

Date Received:

Control No:

## Field Office Checklist and TSP Certification Sample Plan Review

### Agriculture Energy Management Plan, Landscape Practice Activity Code (124)

(Refer to National Bulletin 450-11-1 for a complete listing of CAP Criteria)

**Purpose:** The purpose of this checklist is to provide guidance for components that need to be addressed or included in a Agriculture Energy Management Plan, Landscape. This checklist is designed for use by NRCS staff as well as Technical Service Providers. Please refer to CAP Development Criteria for specific elements to be addressed.

**Instructions:** Note: The Landscape AgEMP sample plan should be reviewed at the State level and also required to be reviewed by National Headquarters. Submit the completed checklist and sample plan by mail or email to Tim Pilkowski, Natural Resources Specialist, TSP Team. See below for address info.

Agriculture Energy Management Plan, Landscape	
<b>State/County:</b>	<b>Date Plan Submitted:</b>
<b>Producer/Owner:</b>	<b>Technical Service Provider:</b>
<p><b>A Landscape Agriculture Energy Management Plan (Landscape AgEMP)</b> contains the strategy by which the producer will explore and address his/her on-farm energy problems and opportunities on the working land.</p> <p><b>Minimum components of a Landscape AgEMP (124) shall include:</b></p>	

<b>1.</b>	<b>Background and Site Information</b>
<input type="checkbox"/>	a. Name of producer; b. Facility location(s) and mailing address; c. Type and size of operation; d. Producer concerns
<b>2.</b>	<b>Criteria for Landscape Energy Audit – NRCS Landscape (cropland, pastureland, forestland, etc.) farm energy audit content is an energy audit that is designed to (a) estimate energy use associated with current farming/ranching operations and (b) identify energy savings associated with alternative management activities. The Audit shall address energy use for the following elements (as applicable).</b>
<input type="checkbox"/>	a. Cropland field equipment operations – estimate energy use associated with the current field equipment operations (Compare in common units): <ol style="list-style-type: none"> <li>1. Field equipment operations;</li> <li>2. Embedded energy in synthetic nitrogen used;</li> <li>3. Irrigation;</li> <li>4. Pasture management;</li> </ol>

	5. Forest management
<b>3</b>	<b>Specific Criteria: The Audit will address specific criteria for each element as identified below:</b>
<input type="checkbox"/>	a. Cropland field equipment operations-Estimate energy use associated with current field equipment operations including tillage, planting, harvesting, manure application and application of inorganic soil amendments and pesticides.
<input type="checkbox"/>	b. Identify potential energy savings associated with alternative activities. As a minimum the analysis will address the following, as appropriate. Each item will be expressed in comparison to the existing situation with total savings expressed in common units: <ul style="list-style-type: none"> <li>• Number and type of field operations;</li> <li>• Trips to the field and across the field;</li> <li>• Precision farming practices;</li> <li>• Equipment maintenance and calibration;</li> <li>• Size of tractor relative to implement</li> </ul>
<input type="checkbox"/>	c. Embedded energy in synthetic fertilizer, especially nitrogen. Estimate indirect energy use associated with synthetic fertilizer used in the operation. Identify potential indirect energy savings associated with alternative management activities. Analysis may include, for example: <ul style="list-style-type: none"> <li>• Presence of a professional developed nutrient management plan that reduces the amount of fertilizers applied and minimizes losses;</li> <li>• Potential adjustments to crop rotation such that the amount of nutrients is reduced by optimizing residual nutrient supplies to subsequent crop;</li> <li>• Precision application techniques that minimize agrichemical needs and optimize the effectiveness of the chemicals used.</li> </ul>
<input type="checkbox"/>	d. Irrigation: Estimate energy used in current irrigation system and identify energy savings associated with alternative equipment and management activities. Analysis may include, for example: <ul style="list-style-type: none"> <li>• System type;</li> <li>• System pressure</li> <li>• Irrigation water management techniques;</li> <li>• Pumping plant evaluation;</li> <li>• System maintenance</li> </ul>
<input type="checkbox"/>	e. Pasture management: Estimate direct energy used in pasture management for example watering facilities and pasture maintenance/renovation and identify energy savings associated with alternative management and equipment. Examples include: <ul style="list-style-type: none"> <li>• Impact of grazing management on reseeding requirements;</li> <li>• Hauling distance for water/feed vs. water facility development</li> </ul>
<input type="checkbox"/>	f. Forest Operations: Estimate current energy use associated with the forest management/harvest system and identifies energy savings associated with alternative management and equipment. Analysis might include (but not be limited to): <ul style="list-style-type: none"> <li>• Forest trails and landings;</li> <li>• Types of equipment used;</li> <li>• Identify potential energy savings in other land uses associated with windbreaks/shelterbelts</li> </ul>
<input type="checkbox"/>	g. Document energy savings for the major activities at the farm headquarters as BTU's, KW hours, etc. Document a simple payback period (in years) for the proposed changes.
<b>3.</b>	<b>Conservation Plan</b>

<input type="checkbox"/>	Conservation plan, conservation practices and measures taken to reduce energy to address energy and to address the energy management needs for the Landscape AgEMP. The record of decisions shall include the planned practice, schedule of implementation and site specific specifications to apply the conservation practice.
<b>4.</b>	<b>References</b>
<input type="checkbox"/>	References included in the document
<b>5.</b>	<b>Energy Audit Report</b>
<input type="checkbox"/>	a. Summary of how much money the producer would save if the recommended measures were included and how much money the producer would lose if no action was taken;
<input type="checkbox"/>	b. A list of recommended measures to reduce energy use including their annual energy (kWh, propane, fuel oil, BTU,...) savings and an estimated payback in years;
<input type="checkbox"/>	c. A narrative summary of the recommendations made through the audit including description of technology, how the technology would affect the site and how much energy would be saved annually.

Yes	No	Checklist Approval
		I have reviewed this Agriculture Energy Management Plan - Landscape, and it meets all the criteria of the Conservation Activity Plan 124 in accordance with Section 2508 of the Food, Conservation and Energy Act of 2008.
NRCS Representative Name and Title (print or type):		
NRCS Representative Signature		Date:
Notes (If "No" is checked, include reasons for denial, comments, missing items that need to be added, etc.):		

**e-mail:**

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