

IOWA

Environmental Quality Incentives Program (EQIP)

Energy Initiative

List of Eligible Practices and Payment Schedule FY2014

December, 2013

EQIP Scenario Booklet Glossary

Practice Code Table – The table of Practices is in alphabetical order. The practice code for each practice has a hot link to the individual Practice Code Scenario Descriptions.

Conservation Practice Description – Each Conservation Practice has the Practice code, Livestock or non-Livestock practice and whether structural or vegetative, PRS Unit of Measure, Definition, Purpose and Applicability for the conservation practice from the Iowa Field Office Technical Guide.

Limitations – This area will list any limitations a conservation practice may have related to EQIP, i.e., payment limitations, planning considerations, practice requirements, etc.

Maintenance – This is the Conservation Practice Lifespan.

Payment Schedule Headers:

ID – This is a numeric identifier for internal tracking purposes.

Scenario Name – Unique name for each scenario.

Scenario and After Practice Description – For each Conservation Practice Scenario Name this column provides the **Scenario Description, After Practice Description** and may include associated practices.

Scenario Feature Measure – This provides additional description of the scenario unit, if different than the scenario unit.

Scenario Unit – Unit of measure used for the scenario.

PAYMENT RATE – The payment rate is the amount of financial assistance (\$/unit) available through EQIP.

- **EQIP** – Payment rate is based on 50% of the estimated incurred costs and foregone income (if applicable) associated with practice implementation.
- **EQIP – HU** – Payment rate is based on 75% of the estimated incurred costs and foregone income (if applicable) associated with practice implementation.
- **Initiative** – Payment rate is based on 75% of the estimated incurred costs and foregone income (if applicable) associated with practice implementation.
- **Initiative – HU** - Payment rate is based on 90% of the estimated incurred costs and foregone income (if applicable) associated with practice implementation.

HU = Historically Underserved: Includes, Beginning Farmers, Limited Resource Farmers, Socially Disadvantaged Farmers, Tribal Farmers. The payment rate is higher for HU producers on most practices. To determine if you are an HU producer go to:

<http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/people/outreach/slbfr>

Initiative – Applications that meet the requirements of a National initiative such as Mississippi River Basin Initiative (MRBI), Seasonal High Tunnel Initiative, Energy Initiative, Organic Initiative, National Water Quality Initiative (NWQI), and Driftless Area Landscape Conservation Initiative (DALCI) use the initiative payment rates.

Table of Practices

Practice Code	Practice Name
122	Agricultural Energy Management Plan, Headquarters - Written
124	Agricultural Energy Management Plan, Landscape - Written
672	Building Envelope Improvement
328	Conservation Crop Rotation
340	Cover Crop
374	Farmstead Energy Improvement
449	Irrigation Water Management
670	Lighting System Improvement
533	Pumping Plant
345	Residue and Tillage Management, Reduced Till
329	Residue and Tillage Management, No-Till
346	Residue and Tillage Management, Ridge Till
380	Windbreak/Shelterbelt Establishment

AGRICULTURAL ENERGY MANAGEMENT PLAN, HEADQUARTERS - WRITTEN
Practice Code 122

PRS Unit of Measurement: Number

Definition: An Agricultural Energy Management Plan- Headquarters (AgEMP) is a detailed documentation of energy consuming components and practices of the current operation, the previous year's on-farm energy consumption, and the strategy by which the producer will explore and address their on-farm energy conservation concerns, objectives, and opportunities.

Purposes: The AgEMP will provide appropriate energy savings for each major activity (including a comparison to the baseline energy use) that reduces energy use and addresses the energy management needs for the agricultural operation.

Applicability: On lands in Iowa that will benefit from the development and implementation of an Agricultural Energy Management Plan.

Limitations:

Maintenance: Practice must be maintained for a lifespan of 1 year.

Payment Schedule:

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
1	AgEMP Livestock Small Less Than 70 AU	<p>Scenario Description: Typical livestock operation has < 70 AU. Natural Resource Concern: Energy Conservation. Before Situation: Agricultural producer currently has minimal knowledge of and no plan for energy conservation. Producer currently manages a small livestock operation with < 70 AU. Producer is willing to collaborate with a certified TSP to develop an AgEMP 122 CAP. The AgEMP is a grouping of conservation measures and management activities which, when implemented as part of a conservation system, will help to ensure that both production and natural resource protection goals are achieved. An AgEMP incorporates recommended measures to maximize energy conservation and efficiency. An EMP is developed to assist an owner/operator in meeting all applicable local, tribal, State, and Federal water quality goals or regulations. Associated Practices: 124 Agricultural Energy Management Plan - Landscape CAP, 374 Farmstead Energy Improvement, or other applicable practices approved in the NRCS Field Office Technical Guide. After Situation: After EQIP contract approval, participant has obtained services from a certified TSP for development of the "Agricultural Energy Management - Headquarters" conservation activity plan. The CAP criteria require the plan to meet quality criteria for energy conservation and efficiency. The CAP plan may include recommendations for associated conservation practices which address energy conservation. The CAP meets the basic quality criteria for the 122 plan as cited in the NRCS Field Office Technical Guide.</p>	Number	Number	\$1,212.82	\$1,455.39		

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
2	AgEMP Livestock Medium 70 - 300 AU	<p>Scenario Description: Typical livestock operation has 70 - 300 AU. Natural Resource Concern: Energy Conservation. Before Situation: Agricultural producer currently has minimal knowledge of and no plan for energy conservation. Producer currently manages a small livestock operation with 70-300 AU. Producer is willing to collaborate with a certified TSP to develop an AgEMP 122 CAP. The AgEMP is a grouping of conservation measures and management activities which, when implemented as part of a conservation system, will help to ensure that both production and natural resource protection goals are achieved. An AgEMP incorporates recommended measures to maximize energy conservation and efficiency. An EMP is developed to assist an owner/operator in meeting all applicable local, tribal, State, and Federal water quality goals or regulations. Associated Practices: 124 Agricultural Energy Management Plan - Landscape CAP, 374 Farmstead Energy Improvement, or other applicable practices approved in the NRCS Field Office Technical Guide. After Situation: After EQIP contract approval, participant has obtained services from a certified TSP for development of the "Agricultural Energy Management - Headquarters" conservation activity plan. The CAP criteria require the plan to meet quality criteria for energy conservation and efficiency. The CAP plan may include recommendations for associated conservation practices which address energy conservation. The CAP meets the basic quality criteria for the 122 plan as cited in the NRCS Field Office Technical Guide.</p>	Number	Number	\$1,586.80	\$1,904.16		
3	AgEMP Livestock Large 301 - 2500 AU	<p>Scenario Description: Typical livestock operation has 301 - 2,500 AU. Natural Resource Concern: Energy Conservation. Before Situation: Agricultural producer currently has minimal knowledge of and no plan for energy conservation. Producer currently manages a small livestock operation with 301-2,500 AU. Producer is willing to collaborate with a certified TSP to develop an AgEMP 122 CAP. The AgEMP is a grouping of conservation measures and management activities which, when implemented as part of a conservation system, will help to ensure that both production and natural resource protection goals are achieved. An AgEMP incorporates recommended measures to maximize energy conservation and efficiency. An EMP is developed to assist an owner/operator in meeting all applicable local, tribal, State, and Federal water quality goals or regulations. Associated Practices: 124 Agricultural Energy Management Plan - Landscape CAP, 374 Farmstead Energy Improvement, or other applicable practices approved in the NRCS Field Office Technical Guide. After Situation: After EQIP contract approval, participant has obtained services from a certified TSP for development of the "Agricultural Energy Management - Headquarters" conservation activity plan. The CAP criteria require the plan to meet quality criteria for energy conservation and efficiency. The CAP plan may include recommendations for associated conservation practices which address energy conservation. The CAP meets the basic quality criteria for the 122 plan as cited in the NRCS Field Office Technical Guide.</p>	Number	Number	\$1,950.26	\$2,340.31		

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
4	AgEMP Livestock Large Greater Than 2500 AU	<p>Scenario Description: Typical livestock operation has > 2,500 AU. Natural Resource Concern: Energy Conservation. Before Situation: Agricultural producer currently has minimal knowledge of and no plan for energy conservation. Producer currently manages a small livestock operation with >2,500 AU. Producer is willing to collaborate with a certified TSP to develop an AgEMP 122 CAP. The AgEMP is a grouping of conservation measures and management activities which, when implemented as part of a conservation system, will help to ensure that both production and natural resource protection goals are achieved. An AgEMP incorporates recommended measures to maximize energy conservation and efficiency. An EMP is developed to assist an owner/operator in meeting all applicable local, tribal, State, and Federal water quality goals or regulations. Associated Practices: 124 Agricultural Energy Management Plan - Landscape CAP, 374 Farmstead Energy Improvement, or other applicable practices approved in the NRCS Field Office Technical Guide. After Situation: After EQIP contract approval, participant has obtained services from a certified TSP for development of the "Agricultural Energy Management - Headquarters" conservation activity plan. The CAP criteria require the plan to meet quality criteria for energy conservation and efficiency. The CAP plan may include recommendations for associated conservation practices which address energy conservation. The CAP meets the basic quality criteria for the 122 plan as cited in the NRCS Field Office Technical Guide.</p>	Number	Number	\$2,524.31	\$3,029.17		
5	AgEMP Non-Livestock Single Enterprise	<p>Scenario Description: Typical single enterprise non-livestock operation - one enterprise as defined in the ASABE S612 on-farm energy audit standard. Natural Resource Concern: Energy Conservation. Before Situation: Agricultural producer currently has minimal knowledge of and no plan for energy conservation. An Agricultural Energy Mgmt CAP for Non- Livestock operations with one enterprise will be planned according to the ASABE S612 standard. Producer currently manages a single non-livestock operation. Producer is willing to collaborate with a certified TSP to develop an AgEMP 122 CAP. The AgEMP is a grouping of conservation measures and management activities which, when implemented as part of a conservation system, will help to ensure that both production and natural resource protection goals are achieved. An AgEMP incorporates recommended measures to maximize energy conservation and efficiency. An EMP is developed to assist an owner/operator in meeting all applicable local, tribal, State, and Federal water quality goals or regulations. Associated Practices: 124 Agricultural Energy Management Plan - Landscape CAP, 374 Farmstead Energy Improvement, or other applicable practices approved in the NRCS Field Office Technical Guide. After Situation: After EQIP contract approval, participant has obtained services from a certified TSP for development of the "Agricultural Energy Management - Headquarters" conservation activity plan. The CAP criteria require the plan to meet quality criteria for energy conservation and efficiency. The CAP plan may include recommendations for associated conservation practices which address energy conservation. The CAP meets the basic quality criteria for the 122 plan as cited in the NRCS Field Office Technical Guide.</p>	Number	Number	\$2,016.73	\$2,420.07		

