

Date Received:

TSP Certification Plan Review Checklist Agricultural

**Energy Management Plan, Landscape
Conservation Activity Code (124)**

(Refer to National Bulletins 300-14-6 and 450-14-4 for a complete listing of CAP Criteria)

Purpose: The purpose of the checklist is to provide guidance for elements that need to be addressed or included in the Conservation Activity Plan (CAP). The checklists are recommended for use by NRCS staff and Technical Service Providers, but are not required. NRCS staff can use the checklist for administrative review of the sample plans submitted as part of the certification process as well as all other plans submitted after a TSP is certified. TSPs can use the checklist for a general guidance of elements to include in the plan, but it is still the TSP's responsibility to follow the CAP Plan Development Criteria for specific elements and the detail of each element to be included.

Instructions: The checklist should be completed and submitted with the sample plan or the hardcopy of the client's plan as described below:

- **Prospective TSP's** should submit the completed checklist and sample plan by mail or email (complete plans should be sent as a single electronic file for example pdf, word or scanned file) to the appropriate State TSP Coordinator for administrative review to ensure the plan contains all necessary components. Once administrative review is complete then the State TSP Coordinator should forward the sample plan to National Headquarters for technical review. A list of State TSP Coordinators is located at: <https://techreg.sc.egov.usda.gov/RptStateContact4Admin.aspx>. States should submit the complete plan and checklist by mail or email to the TSP Team. (See below for address information.)
- **Certified TSP's** should submit the completed checklist, hardcopy and electronic copy of the client's plan to the local NRCS Field Office or appropriate State TSP Coordinator for administrative review. A list of State TSP Coordinators is located at: <https://techreg.sc.egov.usda.gov/RptStateContact4Admin.aspx>.
- **NRCS Staff** should complete the checklist for administrative review and place the completed checklist in the client's file. Administrative review involves a review of the content of the plan to ensure all required elements are present, but does not involve technical review for correctness. (Please Note: If technical review is needed, the completed checklist and client plan should be forwarded to the appropriate State Office staff or NHQ for technical review.)

Agricultural Energy Management Plan, Landscape (CAP 124)

State/County:	Date of Plan:
Producer/Owner:	Technical Service Provider:
<p>Definition: An Agricultural Energy Management Plan - Landscape (AgEMP) is a detailed report documenting the energy consuming components and practices of the current operation's on-farm field energy consumption involved in the cropland, pasture/hayland, range, and woodland activities with recommended strategies to conserve energy resources. The energy consuming components evaluated include those items with an "x" shown under the columns "Field Crops" and "Fruits/Vegetables" in Table 1, ANSI/ASABE S612 JUL2009. The results of this Landscape AgEMP audit will provide strategies by which the producer will explore and address their on-farm energy conservation concerns, objectives, and opportunities.</p>	

A.	General AgEMP Landscape Criteria:
	<p>An AgEMP - Landscape has been developed by a certified Technical Service Provider (TSP). In accordance with Section 1240 (A) of the 2008 Farm Bill, the Environmental Quality Incentives Program (EQIP) provides funding support through contracts with eligible producers to obtain services of certified TSPs for development of an AgEMP- Headquarters. The TSP proficiency criteria required to develop an AgEMP - Headquarters for an EQIP eligible producer is located on the TSP website at: http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/technical/tsp/</p>
B.	Criteria for Specific Elements of an AgEMP Landscape:
	1. The AgEMP - Headquarters meets the Type 2 on-farm energy audit minimum criteria established in the ANSI/ASABE S612 July2009 Performing On-farm Energy Audits standard, hereafter referred to as the industry standard.
2.	Background and Site Information – The AgEMP provides a narrative for:
	a. Name of producer
	b. Farm(s) location(s)
	c. Type, size and overall management scheme of the operation (e.g., description of the poultry, dairy, or swine, etc. as well as production levels, and any unusual factors that affect energy use)
	d. Producer concerns and objectives for the enterprise (i.e., description of why the producer wants an on-farm energy audit and their specific objectives)
3.	<p>Documentation of Current Equipment and Baseline Current Energy Use: The Landscape AgEMP will provide comprehensive documentation of current energy resources used for the production and storage for all field crops or fruits/vegetables for the entire farm, the respective total current energy usage, and total cost date. The evaluation of current energy use shall address the current energy use for engine driven equipment used in the cultivation, irrigation, drainage, protection, and harvesting and storage of agricultural commodities associated with the field production activities. The AgEMP does not address energy associated with inputs such as fertilizers and pesticides, etc. A comprehensive summary of all of the above items will be presented by each energy resource.</p>

