


# Beneficial Use of Solid Waste Determination Evaluation Form

 State of Oregon <b>Department of                  Environmental                  Quality</b>	<b>Applicant:</b>	Boise White Paper LLC		
	<b>BUD#:</b>	BUD-20111115		
	<b>Solid Waste:</b>	Primary clarifier solids from paper mill		
	<b>Summary of Proposed Beneficial Use:</b>			
	Alternative fiber source for recycled paper products and animal bedding			
	<b>Reviewer:</b>	Lorell Miller	<b>Date:</b>	December 1, 2011
	<b>Tier:</b>	<input checked="" type="checkbox"/> One <input 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:**

*Boise White Paper provided information on this case specific BUD application for Primary Clarifier Solids (PCS) dated November 10, 2011 as well as answers to DEQ's questions in an email dated November 21, 2011 from Alison Dean to Lorell Miller.*

*In these documents Boise demonstrated the proposed beneficial use meets the performance criteria for case-specific beneficial uses.*

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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 affect 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:**

*Based on the analytical data provided in the application and process knowledge, the PCS waste has been characterized sufficiently.*

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 applicant generates approximately 7,000 tons per year of PCS waste. They estimate that they will use 440 tons or more of this waste beneficially.*

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

**Notes:**

*This application is for the beneficial use of PCS in recycled paper and animal bedding commercial products. It will be an alternative fiber source in products such as packing material, paper fiber, animal bedding and cardboard.*

- 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 provided general chemical and physical characteristics comparing PCS to recycled paper that the PCS will replace in these commercial products.*

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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:**

*See previous answers.*

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

**Notes:**

*See email to Lorell Miller from Alison Dean dated November 21, 2011.*

**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:**

*The applicant has at least two potential customers lined up ready to purchase the PCS. They also expect to have several other customers set up in the near future.*

- 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

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

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*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.*

**Notes:**

*The use of PCS will replace recycled waste paper and newspaper in commercial products. The fibers that make up the PCS are of a desirable length and consistency for these types of products. PCS is also highly absorptive and works well as animal bedding.*

- 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:** DEQ staff – Write a summary of how applicant met his criterion or identify deficiencies.

*The high absorptive and fibrous qualities of PCS make it a valuable part of the manufacturing process for recycled paper and animal bedding products. The applicant will only sell the PCS to customers who have a legitimate manufacturing need for it.*

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

**Notes:** DEQ staff – Write a summary of how applicant met his criterion or identify deficiencies.

*The applicant has stated that uses will be in accordance with applicable standards of the applicable manufacturing processes.*

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

*The applicant provided a summary of analytical data that has been performed on PCS in the past. The analytical data shows that it would pass the screening for clean fill. The only potential constituents of concern are dioxins. However, the TEQ from the data that was provided ranges from 1.6 to 2.1 ng/kg, depending on the assumptions you make. This is well below the residential risk screening level of 4.4 ng/kg.*

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

**Notes:** DEQ staff – Write a summary of how applicant met his criterion or identify deficiencies.

*The analytical sampling the applicant provided as well as knowledge of process demonstrated that the material is not a hazardous waste.*

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- 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:** DEQ staff – Write a summary of how applicant met his criterion or identify deficiencies.

*The applicant states that the current customers are planning to store the PCS indoors or covered. The BUD requires that the PCS be transported and stored such that there is no contact with surface water.*

- 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:** DEQ staff – Write a summary of how applicant met his criterion or identify deficiencies.

*N/A*

- 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:** DEQ staff – Write a summary of how applicant met his criterion or identify deficiencies.

*N/A*

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

**Notes:** DEQ staff – Write a summary of how applicant met his criterion or identify deficiencies.

*N/A*

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

**Notes:** DEQ staff – Write a summary of how applicant met his criterion or identify deficiencies.

*See application*

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**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:** *DEQ staff – Write a summary of reasons for or against public notice and participation.*

*This is a Tier 1 BUD and there is no indication that this is a controversial beneficial use. DEQ has determined that no public comment period is needed.*