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
6	AgEMP Non-Livestock Two Enterprises	<p>Scenario Description: Typical non-livestock operation with two enterprises as defined in the ASABE S612 on-farm energy audit standard. Natural Resource Concern: Energy Conservation. Before Situation: Agricultural producer currently has minimal knowledge of and no plan for energy conservation. An Agricultural Energy Mgmt CAP for Non- Livestock operations (two enterprises) will be planned according to the ASABE S612 standard (e.g., greenhouse and maple syrup). Producer currently manages a non-livestock operation consisting of two enterprises. Producer is willing to collaborate with a certified TSP to develop an AgEMP 122 CAP. The AgEMP is a grouping of conservation measures and management activities which, when implemented as part of a conservation system, will help to ensure that both production and natural resource protection goals are achieved. An AgEMP incorporates recommended measures to maximize energy conservation and efficiency. An EMP is developed to assist an owner/operator in meeting all applicable local, tribal, State, and Federal water quality goals or regulations. Associated Practices: 124 Agricultural Energy Management Plan - Landscape CAP, 374 Farmstead Energy Improvement, or other applicable practices approved in the NRCS Field Office Technical Guide. After Situation: After EQIP contract approval, participant has obtained services from a certified TSP for development of the "Agricultural Energy Management - Headquarters" conservation activity plan. The CAP criteria require the plan to meet quality criteria for energy conservation and efficiency. The CAP plan may include recommendations for associated conservation practices which address energy conservation. The CAP meets the basic quality criteria for the 122 plan as cited in the NRCS Field Office Technical Guide.</p>	Number	Number	\$2,565.77	\$3,078.92		
7	AgEMP Non-Livestock Three Enterprises	<p>Scenario Description: Typical non-livestock operation with three enterprises as defined in the ASABE S612 on-farm energy audit standard. Natural Resource Concern: Energy Conservation. Before Situation: Agricultural producer currently has minimal knowledge of and no plan for energy conservation. An Agricultural Energy Mgmt CAP for Non- Livestock operations (three enterprises) will be planned according to the ASABE S612 standard (e.g., greenhouse, maple syrup, irrigated grain). Producer currently manages a non-livestock operation consisting of three enterprises. Producer is willing to collaborate with a certified TSP to develop an AgEMP 122 CAP. The AgEMP is a grouping of conservation measures and management activities which, when implemented as part of a conservation system, will help to ensure that both production and natural resource protection goals are achieved. An AgEMP incorporates recommended measures to maximize energy conservation and efficiency. An EMP is developed to assist an owner/operator in meeting all applicable local, tribal, State, and Federal water quality goals or regulations. Associated Practices: 124 Agricultural Energy Management Plan - Landscape CAP, 374 Farmstead Energy Improvement, or other applicable practices approved in the NRCS Field Office Technical Guide. After Situation: After EQIP contract approval, participant has obtained services from a certified TSP for development of the "Agricultural Energy Management - Headquarters" conservation activity plan. The CAP criteria require the plan to meet quality criteria for energy conservation and efficiency. The CAP plan may include recommendations for associated conservation practices which address energy conservation. The CAP meets the basic quality criteria for the 122 plan as cited in the NRCS Field Office Technical Guide.</p>	Number	Number	\$3,462.20	\$4,154.64		

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
8	AgEMP 122 Livestock - Small < 70 AU plus 1 non-Livestock Enterprise	<p>Scenario Description: One non-livestock enterprise as defined in the ASABE S612 on-farm energy audit standard in combination with a small livestock operation with < 70 AU (The livestock operation may have mixed animal types) Agricultural producer currently has minimal knowledge of and no plan for energy conservation. Producer is willing to collaborate with a certified TSP to develop an AgEMP 122 CAP. The AgEMP is a grouping of conservation measures and management activities which, when implemented as part of a conservation system, will help to ensure that both production and natural resource protection goals are achieved. An AgEMP incorporates recommended measures to maximize energy conservation and efficiency. An EMP is developed to assist an owner/operator in meeting all applicable local, tribal, State, and Federal water quality goals or regulations. Natural Resource Concern: Energy Conservation. Before Situation: Agricultural producer currently has minimal knowledge of and no plan for energy conservation. An Agricultural Energy Mgmt CAP for any type of livestock operation with one non-livestock enterprise will be planned according to the ASABE S612 standard (e.g., broiler and greenhouse). Producer is willing to collaborate with a certified TSP to develop an AgEMP 122 CAP. The AgEMP is a grouping of conservation measures and management activities which, when implemented as part of a conservation system, will help to ensure that both production and natural resource protection goals are achieved. An AgEMP incorporates recommended measures to maximize energy conservation and efficiency. An EMP is developed to assist an owner/operator in meeting all applicable local, tribal, State, and Federal water quality goals or regulations. Associated Practices: 124 Agricultural Energy Management Plan - Landscape CAP, 374 Farmstead Energy Improvement, 670 Lighting System Improvement, 672 Building Envelope Improvement, or other applicable practices approved in the NRCS Field Office Technical Guide. After Situation: After EQIP contract approval, participant has obtained services from a certified TSP for development of the "Agricultural Energy Management - Headquarters" conservation activity plan. The CAP criteria require the plan to meet quality criteria for energy conservation and efficiency. The CAP plan may include recommendations for associated conservation practices which address energy conservation. The CAP meets the basic quality criteria for the 122 plan as cited in the NRCS Field Office Technical Guide.</p>	Number	Number	\$2,043.88	\$2,452.65		

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
9	AgEMP 122 Livestock - Small < 70 AU plus 2 non-Livestock Enterprises	<p>Scenario Description: Two non-livestock enterprises as defined in the ASABE S612 on-farm energy audit standard in combination with a small livestock operation with < 70 AU (The livestock operation may have mixed animal types) Agricultural producer currently has minimal knowledge of and no plan for energy conservation. Producer is willing to collaborate with a certified TSP to develop an AgEMP 122 CAP. The AgEMP is a grouping of conservation measures and management activities which, when implemented as part of a conservation system, will help to ensure that both production and natural resource protection goals are achieved. An AgEMP incorporates recommended measures to maximize energy conservation and efficiency. An EMP is developed to assist an owner/operator in meeting all applicable local, tribal, State, and Federal water quality goals or regulations. Natural Resource Concern: Energy Conservation. Before Situation: Agricultural producer currently has minimal knowledge of and no plan for energy conservation. An Agricultural Energy Mgmt CAP for any type of livestock operation with two non-livestock enterprises will be planned according to the ASABE S612 standard (e.g., broiler and greenhouse). Producer is willing to collaborate with a certified TSP to develop an AgEMP 122 CAP. The AgEMP is a grouping of conservation measures and management activities which, when implemented as part of a conservation system, will help to ensure that both production and natural resource protection goals are achieved. An AgEMP incorporates recommended measures to maximize energy conservation and efficiency. An EMP is developed to assist an owner/operator in meeting all applicable local, tribal, State, and Federal water quality goals or regulations. Associated Practices: 124 Agricultural Energy Management Plan - Landscape CAP, 374 Farmstead Energy Improvement, 670 Lighting System Improvement, 672 Building Envelope Improvement, or other applicable practices approved in the NRCS Field Office Technical Guide. After Situation: After EQIP contract approval, participant has obtained services from a certified TSP for development of the "Agricultural Energy Management - Headquarters" conservation activity plan. The CAP criteria require the plan to meet quality criteria for energy conservation and efficiency. The CAP plan may include recommendations for associated conservation practices which address energy conservation. The CAP meets the basic quality criteria for the 122 plan as cited in the NRCS Field Office Technical Guide.</p>	Number	Number	\$2,874.93	\$3,449.92		

