

From: [Sam Imperati](#)
To: [Joel Geier](#)
Cc: [Benton County Talks Trash](#)
Subject: RE: Correction to draft "site-description" text for common understandings document
Date: Friday, September 9, 2022 3:34:36 PM
Attachments: [image001.png](#)

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Joel,

I appreciate the clarification and the not-surprising integrity it demonstrates.

Thanks, Sam



From: Joel Geier [REDACTED]
Sent: Friday, September 9, 2022 3:19 PM
To: Sam Imperati <samimperati@icmresolutions.com>; BentonCountyTalksTrash <BentonCountyTalksTrash@Co.Benton.OR.US>
Subject: Correction to draft "site-description" text for common understandings document

Hi Sam,

Looking through an old DEQ record of decision which involved the old Helms domestic well on the west side of the landfill site, I'd like to restate one sentence in the draft "site description" text that I sent you as a suggestion for the Common Understandings document:

"One household well in sediments west of the landfill, on the former Helms home site, received sufficient contamination from the landfill site that the well had to be decommissioned under DEQ supervision."

The DEQ's "Environmental Cleanup Site Information (ECSI) Database Site Summary Full Report" for the landfill (attached) mentions decommissioning of this well as one of several remedial actions undertaken at this site, under supervision of DEQ, in response to evidence of groundwater contamination from the landfill.

However it's not clear to me, on re-reading the background reports, that there was ever direct evidence of contamination in this well. From other reports, this well seems to have been unused and non-functional by 2003. One interpretation might be that the well was decommissioned as a precaution, to avoid risk to humans in event that groundwater contamination reached that well, rather than as a direct response to contamination measured in that well.

So a better and more cautious way to state this might be:

"One household well in sediments west of the landfill, on the former Helms home site, hydraulically down gradient of an area with contaminated groundwater, was decommissioned under DEQ supervision."

Perhaps a more definite statement could be made from the DEQ record of decision from 11/08/2007, and DEQ's earlier documents on this case going back to 1979 when this site was listed in CERCLIS. Such documents could certainly be useful additions to the county's "documents library," to help all of us in building a common understanding of the issues.

Thanks,
Joel

From: [Deuel, John](#)
To: [Benton County Talks Trash; "samimperati@icmresolutions.com"](#)
Subject: Topic to consider for "Common Understandings" document
Date: Monday, September 12, 2022 9:06:55 PM

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Consider including, either under the scoping of the SMMP, or the criteria for evaluating CUP's, an agreed upon, third party validated set of data that captures the amount of waste generated within Benton County historically and projections. Former SWAC groups, through DEQ and the County, have worked on this data, however I'm not sure how much agreement or awareness there is about the numbers. I think this is critical for most of the efforts this Working Group to succeed as it is foundational.

John Deuel
Recycling Program Manager
Procurement, Contracts and Materials Management
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From: [Joel Geier](#)
To: [Sam Imperati](#); [Benton County Talks Trash](#)
Subject: Re: Benton County Talks Trash Workgroup Homework
Date: Monday, September 12, 2022 7:06:17 PM
Attachments: [image001.png](#)

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Sam,

I filled in the poll but will be reserving comments on the meeting minutes for now, just because I haven't had time.

Very busy weekend as I have personal ties to the Oakridge-Westfir community, and a bunch of my friends and their dogs are sheltering at the Lane County Fairgrounds right now. Happy to report that all of them are safe.

Here are my thoughts on "Common Understandings":

(1) SWAC/DSAC chair Ken Eklund sent us a very thoughtful document that spelled out the main questions that our Benton County advisory committees are looking at. As one of the two SWAC/DSAC representatives to this working group, I request that all of these topics be entered into the record for consideration by the working group.

(2) The question of VLI responsibilities/liabilities vs. those of Republic Services, as the "parent" company, are still very much a concern for me. We need a very clear statement from Republic's representatives regarding which liabilities belong to VLI, vs. which liabilities Republic is legally responsible for, in the long term if Republic divests from VLI.

(3) Republic has recently put up a new web page at:

<https://coffinbuttelandfill.com/fact-sheets/>

All of their pages linked to this page are extremely dodgy in their presentation of facts. particularly the 5 entries that they characterize as "Myth vs. Facts." They've raised these topics for the public, so let's discuss them as part of our "common understanding."

I don't think we need to get more fine-grained than that, at this point in the process.

