


Beneficial Use of Solid Waste Determination Evaluation Form

 <p>State of Oregon Department of Environmental Quality</p>	Applicant:		Canby Utility Board		
	BUD#:		BUD-20120430		
	Solid Waste:		Water Treatment Plant Sludge/Sediment		
	Summary of Proposed Beneficial Use:				
	Soil amendment in commercial and residential areas				
	Reviewer:		Lorell Miller	Date:	July 19, 2012
	Tier:		<input type="checkbox"/> One <input checked="" type="checkbox"/> Two <input type="checkbox"/> Three		

Beneficial Use of Solid Waste

Beneficial use of solid waste is a sustainability practice that may involve using an industrial waste in a manufacturing process to make another product or using a waste as a substitute for construction materials.

The environmental benefits of substituting industrial waste materials for virgin materials includes conserving energy, reducing the need to extract natural resources and reducing demand for disposal facilities.

Oregon Administrative Rules 340-093-0280 - 0290 establish standing beneficial uses and a process for DEQ review of case-specific beneficial use proposals. Under these rules, DEQ may issue a beneficial use determination as an alternative to a disposal permit for proposals that meet the rule criteria. If approved, once a beneficial use determination is issued, DEQ no longer regulates the waste as a solid waste as long as the waste is used in accordance with the approved beneficial use determination.

Beneficial Use Determination Evaluation Summary

- Yes, the Beneficial Use of this solid waste meets all the case-specific performance criteria listed below and is approved.
- No, the Beneficial Use of this solid waste does not meet all the case-specific performance criteria listed below and is not approved.

Identify if the applicant met the three performance criteria (OAR 340-093-0280, Case-Specific Beneficial Use Performance Criteria), or identify any deficiencies in the application and any DEQ recommendations for further action for the beneficial use application.

Notes:

The material is produced during the water treatment process. It has low levels of ammonia and nitrates below the residential risk screening levels. The material is appropriate for use as a soil amendment.

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Case-Specific Beneficial Use Performance Criteria:

DEQ may approve an application for a case-specific beneficial use of solid waste only if all the following performance criteria are addressed: 1) characterization of the solid waste; 2) productive beneficial use of the solid waste; and, 3) the effect of the proposed beneficial use on public health, safety, welfare and/or the environment.

1) Characterization of the Solid Waste

Did the applicant characterize the solid waste and proposed beneficial use sufficiently to demonstrate compliance with the rules for case-specific beneficial use determinations (OAR 340-093-0280) by submitting required information for the appropriate tier? (See tier sections below for detailed characterization information.)

Yes No

Notes:

The applicant described the process in the water treatment that creates this waste as well as provided analytical sampling data results for metals, pH, percent solids, nitrates, and ammonia in the material.

Was the following information submitted for DEQ review and how adequate was it?
 DEQ staff identify if tier designation is applicable. Complete "Notes" section under each applicable tier designation summarizing how criteria are met or identifying information/demonstration deficiencies.

Tier 1 Applicable Not applicable

- Did the applicant provide an adequate description of the material proposed for beneficial use, the manner of generation and the estimated quantity to be used beneficially each year? Yes No

Notes:

The material is sediment generated during the chemical coagulation process in the drinking water treatment process. The solids from this process are collected in filters which are periodically backwashed into a sedimentation pond. The pond is cleaned out once per year. The applicant estimates that they generate 200-300 tons per year.

- Did the applicant provide an adequate description of the proposed beneficial use and justify how the proposed use is beneficial? Yes No

Notes:

As a soil amendment, it will help break up clay soils and provides some ammonia and nitrates to the soil.

- Did the applicant provide a sufficient comparison of the chemical and physical characteristics of the material proposed for beneficial use with the material it will replace? Yes No

Notes:

The applicant stated that the material is not replacing any other material. However, when used as a soil amendment, the material will replace some of the need for fertilizers.