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
10	AgEMP 122 Livestock - Small < 70 AU plus 3 non-Livestock Enterprises	<p>Scenario Description: Three non-livestock enterprises as defined in the ASABE S612 on-farm energy audit standard in combination with a small livestock operation with < 70 AU (The livestock operation may have mixed animal types) Agricultural producer currently has minimal knowledge of and no plan for energy conservation. Producer is willing to collaborate with a certified TSP to develop an AgEMP 122 CAP. The AgEMP is a grouping of conservation measures and management activities which, when implemented as part of a conservation system, will help to ensure that both production and natural resource protection goals are achieved. An AgEMP incorporates recommended measures to maximize energy conservation and efficiency. An EMP is developed to assist an owner/operator in meeting all applicable local, tribal, State, and Federal water quality goals or regulations. Natural Resource Concern: Energy Conservation. Before Situation: Agricultural producer currently has minimal knowledge of and no plan for energy conservation. An Agricultural Energy Mgmt CAP for any type of livestock operation with three non-livestock enterprises will be planned according to the ASABE S612 standard (e.g., broiler and greenhouse). Producer is willing to collaborate with a certified TSP to develop an AgEMP 122 CAP. The AgEMP is a grouping of conservation measures and management activities which, when implemented as part of a conservation system, will help to ensure that both production and natural resource protection goals are achieved. An AgEMP incorporates recommended measures to maximize energy conservation and efficiency. An EMP is developed to assist an owner/operator in meeting all applicable local, tribal, State, and Federal water quality goals or regulations. Associated Practices: 124 Agricultural Energy Management Plan - Landscape CAP, 374 Farmstead Energy Improvement, 670 Lighting System Improvement, 672 Building Envelope Improvement, or other applicable practices approved in the NRCS Field Office Technical Guide. After Situation: After EQIP contract approval, participant has obtained services from a certified TSP for development of the "Agricultural Energy Management - Headquarters" conservation activity plan. The CAP criteria require the plan to meet quality criteria for energy conservation and efficiency. The CAP plan may include recommendations for associated conservation practices which address energy conservation. The CAP meets the basic quality criteria for the 122 plan as cited in the NRCS Field Office Technical Guide.</p>	Number	Number	\$3,705.98	\$4,447.18		

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
11	AgEMP 122 Livestock - Medium 70-300 AU plus 1 non-livestock enterprise	<p>Scenario Description: One non-livestock enterprise as defined in the ASABE S612 on-farm energy audit standard in combination with a medium livestock operation with 70-300 AU (The livestock operation may have mixed animal types) Agricultural producer currently has minimal knowledge of and no plan for energy conservation. Producer is willing to collaborate with a certified TSP to develop an AgEMP 122 CAP. The AgEMP is a grouping of conservation measures and management activities which, when implemented as part of a conservation system, will help to ensure that both production and natural resource protection goals are achieved. An AgEMP incorporates recommended measures to maximize energy conservation and efficiency. An EMP is developed to assist an owner/operator in meeting all applicable local, tribal, State, and Federal water quality goals or regulations. Natural Resource: Energy Conservation. Before Situation: Agricultural producer currently has minimal knowledge of and no plan for energy conservation. An Agricultural Energy Mgmt CAP for any type of livestock operation with one non-livestock enterprise will be planned according to the ASABE S612 standard (e.g., broiler and greenhouse). Producer is willing to collaborate with a certified TSP to develop an AgEMP 122 CAP. The AgEMP is a grouping of conservation measures and management activities which, when implemented as part of a conservation system, will help to ensure that both production and natural resource protection goals are achieved. An AgEMP incorporates recommended measures to maximize energy conservation and efficiency. An EMP is developed to assist an owner/operator in meeting all applicable local, tribal, State, and Federal water quality goals or regulations. Associated Practices: 124 Agricultural Energy Management Plan - Landscape CAP, 374 Farmstead Energy Improvement, 670 Lighting System Improvement, 672 Building Envelope Improvement, or other applicable practices approved in the NRCS Field Office Technical Guide. After Situation: After EQIP contract approval, participant has obtained services from a certified TSP for development of the "Agricultural Energy Management - Headquarters" conservation activity plan. The CAP criteria require the plan to meet quality criteria for energy conservation and efficiency. The CAP plan may include recommendations for associated conservation practices which address energy conservation. The CAP meets the basic quality criteria for the 122 plan as cited in the NRCS Field Office Technical Guide.</p>	Number	Number	\$2,417.85	\$2,901.42		

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
12	AgEMP 122 Livestock - Medium 70-300 AU plus 2 non-livestock enterprises	<p>Scenario Description: Two non-livestock enterprises as defined in the ASABE S612 on-farm energy audit standard in combination with a medium livestock operation with 70-300 AU (The livestock operation may have mixed animal types) Agricultural producer currently has minimal knowledge of and no plan for energy conservation. Producer is willing to collaborate with a certified TSP to develop an AgEMP 122 CAP. The AgEMP is a grouping of conservation measures and management activities which, when implemented as part of a conservation system, will help to ensure that both production and natural resource protection goals are achieved. An AgEMP incorporates recommended measures to maximize energy conservation and efficiency. An EMP is developed to assist an owner/operator in meeting all applicable local, tribal, State, and Federal water quality goals or regulations. Natural Resource: Energy Conservation. Before Situation: Agricultural producer currently has minimal knowledge of and no plan for energy conservation. An Agricultural Energy Mgmt CAP for any type of livestock operation with two non-livestock enterprises will be planned according to the ASABE S612 standard (e.g., broiler and greenhouse). Producer is willing to collaborate with a certified TSP to develop an AgEMP 122 CAP. The AgEMP is a grouping of conservation measures and management activities which, when implemented as part of a conservation system, will help to ensure that both production and natural resource protection goals are achieved. An AgEMP incorporates recommended measures to maximize energy conservation and efficiency. An EMP is developed to assist an owner/operator in meeting all applicable local, tribal, State, and Federal water quality goals or regulations. Associated Practices: 124 Agricultural Energy Management Plan - Landscape CAP, 374 Farmstead Energy Improvement, 670 Lighting System Improvement, 672 Building Envelope Improvement, or other applicable practices approved in the NRCS Field Office Technical Guide. After Situation: After EQIP contract approval, participant has obtained services from a certified TSP for development of the "Agricultural Energy Management - Headquarters" conservation activity plan. The CAP criteria require the plan to meet quality criteria for energy conservation and efficiency. The CAP plan may include recommendations for associated conservation practices which address energy conservation. The CAP meets the basic quality criteria for the 122 plan as cited in the NRCS Field Office Technical Guide.</p>	Number	Number	\$3,248.91	\$3,898.69		

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
13	AgEMP 122 Livestock - Medium 70-300 AU plus 3 non-livestock enterprises	<p>Scenario Description: Three non-livestock enterprises as defined in the ASABE S612 on-farm energy audit standard in combination with a medium livestock operation with 70-300 AU (The livestock operation may have mixed animal types) Agricultural producer currently has minimal knowledge of and no plan for energy conservation. Producer is willing to collaborate with a certified TSP to develop an AgEMP 122 CAP. The AgEMP is a grouping of conservation measures and management activities which, when implemented as part of a conservation system, will help to ensure that both production and natural resource protection goals are achieved. An AgEMP incorporates recommended measures to maximize energy conservation and efficiency. An EMP is developed to assist an owner/operator in meeting all applicable local, tribal, State, and Federal water quality goals or regulations. Natural Resource: Energy Conservation. Before Situation: Agricultural producer currently has minimal knowledge of and no plan for energy conservation. An Agricultural Energy Mgmt CAP for any type of livestock operation with three non-livestock enterprises will be planned according to the ASABE S612 standard (e.g., broiler and greenhouse). Producer is willing to collaborate with a certified TSP to develop an AgEMP 122 CAP. The AgEMP is a grouping of conservation measures and management activities which, when implemented as part of a conservation system, will help to ensure that both production and natural resource protection goals are achieved. An AgEMP incorporates recommended measures to maximize energy conservation and efficiency. An EMP is developed to assist an owner/operator in meeting all applicable local, tribal, State, and Federal water quality goals or regulations. Associated Practices: 124 Agricultural Energy Management Plan - Landscape CAP, 374 Farmstead Energy Improvement, 670 Lighting System Improvement, 672 Building Envelope Improvement, or other applicable practices approved in the NRCS Field Office Technical Guide. After Situation: After EQIP contract approval, participant has obtained services from a certified TSP for development of the "Agricultural Energy Management - Headquarters" conservation activity plan. The CAP criteria require the plan to meet quality criteria for energy conservation and efficiency. The CAP plan may include recommendations for associated conservation practices which address energy conservation. The CAP meets the basic quality criteria for the 122 plan as cited in the NRCS Field Office Technical Guide.</p>	Number	Number	\$4,079.96	\$4,895.95		