Thanks,
Joel

From: "Sam Imperati" <samimperati@icmresolutions.com>
To: "Duvall, Kathryn" [REDACTED]

[REDACTED] "john deuel"
[REDACTED] "christopher mcmorran"
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"Adam Meyer" [REDACTED] "Amelia Webb"
[REDACTED]
Sent: Sunday, September 11, 2022 10:15:03 AM
Subject: Benton County Talks Trash Workgroup Homework

Good Morning:

I appreciated Thursday's robust discussion. Here is your homework for Meeting Two.

Deadline: Monday at 11:59 PM

1. The draft meeting minutes are attached.
2. Please complete the Meeting Evaluation: <https://www.surveymonkey.com/r/3QHCRCG>
3. Last Call on this draft of the Common Understanding document. Please email bentoncountytalkstrash@Co.Benton.OR.US & SamImperati@ICMresolutions.com with your list of missing topics/additional questions to be answered, and attach your supporting materials for inclusion in future drafts.
4. Please complete the Meeting Two Homework survey: <https://www.surveymonkey.com/r/3ZVZQ9M>. (This is for Polling and Ex Officio Members.) It asks about the Workgroup balance, allocation of the Charge elements, the

tour date, and information on your alternate if you have to have one. It should take about 15 minutes. A PDF version is attached for review.

5. Our next meeting is Thursday, September 15, from 3:00 to 7:30 PM with the agenda, materials, and location (probably the Kalapuya building) to follow.

Happy to discuss.

Thanks, Sam



From: [N Whitcombe](#)
To: [Benton County Talks Trash](#)
Cc: [Sam Imperati](#)
Subject: Draft: "Promises Made, Promises Broken"
Date: Monday, September 12, 2022 9:23:34 PM
Attachments: [DRAFT promises made promises broken.pdf](#)

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Missing from the “Draft” Common Understandings document

A crux of what is missing from the “Common Understandings” document is really basic:

The landfill has always been controversial. In exchange for the support of the community, **promises have been made**, by the landfill operator to Benton County as a whole, to the region (north Benton County, south Polk County, west Linn County), and to property owners in the immediate vicinity of the landfill.

Many of these promises have been broken.

A “Common Understanding” must document both **promises made** and **promises broken**.

“Promises broken” that have harmed Benton County, that have harmed the region, and that have harmed owners of adjacent properties – those broken promises matter.

The harms that people have suffered because of “promises broken” must be documented.

To reduce opposition to having the landfill in a place that was surrounded by homes and farms (i.e. not in a special land use area set aside for extremely disruptive industrial uses, which is usually called a “heavy industrial” zone), various operators of the landfill have, over the years, made promises to Benton County as a whole, to the region, and to the owners of adjacent parcels.

The gist of the promises is this: the landfill would be run in a way that would do no harm, and/or potential harms would be mitigated in ways that would make the landfill compatible with surrounding, non-heavy-industry uses.

When the landfill has asked for and received permissions from the County, the development department has attempted to codify these promises, and in fact has added well-meaning “conditions of approval” in an attempt to constrain landfill operations in a way that would minimize adverse effects on surrounding land uses.

Problem is? What the landfill operator has said would be the way the landfill would be operated? That hasn’t happened. The county has not enforced conditions of approval. Even contractual yearly volume caps have been exceeded.

Result: harm.

Here are some promises that have been made, over the years, by the landfill operator to the County; these have been made in the “applicant statement” portion of a land use application (“explain why you want to do this special thing that is not automatically allowed”), or in a “conditions of approval” to the development department (“we will let you do this special thing, but you have to follow these special rules”), or to Benton County in the franchise agreement (“this is the deal, you do this, we’ll do that”). These go by various names and/or legal terms (“applicant narrative” or “conditions of approval” or “orders” or “franchise contract terms”), but what they are, is **promises**.

By making the following promises (and others), the landfill operator obtained support for a long, long laundry list of things it wasn’t automatically allowed to do. Here are some promises (short version):

- This landfill will mainly serve Benton County, traffic will be minimal (“30-40 trucks per day”)

- The county can limit the total volume of waste deposited in the landfill per year via the “franchise agreement” (“our elected officials won’t let it get out of control”)
- The landfill will close in the year 20XX (“it’s temporary”)
- There would be no waste disposal on the 59-acre parcel of land to the south of Coffin Butte Road. Even if it’s zoned for landfill, it will continue to be a tree farm (“nothing will change south of Coffin Butte Road”)
- All leachate (“garbage juice”) will be treated onsite; leachate treatment will be efficient and will not contaminate waterways (“it’s a state-of-the-art new technology!”)
- Landfill operations will be invisible (“you won’t even know it’s there -- landfill operations will be screened so that they cannot be seen!”)
- Landfill operating hours would be limited (“beeping won’t wake your kids at 4:30 am”)
- Only a small area of the landfill would be used for waste disposal at any one time. After being used for waste disposal, it would be covered, reseeded, and returned to productive agricultural/forest use (“you won’t even know it *used to be* there”)
- Geographical features of the landfill property would be protected
- Domestic wells will not be contaminated (“your family will be safe”)
- Just in case the landfill accidentally poisons you, the landfill maintains a muscular liability insurance protection policy (“OK, it’s not 100% safe, but insurance will pay out if you are harmed”).

