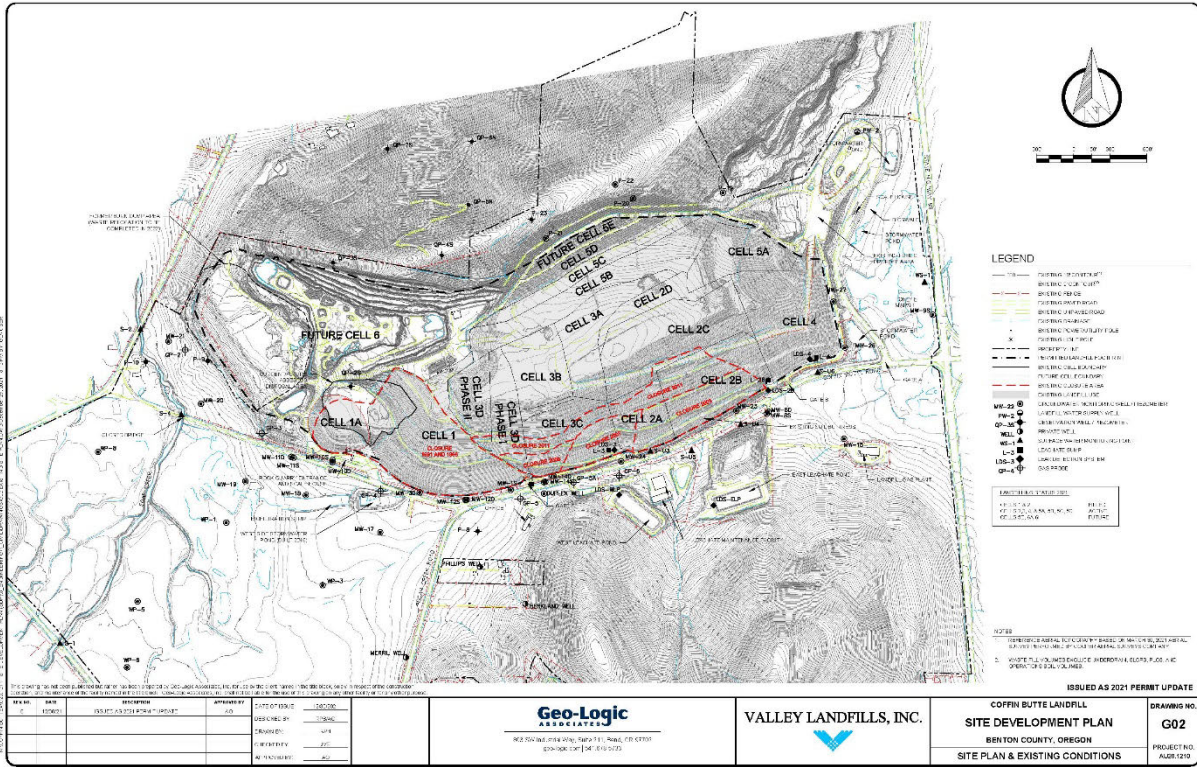
Republic Services advised SWAC, if my memory is correct, that Cell 1a this year will move the last part of the unlined refuse to a lined cell at Coffin Butte.

Hopefully, Cell 1a can be lined and used as additional space for inbound solid waste disposal.

Cell 1a is approximately 2 acres which would be approximately 1, 500,000 yards of capacity, extrapolated from similar acreage listed in the report.

B. Timeline – Service Life – Work Interruptions – Size Capacity (volume) – Longevity – Sustainability

Recapitulating by years, the current Cells 5D/5E service life would be from:	Years 2022 -2025	4 Years
Cell 1a, which needs verification may have a service life for solid waste.	Years 2025-2026	1 year
Knife River quarrying of Cell 6 needs an alleged 8 more years to finish	Years 2022- 2029	8 years



REV.	DESCRIPTION	DATE	BY	CHECKED BY
1	ISSUED AS 2021 PERMIT UPDATE	08/12/20	JL	JL
2				
3				
4				
5				

Geo-Logic
ASSOCIATES
102 FOXGLOVE DRIVE, SUITE 111, BEND, OR 97701
(503) 338-1234 FAX: (503) 338-1235

VALLEY LANDFILLS, INC.