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
14	AgEMP 122 Livestock - Large 301-2500 AU plus 1 non-Livestock Enterprise	<p>Scenario Description: One non-livestock enterprise as defined in the ASABE S612 on-farm energy audit standard in combination with a large livestock operation with 301-2500 AU (The livestock operation may have mixed animal types) Agricultural producer currently has minimal knowledge of and no plan for energy conservation. Producer is willing to collaborate with a certified TSP to develop an AgEMP 122 CAP. The AgEMP is a grouping of conservation measures and management activities which, when implemented as part of a conservation system, will help to ensure that both production and natural resource protection goals are achieved. An AgEMP incorporates recommended measures to maximize energy conservation and efficiency. An EMP is developed to assist an owner/operator in meeting all applicable local, tribal, State, and Federal water quality goals or regulations. Natural Resource Concern: Energy Conservation. Before Situation: Agricultural producer currently has minimal knowledge of and no plan for energy conservation. An Agricultural Energy Mgmt CAP for any type of livestock operation with one non-livestock enterprise will be planned according to the ASABE S612 standard (e.g., broiler and greenhouse). Producer is willing to collaborate with a certified TSP to develop an AgEMP 122 CAP. The AgEMP is a grouping of conservation measures and management activities which, when implemented as part of a conservation system, will help to ensure that both production and natural resource protection goals are achieved. An AgEMP incorporates recommended measures to maximize energy conservation and efficiency. An EMP is developed to assist an owner/operator in meeting all applicable local, tribal, State, and Federal water quality goals or regulations. Associated Practices: 124 Agricultural Energy Management Plan - Landscape CAP, 374 Farmstead Energy Improvement, 670 Lighting System Improvement, 672 Building Envelope Improvement, or other applicable practices approved in the NRCS Field Office Technical Guide. After Situation: After EQIP contract approval, participant has obtained services from a certified TSP for development of the "Agricultural Energy Management - Headquarters" conservation activity plan. The CAP criteria require the plan to meet quality criteria for energy conservation and efficiency. The CAP plan may include recommendations for associated conservation practices which address energy conservation. The CAP meets the basic quality criteria for the 122 plan as cited in the NRCS Field Office Technical Guide.</p>	Number	Number	\$2,781.31	\$3,337.57		

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
15	AgEMP 122 Livestock - Large 301-2500 AU plus 2 non-Livestock Enterprise	<p>Scenario Description: Two non-livestock enterprise as defined in the ASABE S612 on-farm energy audit standard in combination with a large livestock operation with 301-2500 AU (The livestock operation may have mixed animal types) Agricultural producer currently has minimal knowledge of and no plan for energy conservation. Producer is willing to collaborate with a certified TSP to develop an AgEMP 122 CAP. The AgEMP is a grouping of conservation measures and management activities which, when implemented as part of a conservation system, will help to ensure that both production and natural resource protection goals are achieved. An AgEMP incorporates recommended measures to maximize energy conservation and efficiency. An EMP is developed to assist an owner/operator in meeting all applicable local, tribal, State, and Federal water quality goals or regulations. Natural Resource Concern: Energy Conservation. Before Situation: Agricultural producer currently has minimal knowledge of and no plan for energy conservation. An Agricultural Energy Mgmt CAP for any type of livestock operation with two non-livestock enterprise will be planned according to the ASABE S612 standard (e.g., broiler and greenhouse). Producer is willing to collaborate with a certified TSP to develop an AgEMP 122 CAP. The AgEMP is a grouping of conservation measures and management activities which, when implemented as part of a conservation system, will help to ensure that both production and natural resource protection goals are achieved. An AgEMP incorporates recommended measures to maximize energy conservation and efficiency. An EMP is developed to assist an owner/operator in meeting all applicable local, tribal, State, and Federal water quality goals or regulations. Associated Practices: 124 Agricultural Energy Management Plan - Landscape CAP, 374 Farmstead Energy Improvement, 670 Lighting System Improvement, 672 Building Envelope Improvement, or other applicable practices approved in the NRCS Field Office Technical Guide. After Situation: After EQIP contract approval, participant has obtained services from a certified TSP for development of the "Agricultural Energy Management - Headquarters" conservation activity plan. The CAP criteria require the plan to meet quality criteria for energy conservation and efficiency. The CAP plan may include recommendations for associated conservation practices which address energy conservation. The CAP meets the basic quality criteria for the 122 plan as cited in the NRCS Field Office Technical Guide.</p>	Number	Number	\$3,612.36	\$4,334.83		

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
16	AgEMP 122 Livestock - Large 301-2500 AU plus 3 non-Livestock Enterprise	<p>Scenario Description: Three non-livestock enterprise as defined in the ASABE S612 on-farm energy audit standard in combination with a large livestock operation with 301-2500 AU (The livestock operation may have mixed animal types) Agricultural producer currently has minimal knowledge of and no plan for energy conservation. Producer is willing to collaborate with a certified TSP to develop an AgEMP 122 CAP. The AgEMP is a grouping of conservation measures and management activities which, when implemented as part of a conservation system, will help to ensure that both production and natural resource protection goals are achieved. An AgEMP incorporates recommended measures to maximize energy conservation and efficiency. An EMP is developed to assist an owner/operator in meeting all applicable local, tribal, State, and Federal water quality goals or regulations. Natural Resource Concern: Energy Conservation. Before Situation: Agricultural producer currently has minimal knowledge of and no plan for energy conservation. An Agricultural Energy Mgmt CAP for any type of livestock operation with three non-livestock enterprise will be planned according to the ASABE S612 standard (e.g., broiler and greenhouse). Producer is willing to collaborate with a certified TSP to develop an AgEMP 122 CAP. The AgEMP is a grouping of conservation measures and management activities which, when implemented as part of a conservation system, will help to ensure that both production and natural resource protection goals are achieved. An AgEMP incorporates recommended measures to maximize energy conservation and efficiency. An EMP is developed to assist an owner/operator in meeting all applicable local, tribal, State, and Federal water quality goals or regulations. Associated Practices: 124 Agricultural Energy Management Plan - Landscape CAP, 374 Farmstead Energy Improvement, 670 Lighting System Improvement, 672 Building Envelope Improvement, or other applicable practices approved in the NRCS Field Office Technical Guide. After Situation: After EQIP contract approval, participant has obtained services from a certified TSP for development of the "Agricultural Energy Management - Headquarters" conservation activity plan. The CAP criteria require the plan to meet quality criteria for energy conservation and efficiency. The CAP plan may include recommendations for associated conservation practices which address energy conservation. The CAP meets the basic quality criteria for the 122 plan as cited in the NRCS Field Office Technical Guide.</p>	Number	Number	\$4,443.41	\$5,332.10		

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
17	AgEMP 122 Livestock - Extra Large >2,500 AU plus 1 non-Livestock Enterprise	<p>Scenario Description: One non-livestock enterprise as defined in the ASABE S612 on-farm energy audit standard in combination with an extra-large livestock operation with >2,500 AU (The livestock operation may have mixed animal types) Agricultural producer currently has minimal knowledge of and no plan for energy conservation. Producer is willing to collaborate with a certified TSP to develop an AgEMP 122 CAP. The AgEMP is a grouping of conservation measures and management activities which, when implemented as part of a conservation system, will help to ensure that both production and natural resource protection goals are achieved. An AgEMP incorporates recommended measures to maximize energy conservation and efficiency. An EMP is developed to assist an owner/operator in meeting all applicable local, tribal, State, and Federal water quality goals or regulations. Natural Resource Concern: Energy Conservation. Before Situation: Agricultural producer currently has minimal knowledge of and no plan for energy conservation. An Agricultural Energy Mgmt CAP for any type of livestock operation with one non-livestock enterprise will be planned according to the ASABE S612 standard (e.g., broiler and greenhouse). Producer is willing to collaborate with a certified TSP to develop an AgEMP 122 CAP. The AgEMP is a grouping of conservation measures and management activities which, when implemented as part of a conservation system, will help to ensure that both production and natural resource protection goals are achieved. An AgEMP incorporates recommended measures to maximize energy conservation and efficiency. An EMP is developed to assist an owner/operator in meeting all applicable local, tribal, State, and Federal water quality goals or regulations. Associated Practices: 124 Agricultural Energy Management Plan - Landscape CAP, 374 Farmstead Energy Improvement, 670 Lighting System Improvement, 672 Building Envelope Improvement, or other applicable practices approved in the NRCS Field Office Technical Guide. After Situation: After EQIP contract approval, participant has obtained services from a certified TSP for development of the "Agricultural Energy Management - Headquarters" conservation activity plan. The CAP criteria require the plan to meet quality criteria for energy conservation and efficiency. The CAP plan may include recommendations for associated conservation practices which address energy conservation. The CAP meets the basic quality criteria for the 122 plan as cited in the NRCS Field Office Technical Guide.</p>	Number	Number	\$3,355.36	\$4,026.43		

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
18	AgEMP 122 Livestock - Extra Large >2,500 AU plus 2 non-Livestock Enterprise	<p>Scenario Description: Two non-livestock enterprise as defined in the ASABE S612 on-farm energy audit standard in combination with an extra-large livestock operation with >2,500 AU (The livestock operation may have mixed animal types) Agricultural producer currently has minimal knowledge of and no plan for energy conservation. Producer is willing to collaborate with a certified TSP to develop an AgEMP 122 CAP. The AgEMP is a grouping of conservation measures and management activities which, when implemented as part of a conservation system, will help to ensure that both production and natural resource protection goals are achieved. An AgEMP incorporates recommended measures to maximize energy conservation and efficiency. An EMP is developed to assist an owner/operator in meeting all applicable local, tribal, State, and Federal water quality goals or regulations. Natural Resource Concern: Energy Conservation. Before Situation: Agricultural producer currently has minimal knowledge of and no plan for energy conservation. An Agricultural Energy Mgmt CAP for any type of livestock operation with two non-livestock enterprise will be planned according to the ASABE S612 standard (e.g., broiler and greenhouse). Producer is willing to collaborate with a certified TSP to develop an AgEMP 122 CAP. The AgEMP is a grouping of conservation measures and management activities which, when implemented as part of a conservation system, will help to ensure that both production and natural resource protection goals are achieved. An AgEMP incorporates recommended measures to maximize energy conservation and efficiency. An EMP is developed to assist an owner/operator in meeting all applicable local, tribal, State, and Federal water quality goals or regulations. Associated Practices: 124 Agricultural Energy Management Plan - Landscape CAP, 374 Farmstead Energy Improvement, 670 Lighting System Improvement, 672 Building Envelope Improvement, or other applicable practices approved in the NRCS Field Office Technical Guide. After Situation: After EQIP contract approval, participant has obtained services from a certified TSP for development of the "Agricultural Energy Management - Headquarters" conservation activity plan. The CAP criteria require the plan to meet quality criteria for energy conservation and efficiency. The CAP plan may include recommendations for associated conservation practices which address energy conservation. The CAP meets the basic quality criteria for the 122 plan as cited in the NRCS Field Office Technical Guide.</p>	Number	Number	\$4,186.41	\$5,023.70		