...and finally, the perennial:

- This is the last expansion! (“we promise! this expansion will extend the life of the landfill until the year 20XX [insert date a long time from now...preferably 30 years from the present!]”)

There are many more, but the gist of the promises, was that the landfill would be primarily for Benton County, that it would be small, that it wouldn’t be seen, that it would be temporary, that lands would be returned to productive use, that contractual volume caps would be respected, that estimates of landfill life could be relied upon.

In fact, when the landfill zone itself was adopted, the official Solid Waste Management Plan said that by 2000, the landfill would be closed.

Main promises:

The landfill is temporary.

But is it? When something is temporary, forever, is it really temporary? When the entire time it is temporarily there, it gets larger and larger, becomes more and more of an eyesore, what then?

The landfill is safe.

But is it? Have wells been contaminated? Does it currently leak leachate? What is in the gas we smell? Are there cancer clusters? If the landfill is an “asset” now (because people may be paying slightly less than market rate for garbage service – and are they, really? Because the County gets \$35/resident in additional revenue?), will it be a “liability” in the future? How long will that future be?

What the “Common Understandings” needs to address, front and center, is:

What promises have historically been made? How have they been broken? What harms have resulted?

Suggested information sources to consult:

Harms to Benton County: Benton County's vision of itself – how does having the second-largest-landfill in Oregon align with Benton County's stated goals?

- Benton County Comprehensive Plan
- Benton County 2040 Initiative
- Benton County Core Values

Harms to the region:

- Examination of increases in vehicle traffic associated with yearly landfill volume increases; consultation with Benton County public works for an assessment of costs to remediate damages to the transportation network caused by truck traffic
- Examination of leachate treatment costs, what is the burden on public facilities
- Fire department personnel for a description of the challenges of fighting a fire at a landfill
- Various academic studies on the health of residents who live near landfills/Oregon Health Authority for information about cancer clusters
- Emerging information on PFAS

Harms to the immediate vicinity

- Narrative statements by the landfill operator about land use compatibility
- Historical photographs
- Oral histories of long-time residents
- Land sales/acquisitions of parcels that surrounded the landfill
- Blight

From: [N Whitcombe](#)
To: [Sam Imperati](#); [Benton County Talks Trash](#)
Subject: The videos, presentation material, Ken Kenaston's letter, and the Findings from LU-21-047 need to be made available to the workgroup
Date: Monday, September 12, 2022 9:25:10 PM

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From: [Edward Pitera](#)
To: [Benton County Talks Trash](#); [Sam Imperati](#)
Subject: Additional Materials for WorkGroup Common Understanding document
Date: Monday, September 12, 2022 8:29:29 PM
Attachments: [Clarification Sections I 1\) & I 6\).pdf](#)
[Site Characterization Oregon Secretary of State Administrative Rules.pdf](#)

Hello WorkGroup/Sam:

Attached are additional materials for fleshing out what is needed for a common understanding of the landfill. One attachment illustrates a previously submitted comment on clarifying existing landfill zoning for sections I 1) and 6) (Image below). The other attachment is a list of additional questions/comments/inputs/references for Section I 1), 2) and 3) taken from ORDEQ guidance. All of these materials are offered to convey that the materials / questions previously submitted to the WorkGroup are reasonable and should be addressed by RSI and the county.