3.	Landscape AgEMP audit will document the major activities associated with each of the individual farm enterprises:
	<p>a. Components/details of the major activities, as appropriate and primary equipment:</p> <ul style="list-style-type: none"> • Manufacturer of equipment, • Equipment component factory ratings (hp, efficiency, BTU input and BTU output) • Management use efficiencies (e.g. manual/automatic systems)
	b. Annual energy use
4.	Recommended Measures / Conservation Practices:
	a. The recommended measures for energy improvement are presented.
	b. Estimated energy savings are presented. Energy savings have been documented for the each major item of equipment/activity as kWh, joules, gallons, etc. and are also converted to a common measure of millions of British Thermal Units (mBTU).
	c. Estimated cost and energy cost savings in years are presented.
	d. Simple payback period (in years) is documented for each of the recommended energy improvement measures.
	<p>e. The plan includes, but is not limited to, recommendations for appropriate use of the conservation practices listed below:</p> <ul style="list-style-type: none"> • Conservation Crop Rotation (328) • Residue and Tillage Management, No-Till/Strip Till/Direct Seed (Ac.) (329) • Residue and Tillage Management, Mulch Till (Ac.) (345) • Irrigation System, Micro-irrigation (441) • Irrigation System, Sprinkler (442) • Irrigation Water Management (449) • Pumping Plant (533)
	f. The plan includes, but is not limited to the following recommended energy improvement measures: GPS guidance systems, sensors, control systems, variable drives, compressors, motors, waterers, planting, tilling, harvesting, engine driven equipment. (Refer to Table 1 in the ASABE S612 industry standard, for more information on the components listed for each of the major energy activity categories)
5.	Summary Reporting of Recommended Measures:
	Tables 1 and 2 have been provided in their exact formats near the beginning of the AgEMP report. The Summary Table 1 (shown on the next page) contains each of the various recommended measures, prioritized according to pay-back period.
	a. The summary table contains estimated reduction in energy use (electricity, propane, diesel, etc.), estimated energy savings, estimated installation cost, estimated energy cost savings.
	b. The Payback in Years column determines the sequence in which recommended measures are to be listed in the Summary Table. This sequence has been used to provide guidance on the recommended sequence of implementation, from shortest time of payback to longest time of payback.
	c. Recommended measures with payback periods exceeding 10 years have been presented in the body of the report but have not been included in the Summary of Recommendations.

Table 1. Summary of Estimated Annual Energy Efficiency Improvements

Recommended Measure	Estimated Reduction in Energy Use				Estimated Costs, Savings, Payback, and Prioritization for Implementation		
	Electric Savings (kWh)	Propane Savings (Gal)	Other ^{2/}	Energy Savings ^{1/} (mBTU)	Installed Cost [a]	Energy Cost Savings [b]	Payback in Years [a / b]
	-						
		-					
Totals							

Table 1 Notes:

- 1) The estimated energy and cost savings are approximate values provided from an actual on-farm energy audit.
- 2) Other: Gasoline, Diesel fuel, Wood, etc.

Energy Savings as a percent of total energy use will also be presented for each energy type as shown in Table 2 below.

Table 2. Energy Savings of Recommendations

Fuel	Current Usage	MBTU Usage	Savings	MBtu Savings	% Savings
Totals					

6.	References
	<p>a. The Landscape AgEMP includes technical documentation of sources used for the Landscape AgEMP. The report includes the actual documents or web sites that contain technical information used to gain energy savings in the report.</p>
3.	Deliverables for the Client:
	<p>a. The Cover page of the Landscape AgEMP audit contains the following:</p> <ul style="list-style-type: none"> • Name and address of Producer and TSP, • Date Landscape AgEMP audit was performed, • Signature blocks for the TSP and producer, and • Signature and date block for the NRCS Field Office concurrence

	<p>b. The Landscape AgEMP Audit Document</p> <ul style="list-style-type: none"> • Farm location(s) map • Type and size of the operation (e.g., cropland, irrigation, pasture/hayland, range, forest) and any unusual factors that affect energy use) • Producer concerns, objectives, opportunities, and overall management scheme for the enterprise (i.e., description of why the producer wants an on-farm energy audit and their specific objectives) • Documentation of Baseline Current Energy Use • Recommended Measures/Conservation Practices • The summary tables (Table 1 and Table 2) will contain each of the various recommended measures, prioritized according to pay-back period, and estimated energy savings. • Recommended measures with payback periods exceeding 10 years may be presented in the body of the report but shall not be included in the Summary of Recommendations.
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Yes	No	Checklist Approval
<input type="checkbox"/>	<input type="checkbox"/>	I have administratively reviewed this Agricultural Energy Management Plan, Landscape and it meets the FY14 Plan Development Criteria for Conservation Activity Plan 124.
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.):		

Email: tsp@wdc.usda.gov.

Mailing Address: **Technical Service Provider Team**
 USDA - Natural Resources Conservation Service
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 Washington, DC 20250