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
19	AgEMP 122 Livestock - Extra Large >2,500 AU plus 3 non-Livestock Enterprise	<p>Scenario Description: Three non-livestock enterprise as defined in the ASABE S612 on-farm energy audit standard in combination with an extra-large livestock operation with >2,500 AU (The livestock operation may have mixed animal types) Agricultural producer currently has minimal knowledge of and no plan for energy conservation. Producer is willing to collaborate with a certified TSP to develop an AgEMP 122 CAP. The AgEMP is a grouping of conservation measures and management activities which, when implemented as part of a conservation system, will help to ensure that both production and natural resource protection goals are achieved. An AgEMP incorporates recommended measures to maximize energy conservation and efficiency. An EMP is developed to assist an owner/operator in meeting all applicable local, tribal, State, and Federal water quality goals or regulations. Natural Resource Concern: Energy Conservation. Before Situation: Agricultural producer currently has minimal knowledge of and no plan for energy conservation. An Agricultural Energy Mgmt CAP for any type of livestock operation with three non-livestock enterprise will be planned according to the ASABE S612 standard (e.g., broiler and greenhouse). Producer is willing to collaborate with a certified TSP to develop an AgEMP 122 CAP. The AgEMP is a grouping of conservation measures and management activities which, when implemented as part of a conservation system, will help to ensure that both production and natural resource protection goals are achieved. An AgEMP incorporates recommended measures to maximize energy conservation and efficiency. An EMP is developed to assist an owner/operator in meeting all applicable local, tribal, State, and Federal water quality goals or regulations. Associated Practices: 124 Agricultural Energy Management Plan - Landscape CAP, 374 Farmstead Energy Improvement, 670 Lighting System Improvement, 672 Building Envelope Improvement, or other applicable practices approved in the NRCS Field Office Technical Guide. After Situation: After EQIP contract approval, participant has obtained services from a certified TSP for development of the "Agricultural Energy Management - Headquarters" conservation activity plan. The CAP criteria require the plan to meet quality criteria for energy conservation and efficiency. The CAP plan may include recommendations for associated conservation practices which address energy conservation. The CAP meets the basic quality criteria for the 122 plan as cited in the NRCS Field Office Technical Guide.</p>	Number	Number	\$5,017.47	\$6,020.96		

AGRICULTURAL ENERGY MANAGEMENT PLAN, LANDSCAPE - WRITTEN
Practice Code 124

PRS Unit of Measurement: Number

Definition:

A Landscape Agricultural Energy Management Plan (Landscape AgEMP) contains the strategy by which the producer will explore and address producer/grower on-farm energy savings and opportunities on the working land (crop, forest, pasture, range). A Landscape Agricultural Energy Plan conservation activity plan must:

- Meet NRCS quality criteria for soil erosion, water quantity, energy, and other identified resource concerns;
- Comply with federal, state, tribal, and local laws, regulations and permit requirements; and
- Satisfy the operator's objectives.

Purposes: Landscape Agricultural Energy Resource Assessment: This element determines and documents current energy usage, over the past annual cycle. The evaluation of energy conservation activities shall include energy used in the cultivation, irrigation, production, protection, and harvesting of agricultural/forest crops.

Applicability: On lands in Iowa that will benefit from the development and implementation of an Agricultural Energy Management Plan.

Limitations:

Maintenance: Practice must be maintained for a lifespan of 1 year.

Payment Schedule:

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
1	Non-Irrigated Small, Less Than 50 acres	<p>Scenario Description: Typical non-irrigated small cropping system with < 50 acres. Natural Resource Concern: Energy Conservation. Before Situation: Agricultural producer currently has minimal knowledge of and no plan for energy conservation. Producer currently manages a small non-irrigated operation with < 50 acres. Producer is willing to collaborate with a certified TSP to develop an AgEMP 124 CAP (on-farm energy audit). Participant to obtain an AgEMP by a certified Technical Service Provider, in accordance with ASABE S612, July 2009, for non-irrigated crops farmed on less than 50 acres. The purpose of this AgEMP is to provide the producer with specific recommendations for increasing energy efficiency and reducing energy use for each major cropping activity on the farm. The AgEMP is to provide estimates of energy savings for the landscape operations and does not include the headquarter operations. Energy usage may include, but is not limited to: manure land application; agricultural practices (i.e., on-farm-use of mobile agricultural equipment). An AgEMP is developed to assist an owner/operator in meeting all applicable local, tribal, State, and Federal water quality goals or regulations. Associated Practices: 122 Agricultural Energy Management Plan - Headquarters CAP, 374 Farmstead Energy Improvement, or other applicable practices approved in the NRCS Field Office Technical Guide. After Situation: After EQIP contract approval, participant has obtained services from a certified TSP for development of the "Agricultural Energy Management - Landscape" conservation activity plan. The CAP criteria require the plan to meet quality criteria for energy conservation and efficiency. The CAP plan may include recommendations for associated conservation practices which address energy conservation. The CAP meets the basic quality criteria for the 124 plan as cited in the NRCS Field Office Technical Guide.</p>	Number	Number	\$1,308.57	\$1,570.29		
2	Non-Irrigated Medium, 50 to 499 acres	<p>Scenario Description: Typical non-irrigated medium cropping operation with 50-499 acres. Natural Resource Concern: Energy Conservation Before Situation: Agricultural producer currently has minimal knowledge of and no plan for energy conservation. Producer currently manages a medium non-irrigated operation with 50-499 acres. Producer is willing to collaborate with a certified TSP to develop an AgEMP 124 CAP (on-farm energy audit). Participant to obtain an AgEMP by a certified Technical Service Provider, in accordance with ASABE S612, July 2009, for non-irrigated crops farmed on 50-499 acres. The purpose of this AgEMP is to provide the producer with specific recommendations for increasing energy efficiency and reducing energy use for each major cropping activity on the farm. The AgEMP is to provide estimates of energy savings for the landscape operations and does not include the headquarter operations. Energy usage may include, but is not limited to: manure land application; agricultural practices (i.e., on-farm-use of mobile agricultural equipment). An AgEMP is developed to assist an owner/operator in meeting all applicable local, tribal, State, and Federal water quality goals or regulations. Associated Practices: 122 Agricultural Energy Management Plan - Headquarters CAP, 374 Farmstead Energy Improvement, or other applicable practices approved in the NRCS Field Office Technical Guide. After Situation: After EQIP contract approval, participant has obtained services from a certified TSP for development of the "Agricultural Energy Management - Landscape" conservation activity plan. The CAP criteria require the plan to meet quality criteria for energy conservation and efficiency. The CAP plan may include recommendations for associated conservation practices which address energy conservation. The CAP meets the basic quality criteria for the 124 plan as cited in the NRCS Field Office Technical Guide.</p>	Number	Number	\$1,661.94	\$1,994.33		

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
3	Non-Irrigated Large, 500 to 5000 acres	<p>Scenario Description: Typical non-irrigated large cropping operation with 50-5000 acres. Natural Resource Concern: Energy Conservation. Before Situation: Agricultural producer currently has minimal knowledge of and no plan for energy conservation. Producer currently manages a large non-irrigated operation with 500-5,000 acres. Producer is willing to collaborate with a certified TSP to develop an AgEMP 124 CAP (on-farm energy audit). Participant to obtain an AgEMP by a certified Technical Service Provider, in accordance with ASABE S612, July 2009, for non-irrigated crops farmed on 500-5,000 acres. The purpose of this AgEMP is to provide the producer with specific recommendations for increasing energy efficiency and reducing energy use for each major cropping activity on the farm. The AgEMP is to provide estimates of energy savings for the landscape operations and does not include the headquarter operations. Energy useage may include, but is not limited to: manure land application; agricultural practices (i.e., on-farm-use of mobile agricultural equipment). An AgEMP is developed to assist an owner/operator in meeting all applicable local, tribal, State, and Federal water quality goals or regulations.</p> <p>Associated Practices: 122 Agricultural Energy Management Plan - Headquarters CAP, 374 Farmstead Energy Improvement, or other applicable practices approved in the NRCS Field Office Technical Guide. After Situation: After EQIP contract approval, participant has obtained services from a certified TSP for development of the "Agricultural Energy Management - Landscape" conservation activity plan. The CAP criteria require the plan to meet quality criteria for energy conservation and efficiency. The CAP plan may include recommendations for associated conservation practices which address energy conservation. The CAP meets the basic quality criteria for the 124 plan as cited in the NRCS Field Office Technical Guide.</p>	Number	Number	\$2,025.61	\$2,430.74		
4	Non-Irrigated Extra Large, Greater Than 5000 acres	<p>Scenario Description: Typical non-irrigated extra-large cropping operation with >5,000 acres. Natural Resource Concern: Energy Conservation. Before Situation: Agricultural producer currently has minimal knowledge of and no plan for energy conservation. Producer currently manages an extra-large non-irrigated operation with >5,000 acres. Producer is willing to collaborate with a certified TSP to develop an AgEMP 124 CAP (on-farm energy audit). Participant to obtain an AgEMP by a certified Technical Service Provider, in accordance with ASABE S612, July 2009, for non-irrigated crops farmed on >5,000 acres. The purpose of this AgEMP is to provide the producer with specific recommendations for increasing energy efficiency and reducing energy use for each major cropping activity on the farm. The AgEMP is to provide estimates of energy savings for the landscape operations and does not include the headquarter operations. Energy usage may include, but is not limited to: manure land application; agricultural practices (i.e., on-farm-use of mobile agricultural equipment). An AgEMP is developed to assist an owner/operator in meeting all applicable local, tribal, State, and Federal water quality goals or regulations.</p> <p>Associated Practices: 122 Agricultural Energy Management Plan - Headquarters CAP, 374 Farmstead Energy Improvement, or other applicable practices approved in the NRCS Field Office Technical Guide. After Situation: After EQIP contract approval, participant has obtained services from a certified TSP for development of the "Agricultural Energy Management - Landscape" conservation activity plan. The CAP criteria require the plan to meet quality criteria for energy conservation and efficiency. The CAP plan may include recommendations for associated conservation practices which address energy conservation. The CAP meets the basic quality criteria for the 124 plan as cited in the NRCS Field Office Technical Guide.</p>	Number	Number	\$2,629.50	\$3,155.40		

