This enhancement is for the use of manure that has been treated to reduce both odors and pathogens prior to land application. Acceptable practices include controlled temperature anaerobic digestion (mesophilic or thermophilic), composting and chemical treatment. Waste treatment lagoons and injection of manure alone do not qualify as acceptable practices.

Benefits

Utilizing manure for land application not only benefits crop production and soil quality, it also reduces air and water quality concerns if properly treated. Odors have been shown to be significantly reduced when manure is treated before land application. Benefits include reduced odors in the airshed. This lessens the impacts on neighboring properties along with potentially increasing the time and areas available for land application. Working conditions for employees can also be improved by the reduction in odors. An additional benefit for treating manure prior to land application is the reduction in pathogens. Human and animal health concerns are diminished due to lower pathogen counts from properly treated animal manure. Reduced or eliminated pathogens from land applied manure also decrease the likelihood water quality contamination from pathogens.

Conditions Where Enhancement Applies

This enhancement applies to crop land use acres, not including orchards and vineyards, and all pasture land use acres.

Criteria for the land application of treated manure

1. Animal manure must be treated with a practice which will reduce both odors and pathogens prior to the manure being land applied. Acceptable treatment practices include:
   a. Controlled temperature anaerobic digestion (mesophilic or thermophilic)
   b. Composting
   c. Chemical treatments (as recommended by the Land Grant University)
2. Animal manure is land applied according to a nutrient management plan.

Layout Sketch & Drawing

- Geo-referenced field map with all delineated treatment areas where CSP Enhancement WQL14 is to be applied.

Adoption Requirements

This enhancement is considered adopted when manure has been treated via controlled temperature anaerobic digestion (mesophilic or thermophilic), composting or chemical methods to reduce odors and pathogens, and the manure has been land applied according to a nutrient management plan.
### Documentation Requirements

1. Documentation of the manure treatment practice(s) used prior to land application to obtain both odor and pathogen reduction.

2. Documentation of the land application of manure that includes:
   a. Fields where manure is applied,
   b. Manure application rate per field,
   c. Nutrients applied to each field, and
   d. Crops grown in each field.

### References*

**Field Office Technical Guide:**


* Some online documents may take several minutes to download.

### State Supplemental Information

None.
1. Documentation of the manure treatment practice(s) used prior to land application to obtain both odor and pathogen reduction.

2. Documentation of the land application of manure that includes:
   a. Fields where manure is applied,
   b. Manure application rate per field,
   c. Nutrients applied to each field, and
   d. Crops grown in each field.

<table>
<thead>
<tr>
<th>Field Number(s):</th>
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<tbody>
<tr>
<td>Crop:</td>
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<tr>
<td>Acres:</td>
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</table>

**Manure Application for Each Field:**

<table>
<thead>
<tr>
<th>Application Rate/Amount:</th>
<th>N:</th>
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<tr>
<td></td>
<td>P₂O₅:</td>
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<td>K₂O:</td>
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</tbody>
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**Manure Application Date(s):**

**Fertilizer Application for Each Field:**

<table>
<thead>
<tr>
<th>Application Rate/Amount:</th>
<th>N:</th>
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<tbody>
<tr>
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<td>P₂O₅:</td>
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<td></td>
<td>K₂O:</td>
</tr>
</tbody>
</table>

**Fertilizer Application Date(s):**

Attach documentation of manure treatment practice(s) prior to land application to obtain both odor and pathogen reduction.
WSU Analytical Laboratories Database:  
http://www.puyallup.wsu.edu/analyticallabs/

Commercial and Agricultural Resources:  
http://extension.wsu.edu/wsprs/Pages/AgResources.aspx

**Client’s Acknowledgement (To be signed before the Enhancement is applied.)**

By signing below, I acknowledge that I:

- have reviewed and understand the site specific design, installation specifications and operation/maintenance requirements in this State Supplemental Sheet and have an understanding of the purpose(s) of this Enhancement;
- will install, operate, and maintain this Enhancement in accordance with the National Sheet, the Washington State Supplemental Sheet and the site specific specifications.
- will make no changes to the planned design and installation without prior written approval of the Natural Resources Conservation Service.
- will obtain all necessary permits and/or rights, and comply with all ordinances and laws pertaining to the installation, operation, and maintenance of this Enhancement, prior to the start of installation; and
- will assume responsibility for notifying all Utilities affected by the installation, operation and maintenance of this Enhancement.

<table>
<thead>
<tr>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
</table>

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