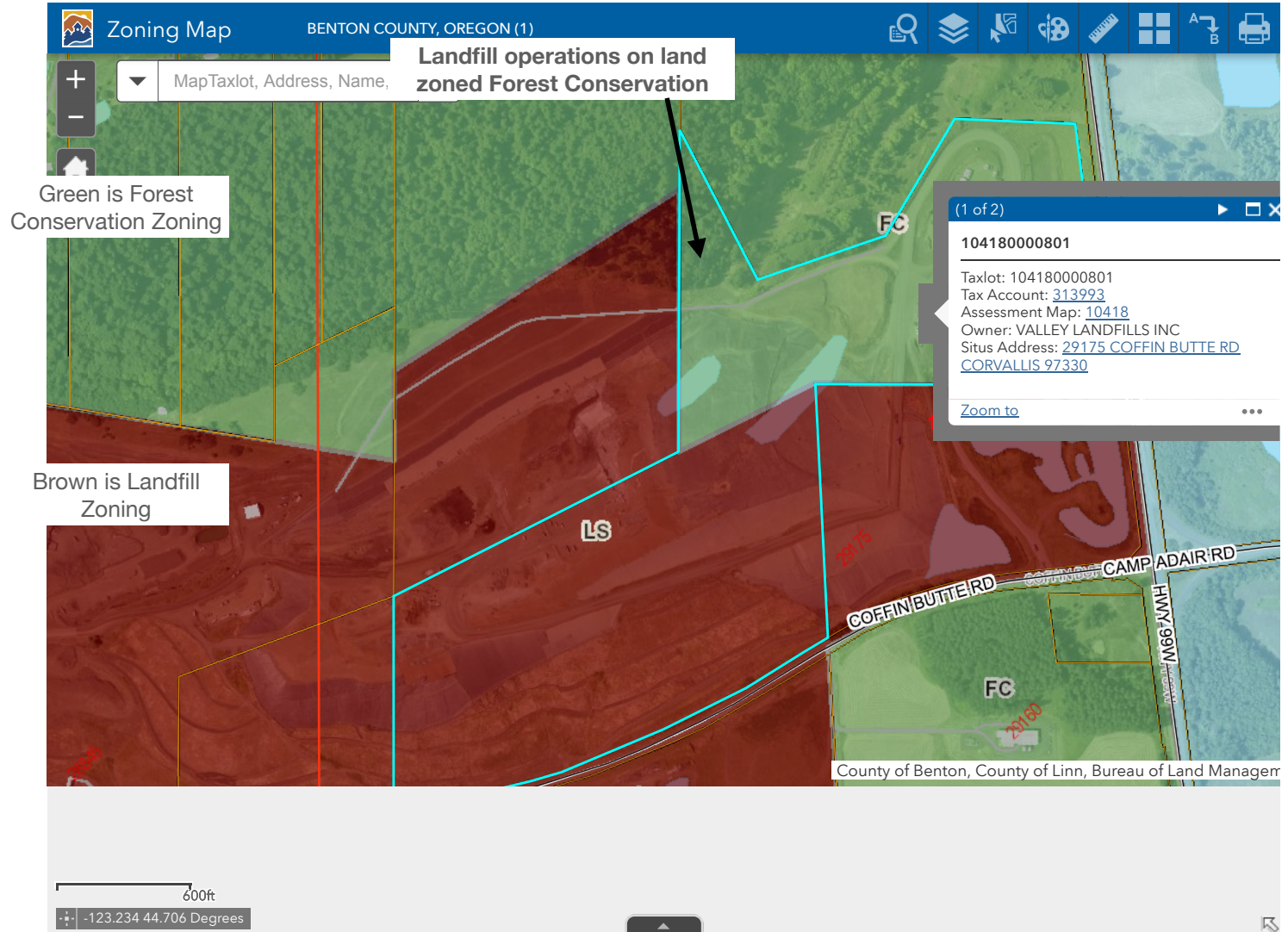
For the Common Understanding document Section I 1), please add identification/control of disease vectors (this issue showed up in a literature search of landfill design/operational issues).

Jumping back to the Meeting 1 Evaluation Question on participation, how are the interests of the Oregon State Game Commission - a significant near neighbor/landowner to east - represented? Should they be considered a stakeholder?

With respect to ORDEQ, could they help by making available a list of all the OR/Federal permits for the landfill operation and providing easy electronic access to them? E.g. Where is the OR State solid waste permit (No.306?) for the site?

I have more inputs for the “strategic plan” discussion but I think it best to focus on “Common Understandings” first.

Regards,
Ed Pitera



For Clarification of Report Section I 1) History and I 6) Assumptions

Need Clarification: Portion of Landfill operations is shown outside LS Zoning on land zoned Forest Conservation



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Department of Environmental Quality

Chapter 340

Division 93

SOLID WASTE: GENERAL PROVISIONS

340-093-0130

Site Characterization Report(s)

The purpose of the site characterization report(s) required by OAR 340 093 0070(3)(e) is to demonstrate that the proposed facility will be located in a suitable site and will use appropriate technology in design, construction and operation. The site characterization report(s) must describe existing site conditions and a conceptual engineering proposal in sufficient detail to determine whether the facility is feasible and protects the environment. Except as provided in OAR 340 093 0070(4), the site characterization report(s) must include, but not be limited to, the following:

(1) Information on site location and existing site conditions, including:

(a) A site location description, including a location map and list of adjacent landowners;

(b) An Existing Conditions Map of the area showing land use and zoning within 1/4 mile of the disposal site; and

(c) Identification of any siting limitations and how those limitations will be addressed.