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
5	Irrigated Small, Less Than 50 acres	<p>Scenario Description: Typical irrigated small cropping system with < 50 acres. Natural Resource Concern: Energy Conservation. Before Situation: Agricultural producer currently has minimal knowledge of and no plan for energy conservation. Producer currently manages a small irrigated operation with < 50 acres. Producer is willing to collaborate with a certified TSP to develop an AgEMP 124 CAP (on-farm energy audit). Participant to obtain an AgEMP by a certified Technical Service Provider, in accordance with ASABE S612, July 2009, for irrigated crops farmed on less than 50 acres. The purpose of this AgEMP is to provide the producer with specific recommendations for increasing energy efficiency and reducing energy use for each major cropping activity on the farm. The AgEMP is to provide estimates of energy savings for the landscape operations and does not include the headquarter operations. Energy usage may include, but is not limited to: irrigation pumping; manure land application; agricultural practices (i.e., on-farm-use of mobile agricultural equipment). An AgEMP is developed to assist an owner/operator in meeting all applicable local, tribal, State, and Federal water quality goals or regulations. Associated Practices: 122 Agricultural Energy Management Plan - Headquarters CAP, 374 Farmstead Energy Improvement, or other applicable practices approved in the NRCS Field Office Tech Guide. After Situation: After EQIP contract approval, participant has obtained services from a certified TSP for development of the "Agricultural Energy Management - Landscape" conservation activity plan. The CAP criteria require the plan to meet quality criteria for energy conservation and efficiency. The CAP plan may include recommendations for associated conservation practices which address energy conservation. The CAP meets the basic quality criteria for the 124 plan as cited in the NRCS Field Office Technical Guide.</p>	Number	Number	\$2,030.55	\$2,436.66		
6	Irrigated Medium, 50 to 499 acres	<p>Scenario Description: Typical irrigated medium cropping operation with 50-499 acres. Natural Resource Concern: Energy Conservation. Before Situation: Agricultural producer currently has minimal knowledge of and no plan for energy conservation. Producer currently manages a medium irrigated operation with 50-499 acres. Producer is willing to collaborate with a certified TSP to develop an AgEMP 124 CAP (on-farm energy audit). Participant to obtain an AgEMP by a certified Technical Service Provider, in accordance with ASABE S612, July 2009, for irrigated crops farmed on 50-499 acres. The purpose of this AgEMP is to provide the producer with specific recommendations for increasing energy efficiency and reducing energy use for each major cropping activity on the farm. The AgEMP is to provide estimates of energy savings for the landscape operations and does not include the headquarter operations. Energy usage may include, but is not limited to: irrigation pumping; manure land application; agricultural practices (i.e., on-farm-use of mobile agricultural equipment). An AgEMP is developed to assist an owner/operator in meeting all applicable local, tribal, State, and Federal water quality goals or regulations. Associated Practices: 122 Agricultural Energy Management Plan - Headquarters CAP, 374 Farmstead Energy Improvement, or other applicable practices approved in the NRCS Field Office Technical Guide. After Situation: After EQIP contract approval, participant has obtained services from a certified TSP for development of the "Agricultural Energy Management - Landscape" conservation activity plan. The CAP criteria require the plan to meet quality criteria for energy conservation and efficiency. The CAP plan may include recommendations for associated conservation practices which address energy conservation. The CAP meets the basic quality criteria for the 124 plan as cited in the NRCS Field Office Technical Guide.</p>	Number	Number	\$2,698.53	\$3,238.23		

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
7	Irrigated Large, 500 to 5000 acres	<p>Scenario Description: Typical irrigated large cropping operation with 500-5,000 acres. Natural Resource Concern: Energy Conservation. Before Situation: Agricultural producer currently has minimal knowledge of and no plan for energy conservation. Producer currently manages a large irrigated operation with 500-5,000 acres. Producer is willing to collaborate with a certified TSP to develop an AgEMP 124 CAP (on-farm energy audit). Participant to obtain an AgEMP by a certified Technical Service Provider, in accordance with ASABE S612, July 2009, for irrigated crops farmed on 500-5,000 acres. The purpose of this AgEMP is to provide the producer with specific recommendations for increasing energy efficiency and reducing energy use for each major cropping activity on the farm. The AgEMP is to provide estimates of energy savings for the landscape operations and does not include the headquarter operations. Energy usage may include, but is not limited to: irrigation pumping; manure land application; agricultural practices (i.e., on-farm-use of mobile agricultural equipment). An AgEMP is developed to assist an owner/operator in meeting all applicable local, tribal, State, and Federal water quality goals or regulations. Associated Practices: 122 Agricultural Energy Management Plan - Headquarters CAP, 374 Farmstead Energy Improvement, or other applicable practices approved in the NRCS Field Off Tech Guide. After Situation: After EQIP contract approval, participant has obtained services from a certified TSP for development of the "Agricultural Energy Management - Landscape" conservation activity plan. The CAP criteria require the plan to meet quality criteria for energy conservation and efficiency. The CAP plan may include recommendations for associated conservation practices which address energy conservation. The CAP meets the basic quality criteria for the 124 plan as cited in the NRCS Field Office Technical Guide.</p>	Number	Number	\$3,481.14	\$4,177.36		
8	Irrigated Extra Large, Greater Than 5000 acres	<p>Scenario Description: Typical irrigated extra-large cropping operation with >5,000 acres. Natural Resource Concern: Energy Conservation. Before Situation: Agricultural producer currently has minimal knowledge of and no plan for energy conservation. Producer currently manages an extra-large irrigated operation with >5,000 acres. Producer is willing to collaborate with a certified TSP to develop an AgEMP 124 CAP (on-farm energy audit). Participant to obtain an AgEMP by a certified Technical Service Provider, in accordance with ASABE S612, July 2009, for irrigated crops farmed on >5,000 acres. The purpose of this AgEMP is to provide the producer with specific recommendations for increasing energy efficiency and reducing energy use for each major cropping activity on the farm. The AgEMP is to provide estimates of energy savings for the landscape operations and does not include the headquarter operations. Energy usage may include, but is not limited to: irrigation pumping; manure land application; agricultural practices (i.e., on-farm-use of mobile agricultural equipment). An AgEMP is developed to assist an owner/operator in meeting all applicable local, tribal, State, and Federal water quality goals or regulations. Associated Practices: 122 Agricultural Energy Management Plan - Headquarters CAP, 374 Farmstead Energy Improvement, or other applicable practices approved in the NRCS Field Office Technical Guide. After Situation: After EQIP contract approval, participant has obtained services from a certified TSP for development of the "Agricultural Energy Management - Landscape" conservation activity plan. The CAP criteria require the plan to meet quality criteria for energy conservation and efficiency. The CAP plan may include recommendations for associated conservation practices which address energy conservation. The CAP meets the basic quality criteria for the 124 plan as cited in the NRCS Field Office Technical Guide.</p>	Number	Number	\$3,909.01	\$4,690.81		

**BUILDING ENVELOPE IMPROVEMENT
Practice Code 672**

Non - Livestock Structural Practice

PRS Unit of Measurement: Number

Definition: Modification or retrofit of the building envelope of an existing agricultural structure.

Purpose: This practice may be applied to reduce energy use by regulating heat transfer.

Applicability: This practice applies to any agricultural facility which is climate controlled at least part of the time with a completed energy analysis that complies with the guidelines for a Type 2 on-farm energy audit per the American Society of Agricultural and Biological Engineers (ASABE) S612. The audit will have at a minimum addressed the major activities of ventilation, air heating and air cooling that exists in the building.

Limitations: Contracts that include Agricultural Energy Management Plans or audits as required for 672 – Building Envelope Improvement shall have energy plans or audits sent to the Area Engineer who will forward a copy to Mark Garrison in the State Office for administrative review before certification of plans or installation of practices outlined in plans or audits.

Maintenance: Practice will be maintained for a lifespan of 10 years.