ISSUED AS 2021 PERMIT UPDATE
COFFIN BUTTE LANDFILL
SITE DEVELOPMENT PLAN
BENTON COUNTY, OREGON
SITE PLAN & EXISTING CONDITIONS
DRAWING NO. **G02**
PROJECT NO. AUG1210

phasing details of Cell 6. This SDP update incorporates a phased design that reduces the lined landfill slopes to 1:1 (horizontal: vertical) in the existing quarry/Cell 6 area.

Organization of this SDP follows the latest version of ODEQ's *Solid Waste Landfill Guidance* document (<https://www.oregon.gov/deq>).

2. Facility Operations

2.1 Facility Operations

General facility operations have been previously described in the Operations Plan (GLA, 2020a) and the Operations and Maintenance Manual (GLA, 2020b). These documents were recently updated as part of the permit renewal associated with this SDP update. This section provides an overview of the information previously published, updated as appropriate.

The VLI land ownership around the CBL encompassing facility operations and waste placement areas can be seen in Drawing G02 in Appendix A. General facility operations consist of solid waste disposal operations, monitoring, maintenance, and management of leachate collection and removal systems, landfill gas collection systems, and stormwater management infrastructure, ancillary operations, and environmental monitoring operations.

2.2 Capacity and Projected Life

Site life calculations were performed for the CBL to estimate the overall life span of the landfill and the general schedule required for construction of the major individual phases. The site life calculations were based on (1) the volumetric capacities of the phases as shown on the SDP drawings in Appendix A, (2) an operational density of 1,600 lbs/cy, (3) a soil to waste ratio of 15% (for daily cover), and (4) an incoming tonnage of 2,959 tons per day (projected average daily tonnage). The capacity of each phase was volumetrically calculated from the top of waste design grades to the design liner grade using AutoCAD Civil 3D software. The volume of soil for the operations layer was subtracted from the gross air space. Supporting documentation for the site life calculations is presented in Appendix B.

The net available airspace volume available for disposal in Cell 5D/5E and Cells 6A – 6I, as of the March 30, 2021 topographical map, totals approximately 18,645,000 cy. For the purposes of this report, airspace is defined as the volume available for waste, daily cover, and interim cover. Soil

for daily and intermediate cover is estimated to consume approximately 2,797,000 cy of this volume, with an assumed soil to waste ratio of 15% by volume. Using the above stated parameters, the current fill area was calculated to reach final grades during the middle of the year 2039. Table 1 summarizes the site life projections for the landfill.

Table 1
Site Life Projection

	Plan View Footprint (Acres)	Capacity (CY)	Cumulative Capacity (CY)	Total Life of Cell (Years)	Year Capacity is Reached
Cell 5D/5E	6.1 ¹	4,834,330	4,834,330	4	2025
Cell 6A	19.8	1,482,260	6,316,590	1	2026
Cell 6B	11.3	1,029,430	7,346,020	1	2027
Cell 6C	4.3	1,742,130	9,088,150	2	2029
Cell 6D	11.0	1,859,820	10,947,970	2	2031
Cell 6E	3.9	1,078,420	12,026,390	1	2032
Cell 6F	5.1	1,686,070	13,712,460	2	2034
Cell 6G	2.4	2,015,260	15,727,720	2	2036
Cell 6H	1.1	1,295,450	17,023,170	1	2037
Cell 6I	1.2	1,622,130	18,645,300	2	2039

Notes: 1 – Cell 5 consists of Cells 5A through Cell 5E. Cell 5A through 5C are currently lined and accepting waste. Cell 5D (3.5 acres) was lined during 2021 and is awaiting approval for waste acceptance to begin in 2022. Cell 5E (2.6 acres) is planned to be lined in 2023. The plan view footprint presented in this table represents the areas of Cells 5D and 5E.

2.3 Population and Industry Served

At present, the landfill serves primarily the counties shown in Table 2. In addition, some amounts of overflow waste come to the landfill from Lane and Marion Counties. Future sources of waste are susceptible to change. The major industries served by the landfill consist of forest products, mobile home manufacturers, and the electronics industry.