(2) A description of the scope, magnitude, type, and purpose of the proposed facility, including but not limited to the following:

(a) Estimated capacity and projected life of the site;

- (b) Identification of the communities, industries and/or markets to be served;
 - (c) Anticipated types and quantities of solid wastes to be received, disposed of and/or processed by the facility;
 - (d) Summary of general design criteria and submittal of conceptual engineering plans;
 - (e) Description of how the proposed technology compares to current technological practices, or to similar proven technology, including references to where similar technology has been effectively implemented;
 - (f) Demonstration that the proposed facility is compatible with the local solid waste management plan and the state solid waste management plan;
 - (g) Planned future use of the disposal site after closure;
 - (h) Key assumptions used to calculate the economic viability of the proposed facility; and
 - (i) The public involvement process that has been and will be implemented.
- (3) A proposal for protection and conservation of the air, water and land environment surrounding the disposal site, including control and/or treatment of leachate, methane gas, litter and vectors, and control of other discharges, emissions and activities which may result in a public health hazard, a public nuisance or environmental degradation.
- (4) For a landfill, the following must be included:
- (a) A detailed soils, geologic, and groundwater report of the site prepared and stamped by a professional Engineer, Geologist or Engineering Geologist with current Oregon registration. The report must include consideration of surface features, geologic formations, soil boring data, water table profile, direction of groundwater flow, background quality of water resources in the anticipated zone of influence of the landfill, need and availability of cover material, climate, average rates of precipitation, evapotranspiration, runoff, and infiltration (preliminary water balance calculations);
 - (b) Information on soil borings to a minimum depth of 20 feet below the deepest proposed excavation and lowest elevation of the site or to the permanent groundwater table if encountered within 20 feet. A minimum of one boring per representative landform at the site and an overall minimum of one boring per each ten acres must be provided. Soil boring data must include the location, depth, surface elevation and water level measurements of all borings, the textural classification (Unified Soil Classification System), permeability and cation exchange capacity of the subsurface materials and a preliminary soil balance;
 - (c) For all water wells located within the anticipated zone of influence of the disposal site, the depth, static level and current use must be identified;
 - (d) Background groundwater quality must be determined by laboratory analysis and must include at least each of the constituents specified by the department.

(5) Any other information the department may deem necessary to determine whether the proposed disposal site is feasible and will comply with all applicable rules of the department.

Statutory/Other Authority: ORS 459

Statutes/Other Implemented: ORS 459.015 & 459.205(1)

History:

DEQ 6 2009, f. & cert. ef. 9 14 09

DEQ 17 1997, f. & cert. ef. 8 14 97

DEQ 10 1994, f. & cert. ef. 5 4 94

DEQ 5 1993, f. & cert. ef. 3 10 93, Renumbered from 340 061 0030

DEQ 26 1981, f. & ef. 9 8 81

DEQ 41, f. 4 5 72, ef. 4 15 72

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From: [Louisa and Craig Shelby](#)
To: [samimperati](#)
Cc: [Duvall, Kathryn](#); [REDACTED]; [john deuel](#); [christopher mcmorran](#); [REDACTED]; [brian FULLER](#); [REDACTED]; [BENTON Daniel](#); [JOE Geyer](#); [MICHAEL Dean](#); [Benton County Talks Trash](#); [WYSE Nancy](#); [MALONE Patrick](#); [AUGUSTIN Stephanie](#); [ALFORD Joseph](#); [MILPUS Darren](#); [CRONEY Vance M](#); [WILLIAMS Inga](#); [KWIATKOWSKI Maura](#); [MAKEPEACE Amanda](#); [MILO Erika](#); [GROGAN Cory](#); [RAY Linda](#); [Adam Meyer](#); [Amelia Webb](#)
Subject: Re: Benton County Talks Trash Workgroup
Date: Tuesday, September 13, 2022 12:10:42 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 all,

One of our original members that had to resign was a materials management manager at Samaritan. I connected with him and he sent me a email with this information. Since I also work at the hospital I can discuss issues or bring knowledge about anything related to the hospital waste management by collaborating with Brandon. I wanted to share his email with the group.