Payment Schedule:

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
1	Building Envelope - Attic Insulation	<p>Scenario Description: Install a minimum R-7 insulation in an existing attic or ceiling to reduce heat transfer. Increased insulation reduces seasonal heat loss and heat gain which reduces the respective need for heating and cooling equipment to operate. Payment includes materials, equipment and labor to install. After Practice Description: A more effective and efficient building envelope can be created through addition of, or increased, attic insulation. Associated practices/activities: 122-AgEMP - HQ, 672-Building Envelope Improvement, and other activities within 374-Farmstead Energy Improvement. The resource concern is inefficient use of energy in the farm operation which increases dependence on non-renewable energy sources and can be addressed through improved energy efficiency. Any improvements are based on a Type 2 energy audit meeting the requirements of ASABE S612.</p>	Area of Attic Insulated	Square Foot	\$0.34	\$0.51	\$0.51	\$0.61

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
2	Building Envelope - Wall Insulation	Scenario Description: Enclose both sidewalls and endwalls from ceiling to floor in one of two manners: 1) metal exterior, 3.5" fiberglass batts (R-11), vapor barrier, & interior plywood or OSB sheathing, or 2) closed-cell polyurethane foam application (minimum 1" thickness (R-7) of 2.5 lbs/cu.ft. or higher density, (3.0 or higher density preferred) with a form of physical protective barrier on lower 2' (may be 6 lbs/cu.ft. or higher density 1/8" thick foam, or treated lumber). Payment includes materials, equipment and labor to install. After Practice Description: A more effective and efficient building envelope can be created through addition of, or increased, insulation in a 40' x 400' poultry house. Associated practices/activities: may include 122-AgEMP - HQ, 672-Building Envelope Improvement, and other activities within 374-Farmstead Energy Improvement. The resource concern is inefficient use of energy in the farm operation which increases dependence on non-renewable energy sources and can be addressed through improved energy efficiency. Any improvements are based on a Type 2 energy audit meeting the requirements of ASABE S612.	Area of Wall Insulated	Square Foot	\$0.83	\$1.25	\$1.25	\$1.49
3	Building Envelope - Sealant	Scenario Description: Seal the gaps between walls, gables, ceiling, etc. in a poultry house or greenhouse. Payment includes materials, equipment and labor performed by a professional contractor. After Practice Description: A more effective and efficient building envelope can be created through interior sealing of the exterior walls at the footer plate, eaves, ridge cap, and gable ends. The sealant reduces seasonal heat loss and heat gain due to infiltration which reduces the respective need for heating and cooling equipment to operate. The unit basis of payment in this scenario is each house based on 60' x 500' poultry house with an assumed need of sealant to seal 2400 linear feet of gap. Associated practices/activities: may include 122-AgEMP - HQ, 672-Building Envelope Improvement, and other activities within 374-Farmstead Energy Improvement. The resource concern is inefficient use of energy in the farm operation which increases dependence on non-renewable energy sources and can be addressed through improved energy efficiency. Any improvements are based on a Type 2 energy audit meeting the requirements of ASABE S612.	Perimeter of heated structure	Foot	\$0.72	\$1.08	\$1.08	\$1.30
4	Building Envelope - Greenhouse Screens	Scenario Description: Installation of a mechanical energy screen system associated with a greenhouse consisting of a drive motor, support cables, controls, and shade material, which may be woven, knitted, or non-woven strips of aluminum fiber, polyethylene, nylon or other synthetic material. The screen provides a means to better control solar heat gain and heat transfer during night or cold weather conditions to reduce energy use. Screens and similar devices may also be used to divide internal areas and allow for differentiated heating, ventilation, or cooling system operation to reduce energy use. Payment includes materials and labor to install. After Practice Description: The greenhouse is fitted with a mechanically controlled energy screen installed truss-to-truss or gutter-to-gutter, with side screens as necessary, reducing heat loss in the greenhouse. Associated practices/activities: may include 122-AgEMP - HQ, 672-Building Envelope Improvement, and other activities within 374-Farmstead Energy Improvement. The resource concern is inefficient use of energy in the farm operation which increases dependence on non-renewable energy sources and can be addressed through improved energy efficiency. Any improvements are based on a Type 2 energy audit meeting the requirements of ASABE S612.	Area of Screen	Square Foot	\$0.91	\$1.37	\$1.37	\$1.65

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
5	Building Envelope - Greenhouse Unglazed Wall Insulation	<p>Scenario Description: Installation of insulation in greenhouse to address energy loss. The insulation can be either of the cellulose or bubble type (or equivalent). The increased insulation reduces seasonal heat loss and heat gain which reduces the respective need for heating and cooling equipment to operate. Payment includes materials and labor to install. After Practice Description: The greenhouse is fitted with insulation installed truss-to-truss or gutter-to-gutter and/or non-glazed endwalls and/or sidewalls, reducing heat loss and gain in the greenhouse. Associated practices/activities: may include 122-AgEMP - HQ, and other activities within 374-Farmstead Energy Improvement. The resource concern is inefficient use of energy in the farm operation which increases dependence on non-renewable energy sources and can be addressed through improved energy efficiency. Any improvements are based on a Type 2 energy audit meeting the requirements of ASABE S612.</p>	Square Feet of insulation	Square Foot	\$0.14	\$0.21	\$0.21	\$0.25
6	Building Envelope - Insulated Door Upgrade	<p>Scenario Description: Replace an existing door with an insulated door, such as but not limited to a steel roll up door in a poultry building. Increased insulation reduces seasonal heat loss and heat gain which reduces the respective need for heating and cooling equipment to operate. Payment includes materials and labor to install. After Practice Description: A 20 gauge 12' x 12' rolling service insulated steel door is installed as a replacement for an existing less efficient door on a poultry building. Associated practices/activities may include: 122-AgEMP - HQ, and other activities within 374-Farmstead Energy Improvement. The resource concern is inefficient use of energy in the farm operation which increases dependence on non-renewable energy sources and can be addressed through improved energy efficiency. Any improvements are based on a Type 2 energy audit meeting the requirements of ASABE S612.</p>	Square foot	Square Foot	\$5.09	\$7.64	\$7.64	\$9.16
7	Building Envelope - Insulated Curtain Upgrade	<p>Scenario Description: Replacement of an existing non-insulated curtain with a seven layer insulated curtain with an R- value of 3 for a livestock building. The curtain's two outer layers are vinyl and polyethylene and the five inner layers are composed of insulating materials with air trapping fibers and a vapor barrier. Payment includes curtain and labor to install. Payment does not include mounting accessories because the scenario assumes the curtain is replacing a non-insulated curtain. After Practice Description: A 7 layer insulated curtain is installed as a replacement for an existing less efficient curtain on a livestock building. Associated practices/activities may include: 122-AgEMP - HQ, and other activities within 374-Farmstead Energy Improvement. The resource concern is inefficient use of energy in the farm operation which increases dependence on non-renewable energy sources and can be addressed through improved energy efficiency. Any improvements are based on a Type 2 energy audit meeting the requirements of ASABE S612.</p>	Square Foot	Square Foot	\$1.17	\$1.76	\$1.76	\$2.11
8	Building Envelope - Curtain Wall Conversion	<p>Scenario Description: Converting part or all of a curtain wall to solid insulated wall by installation of an insulated metal cover in a livestock building. Payment includes materials and labor for the installation of a weather proof exterior such as, but not limited to, corrugated steel, and insulation such as, but not limited to polyurethane R-7. Payment does not include upgrade to ventilation. After Practice Description: An insulated metal wall is installed as a replacement for an existing less efficient curtain on a livestock building. Conversion is for a building that requires 3040 sq ft of wall to replace the curtains. Associated practices/activities may include: 122-AgEMP - HQ, and other activities within 374-Farmstead Energy Improvement. The resource concern is inefficient use of energy in the farm operation which increases dependence on non-renewable energy sources and can be addressed through improved energy efficiency. Any improvements are based on a Type 2 energy audit meeting the requirements of ASABE S612.</p>	Square Foot	Square Foot	\$1.70	\$2.56	\$2.56	\$3.07

**CONSERVATION CROP ROTATION
Practice Code 328**

Non-Livestock Management Practice

PRS Unit of Measurement: Acre

Definition: Growing crops in a recurring sequence on the same field.

Purposes: To reduce sheet and rill erosion, reduce soil erosion from wind, maintain or improve soil organic matter content, manage the balance of plant nutrients, manage plant pests (weeds, insects, and diseases), provide food for domestic livestock and provide food and cover for wildlife.

Applicability: This practice applies to all land where crops are grown, except pastureland, hayland, or other land used for crops grown occasionally only to facilitate renovation or re-establishment of perennial vegetation. It does not apply to land devoted to orchards, vineyards, or nurseries.

Organic Crop Production incentive is meant to offset some of the costs incurred by conversion to organic farming.

Limitations: The Conservation Crop Rotation practice may be paid annually for up to 3 consecutive years.

Maintenance: Practice will be maintained for a lifespan of 1 year.