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- Did the applicant successfully demonstrate compliance of the proposed beneficial use with the performance criteria in OAR 340-093-0280 based on knowledge of the process that generated the material, properties of the finished product, or testing? Yes No

Notes:

The process that generates the waste is described above. The applicant provided analytical testing results indicating that the only constituents elevated above clean fill levels were ammonia and nitrates. However, the levels are still well below residential risk screening levels. Use of this material as a soil amendment is appropriate.

- If required, did the applicant provide any other DEQ required information to evaluate the proposal? Yes No

Notes:

The applicant did provide some additional information in follow-up email communications. They clarified that in addition to using the material as soil amendment, they wanted to use it as fill in a gravel pit at Canby Sand & Gravel. DEQ notified the applicant that this was not considered a beneficial use and would be considered disposal. This BUD evaluation is only for use of the material as a soil amendment.

Tier 2 Applicable Not applicable

- Did the applicant submit all the information required for a Tier 1 application? Yes No

Notes:

See above.

- Did the applicant submit adequate sampling and analysis to make a determination of suitability for beneficial use? (Note: The analysis must provide chemical, physical, and biological characterization of the material proposed for beneficial use and identify potential contaminants in the material or the end product, as applicable.) Yes No

Notes:

The applicant provided analytical results and compared them to the clean fill screening levels and the residential risk based screening levels. The material is below all residential risk screening levels. It was above the clean fill levels for ammonia and nitrates.

- When applicable, did the applicant provide a risk screening comparing the concentration of hazardous substances in the material to existing, DEQ approved, risk-based screening level values, and demonstrate compliance with acceptable risk levels? Yes No

Notes:

See above.

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- When applicable, did the applicant supply the location or type of land use where the material will be applied, consistent with the risk scenarios used to evaluate risk? Yes No

Notes:

Not applicable for this BUD. This application is not location specific. The applicant used residential risk screening levels, which are the most conservative of the applicable standards.

- When applicable, did the applicant supply contact information of property owner(s) if this is a site-specific land application proposal, including name, address, phone number, e-mail, site address and site coordinates (latitude and longitude)? Yes No

Notes:

N/A – not a site specific application

- Did the applicant supply an adequate description of how the material will be managed to minimize potential adverse impacts to public health, safety, welfare, or the environment? Yes No

Notes:

The applicant stated that the material would be stockpiled on their site until it was sold or given to the parties that would be using it for soil amendment. The BUD will require that all the material must be stored in such a manner that it does not impact surface water quality. Under no circumstances can the material be stockpiled on site for more than six months.

Tier 3 Applicable Not applicable

- Did the applicant submit all the information required for a Tier 1 & Tier 2 application? Yes No

Notes:

N/A

- Did the applicant provide an adequate discussion of the justification for the proposal? Yes No

Notes:

N/A

- Is there an estimated length of time that would be required to complete the project, if it is a demonstration? Yes No

Notes:

N/A

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- If it is a demonstration project, are their methods proposed to ensure safe and proper management of the material? Yes No

Notes:

N/A

2) Productive Beneficial Use of the Solid Waste

Has the applicant demonstrated that the proposed beneficial use is a productive use of the material by providing information substantiating the criteria listed below? Yes No

Notes:

- Did the applicant successfully identify or demonstrate a reasonably likely proposed beneficial use for the material that is not speculative? Yes No

This criterion consists of three parts.

1. Identified Use:

Has the applicant clearly stated what the waste is going to be used for, that the waste is compatible with that use and the proposed quantity is necessary?

Yes No

2. Reasonably Likely Use:

Has the applicant identified, with supporting documentation, the timeframe within which this use is likely to occur (e.g., zoning info, master plan for development, letters from local jurisdictions, etc)?

Yes No N/A

3. Not Speculative:

For Land application - has this material been used at other sites for the same purpose, is the material feasible for use at this site for this purpose, or has the applicant identified a known potential for this use at this site?

Yes No N/A

For uses other than land application - has the material been used in a product before, is the material feasible for use in a product, or has the applicant identified a known potential for use in this product?