Thanks!

Louisa Shelby RN, BSN, IBCLC

Here is what I was hoping to relay on behalf of GSRMC.....

- GSRMC (and SHS for that matter) take waste management very seriously and are always looking for ways to reduce waste...
 - Through the years we have launched a plastic recycling program.
 - Worked on and implemented several green initiatives.
 - One example is an effort to reduce our use of paper by 25% system-wide.
 - We have partnered with suppliers and clinical staff to launch reprocessing programs, so a “disposable” item can be used, re-sterilized, re-packaged, and used again multiple times to reduce waste.
 - Several years ago we implemented a sharps/Rx waste program to where those items are properly/safely disposed of, and the plastic collection containers are cleaned and returned to us to be used over and over again.
 - We also have a very robust paper shredding and recycling program.
- Despite everything listed above (which is not an exhaustive list), I think we can do more! (both GSRMC and county residents)
 - Rather than focusing on just expanding the landfill (which may be necessary), I’d like to see the focus shift more toward waste reduction and expanded recycling efforts.
 - Seems like there is an overall lack of understanding as to what can and cannot be recycled (I definitely get confused)
 - I think there is also a lack of understanding on what can be tossed in the trash v. what needs to be handled separately (like chemicals, etc.)
 - It would also be great to know what actually happens to all the stuff we recycle and

properly dispose of.

- Perhaps if the public knew where it went, how it was processed, and what it turned into there would be a stronger desire to participate?
 - Maybe some of the cost to expand can be put towards a marketing campaign to raise awareness and educate residents about recycling?
 - I would also love to see GSRMC, Benton County, and Republic Services work together in a greater way to help reduce our overall waste production, recycle more, and help ensure we are disposing of waste properly.
-
- Lastly, just an overall message that GSRMC cares!
 - We are a large producer of waste, but want to work together to make sure we are doing everything we can to reduce and improve in this area.

Wish there was a way I could participate.

-Brandon

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

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](#)

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 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.

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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 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?
 - 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.

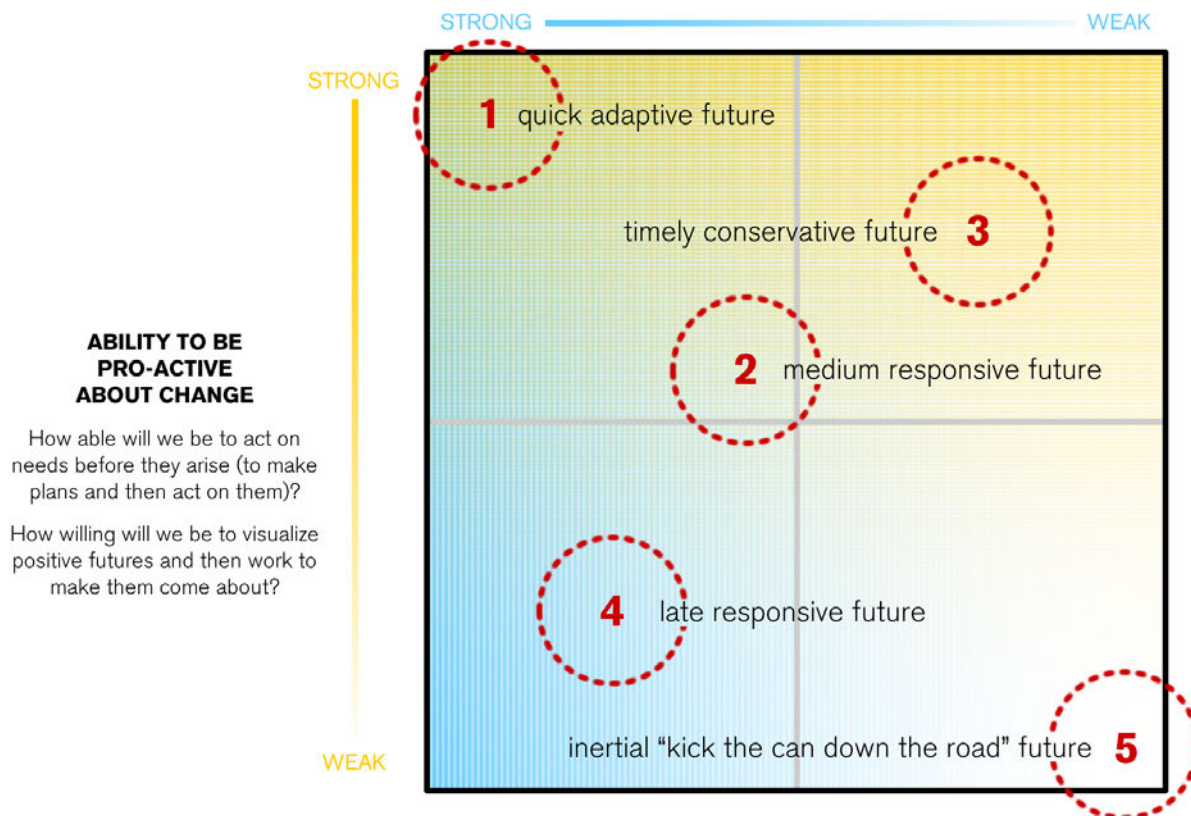
THE FUTURES MATRIX

FUTURES MATRIX

Benton County, Oregon 2022

LEADERSHIP IN MANAGING CHANGE

How open will we be to adopting new methods / technologies?
Will we help lead the way, will we follow others, or not change at all?



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!

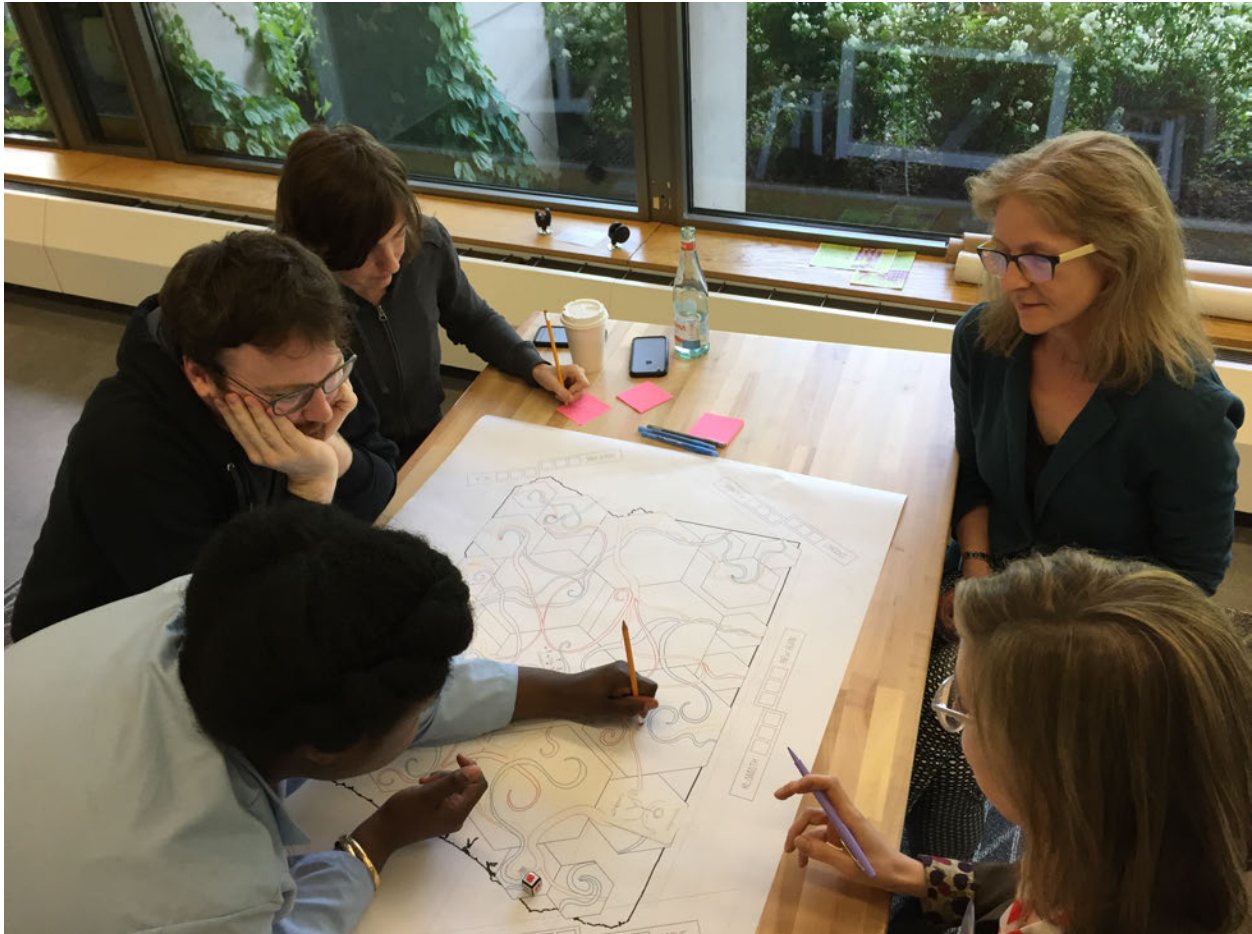


Ken Eklund, writerguy

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

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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