Yes No N/A

Notes:

This will rely on staff's professional judgment and you are encouraged to consult with other staff. – Examples: 1) In your judgment, is the proposed beneficial use reasonably likely to have end users/markets that will use the material in a timely manner? Some proposals will be for potential uses (uses that do not have a historical track record), so staff may need to make another judgment and decide whether or not to give a beneficial use proponent the "benefit of the doubt" in order to allow a use to have a chance to succeed. 2) If this beneficial use is for a land application or dredged sediment fill use on a specific piece of property, is it reasonably likely the land application or fill will be followed by an agricultural use or site development? Staff may recommend that the beneficial use determination conditions include that the use meet time-frames identified in the application or established by DEQ.

This applicant has described the material as being beneficial as a soil amendment due to the physical and chemical characteristics. They did not provide documentation that this has been done before.

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- Is the use a valuable part of a manufacturing process, an effective substitute for a valuable raw material or commercial product, or otherwise authorized by the Department and does not constitute disposal?
 Yes No

Notes:

N/A

- Is the use in accordance with applicable engineering standards, commercial standards, and agricultural or horticultural practices?
 Yes No

Notes: Write a summary of how applicant met this criterion or identify deficiencies.

See above

3) Effect of Proposed Beneficial Use on Public Health, Safety, Welfare and/or the Environment

Has the applicant demonstrated the proposed beneficial use will **not** create an adverse impact to public health, safety, welfare, or the environment, by providing information substantiating compliance with the criteria listed in the bullet list below?

Yes No

Notes: Based on the information provided below, write an overall summary of: 1) how the applicant met his criteria; and/or, 2) identify any deficiencies.

See above

Identify if each criterion is applicable. Complete "Notes" section under each applicable criterion summarizing how each is met or identifying information/demonstration deficiencies.

- Has the applicant demonstrated that the material is not a hazardous waste under ORS 466.00?
 Yes No

Notes:

See above

- Has the applicant demonstrated that until the time this material is used according to a beneficial use determination, the material will be managed, including any storage, transportation, or processing, to prevent releases to the environment or nuisance conditions?
 Yes No

Notes:

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The BUD requires that the material be stored in a manner that the material will not impact surface water quality or other waters of the State. Therefore, there are no significant risks to the environment

- Has the applicant demonstrated that hazardous substances in the material, if any, meet one of the criteria in the bulleted list below? Yes No
 - Hazardous substances do not significantly exceed the concentration in a comparable raw material or commercial product;
 - Hazardous substances do not exceed naturally occurring background concentrations; or
 - Hazardous substances will not exceed acceptable risk levels, including persistence and potential bioaccumulation, when the material is managed according to a beneficial use determination.

Notes:

The only potentially hazardous substance of concern in the material is ammonia. The levels do not exceed acceptable risk levels for residential exposure.

- Has the applicant demonstrated that the proposed beneficial use will not result in the increase of a hazardous substance in a sensitive environment, such as a park, wildlife refuge or wetland? Yes No

Notes:

The material will not be allowed to be used in sensitive environments.

- Has the applicant demonstrated that the proposed beneficial use will not create objectionable odors, dust, unsightliness, fire, or other nuisance conditions? Yes No

Notes:

The material is mostly inert and will not decompose or create odors.

- Has the applicant indicated that the proposed beneficial use will comply with any other applicable federal, state, and local regulations? Yes No

Notes:

This was not addressed in the application, but is part of the requirements of the BUD.

4) Public Involvement Evaluation (Note: this is not a Beneficial Use evaluation criterion)
 Determine a public involvement recommendation using the current, **Guidance to DEQ Solid Waste Program Staff and Managers on Public Notice & Participation.**

- Is public notice and participation being recommended for this application? Yes No

Notes:

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This material use is proposed to be sold or given to various property owners for various residential and commercial uses. The physical and chemical characteristics of this material do not pose risks to human health or the environment. DEQ has determined that this type of use is similar to the application of nitrogen-containing fertilizer, and that therefore a public involvement component for this beneficial use determination is not necessary