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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](#)

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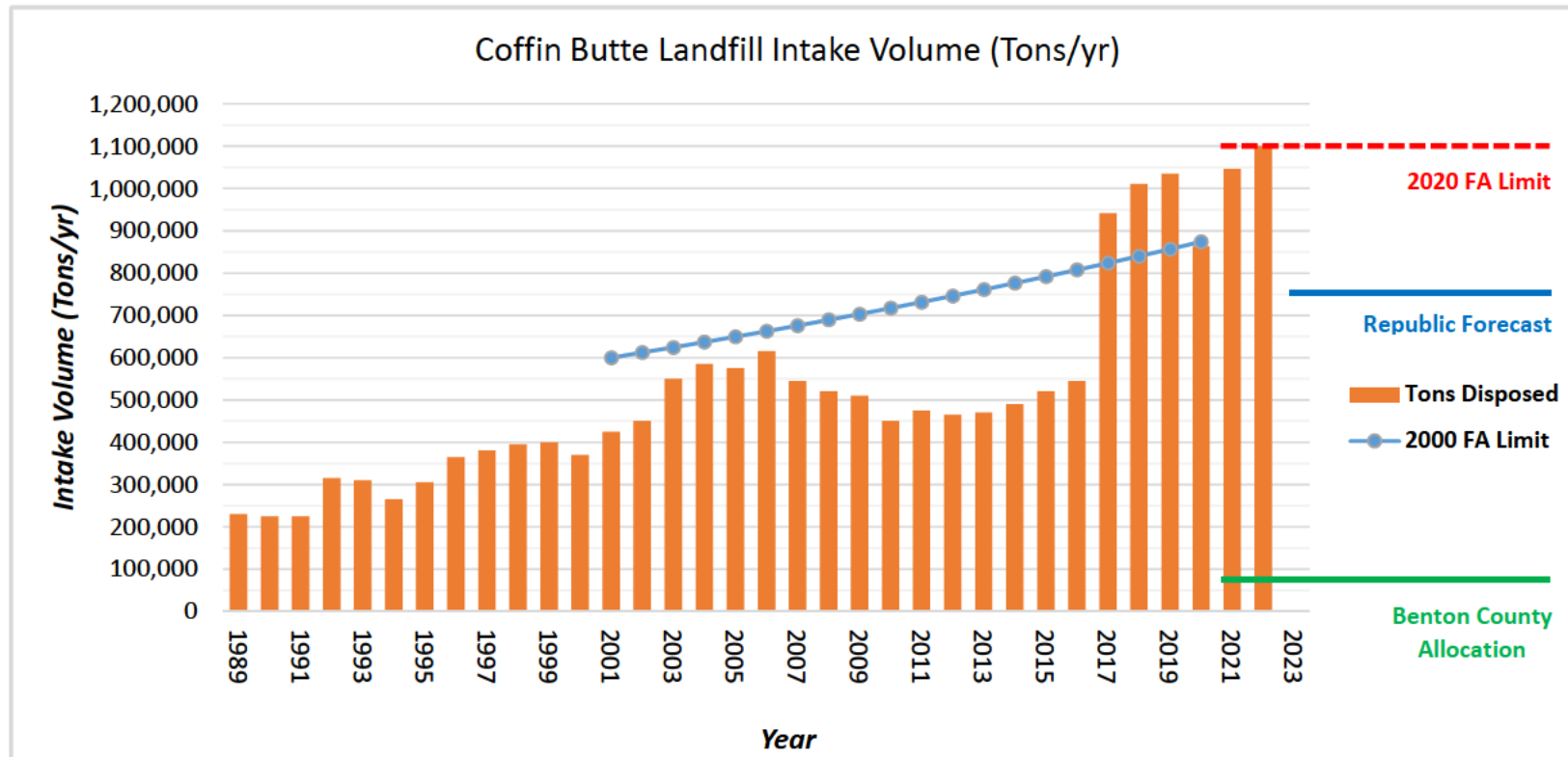
The attached document covers three areas that I believe should be included in the Common Understandings section of the workgroup recommendations document:

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)?