Payment Schedule:

ID	Scenario Name	Scenario & After Practice Description	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
1	Add Small Grain to Rotation	Scenario Description: Scenario is for incorporating a small grain crop into an existing cropping system that does not include small grains. This practice payment is provided to acquire the technical knowledge and skills necessary to effectively implement a conservation crop rotation utilizing small grain on a cropland farm, and foregone income that may be associated with the change from the current rotation. It requires new acres established in a rotation. Cost represents typical situations for conventional and organic producers. After Practice Description: A rotation is established that provides additional high residue and small grain that reduce erosion, improve soil quality, and break pest cycles.	Area planted	Acre	\$39.93	\$59.89	\$59.89	\$71.87
2	Add 2 Years of Perennials to Rotation	Scenario Description: Scenario is for incorporating two years of a high residue perennial crop into an existing rotation that does not include perennials. This practice payment is provided to acquire the technical knowledge and skills necessary to effectively implement a conservation crop rotation utilizing perennials on a cropland farm, and foregone income that may be associated with the change from the current rotation. It requires new acres established in the rotation. Cost represents typical situations for conventional and organic producers. After Practice Description: A rotation is establish that provides additional 2 yrs. of high residue perennial crops that reduce erosion, improve soil quality, and break pest cycles.	Area planted	Acre	\$88.78	\$133.18	\$133.18	\$159.81

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
3	Add 1 Year of Perennials to Rotation	<p>Scenario Description: Scenario is for incorporating one year of a high residue perennial crop into an existing rotation that does not include perennials. This practice payment is provided to acquire the technical knowledge and skills necessary to effectively implement a conservation crop rotation utilizing perennials on a cropland farm, and foregone income that may be associated with the change from the current rotation. It requires new acres established in the rotation. Cost represents typical situations for conventional and organic producers. After Practice Description: A rotation is established that provides additional 1 year of high residue perennial crops that reduce erosion, improve soil quality, and break pest cycles.</p>	Area planted	Acre	\$35.44	\$53.16	\$53.16	\$63.80
4	Add 2 Years of Perennials to Rotation, Specialty Crop	<p>Scenario Description: Scenario is for incorporating two years of a high residue perennial crop into an existing rotation that does not include perennials. This practice payment is provided to acquire the technical knowledge and skills necessary to effectively implement a conservation crop rotation utilizing perennials on an organic specialty crop farm, and foregone income that may be associated with the change from the current rotation. It requires new acres established in the rotation. This practice includes foregone income by including perennials into the rotation. Cost represents typical situations for conventional and organic specialty crop producers. After Practice Description: A rotation is establish that provides additional 2 yrs. of high residue perennial crops that reduce erosion, improve soil quality, and break pest cycles.</p>	Area Planted	Acre	\$295.22	\$442.83	\$442.83	\$531.39

**COVER CROP
Practice 340**

Non-Livestock Vegetative Practice

PRS Unit of Measurement: Acre

Definition: Crops including grasses, legumes, and forbs planted for seasonal cover and other conservation purposes.

Purpose: To reduce erosion from wind and water, increase soil organic matter content, capture and recycle or redistribute nutrients in the soil profile, promote biological nitrogen fixation, increase biodiversity. To suppress diseases, weeds and insects, provide supplemental forage, soil moisture management, reduce particulate emissions into the atmosphere and minimize or reduce soil compaction.

Applicability: On all lands requiring vegetative cover for natural resource protection and/or improvement.

Cover Crop is an annually seeded small grain crop for erosion control purposes, livestock purposes or organic production.

Limitations:

Maintenance: Cover Crop will be maintained for a lifespan of 1 year.

Payment Schedule: This practice may be scheduled for 3 consecutive years.

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
1	Chemical or Mechanical Kill Species	<p>Scenario Description: A single species grass/legume/brassica or mixed grass/legume/brassica cover will be planted as a cover crop immediately after harvest of a row crop (within 30 days), and will be followed by a row crop that will utilize fixed nitrogen and cover crop biomass as a mulch. This scenario assumes that seed will be planted with a no-till drill. Legume seeds must be inoculated with the proper inoculant prior to planting. The cover crop should be allowed to reach early to mid-bloom before it is terminated; using approved chemical and/or mechanical methods, in order to maximize nitrogen fixation. The legume will promote biological nitrogen fixation and reduce energy use by reducing the need for commercial nitrogen fertilizer in following crops. After Practice Description: Within 30 days after harvest fields are planted with a single species grass or legume cover crop, such as annual ryegrass, clover or vetch species. The cover crop is seeded with a no-till drill. No fertilizer is applied with the cover crop. The cover crop provides soil cover by late fall, throughout the winter, and into the early spring. Runoff and erosion are reduced and no rills are visible on the soil surface in the spring. The cover crop is terminated chemically and/or mechanically prior to spring planting as late as feasible to maximize plant biomass production. Over time, soil health is improved due to the additional biomass, ground cover, and plant diversity introduced to the cropping system. Cover crop residues left on the surface may maximize weed control by increasing allelopathic and mulching effect. By utilizing the nitrogen that is fixed by the legume cover crop, the amount of energy is reduced by reducing the amount of commercial fertilizer that will be needed for the following crop.</p>	Area Planted	Acre	\$38.89	\$58.34	\$58.34	\$70.00

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
2	Winter Kill Species	<p>Scenario Description: Typically a small grain or small grain-brassica mix (may also use forage sorghum, legumes, buckwheat, etc.) will be planted as a cover crop immediately after harvest of a row crop (within 30 days), and will be followed by a row crop that will utilize the residue as a mulch. This scenario assumes that seed will be planted with a no-till drill. The cover crop species established under this scenario will winter kill, meaning no species termination is required. After Practice Description: Within 30 days after harvest of row crop, fields are planted with a small grain-brassica mix cover crop, typically oats and oilseed radish. The cover crop is seeded with a no-till drill. No additional fertilizer is applied with the cover crop. The cover crop provides soil cover by late fall, throughout the winter, and into the early spring. Runoff and erosion are reduced and no rills are visible on the soil surface in the spring. The cover crop is established using winter kill species which should not require termination in the spring. Over time, soil health is improved due to the additional biomass, ground cover, and plant diversity introduced to the cropping system. Wind erosion is reduced by standing residues. Cover crop residues left on the surface may maximize weed control by increasing allelopathic and mulching effect.</p>	Area planted	Acre	\$28.14	\$42.21	\$42.21	\$50.65
3	2 Species Mix	<p>Scenario Description: This scenario reflects the establishment of a diverse mix of cover crops consisting of two or more species which can include a combination of grasses, legumes, forbs, or other herbaceous plants. Cover crop will be planted immediately after harvest of a row crop (within 30 days), and will be followed by a row crop that will utilize the residue as a mulch. This scenario assumes that seed will be planted with a no-till drill. The cover crop should be allowed to generate as much biomass as possible, without delaying planting of the following crop. The cover crop will be terminated using approved chemical and/or mechanical methods. After Practice Description: Within 30 days after harvest of row crop, fields are planted with a diverse mix of cover crop species. The cover crop is seeded with a no-till drill. No additional fertilizer is applied with the cover crop. The cover crop provides soil cover by late fall, throughout the winter, and into the early spring. Runoff and erosion are reduced and no rills are visible on the soil surface in the spring. Wind erosion is reduced by standing residues. The cover crop is terminated with approved chemical and/or mechanical methods prior to spring planting as late as feasible to maximize plant biomass production. Over time, soil health is improved at an accelerated pace due to the diversity in additional biomass and ground cover which provides increased soil infiltration, and plant diversity introduced to the cropping system. Cover crop residues left on the surface may maximize weed control by increasing allelopathic and mulching effect.</p>	Area planted	Acre	\$45.78	\$68.67	\$68.67	\$82.40
4	3 Species or More Mix	<p>Scenario Description: This scenario reflects the establishment of a diverse mix of cover crops consisting of three or more species which can include a combination of grasses, legumes, forbs, or other herbaceous plants. Cover crop will be planted immediately after harvest of a row crop (within 30 days), and will be followed by a row crop that will utilize the residue as a mulch. This scenario assumes that seed will be planted with a no-till drill. The cover crop should be allowed to generate as much biomass as possible, without delaying planting of the following crop. The cover crop will be terminated using approved chemical and/or mechanical methods. After Practice Description: Within 30 days after harvest of row crop, fields are planted with a diverse mix of cover crop species. The cover crop is seeded with a no-till drill or other approved method. No additional fertilizer is applied with the cover crop. The cover crop provides soil cover by late fall, throughout the winter, and into the early spring. Runoff and erosion are reduced and no rills are visible on the soil surface in the spring. Wind erosion is reduced by standing residues. The cover crop is terminated with approved chemical and/or mechanical methods prior to spring planting as late as feasible to maximize plant biomass production. Over time, soil health is improved at an accelerated pace due to the diversity in additional biomass and ground cover which provides increased soil infiltration, and plant diversity introduced to the cropping system. Cover crop residues left on the surface may maximize weed control by increasing allelopathic and mulching effect.</p>	Area planted	Acre	\$49.05	\$73.58	\$73.58	\$88.29

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
5	Organic Cover Crop	<p>Scenario Description: Typically a small grain or small grain-legume mix (may also use forage sorghum, radishes, turnips, buckwheat, etc.) will be planted as a cover crop immediately after harvest of an organically grown crop (within 30 days), and will be followed by an organically grown crop that will utilize the residue as a mulch. This scenario assumes that seed will be planted with a no-till drill. The cover crop should be allowed to generate as much biomass as possible, without delaying planting of the following crop. The cover crop will be terminated using a mechanical kill method (mowing, rolling, undercutting, etc.), a minimum of 3 weeks prior to planting the subsequent crop. This scenario REQUIRES use of Certified Organic Seed according to NOP rules. After Practice Description: Within 30 days after harvest of organic crop, fields are planted with a small grain-legume mix cover crop, typically rye and clover. The cover crop is seeded with a no-till drill. No additional fertilizer is applied with the cover crop. The cover crop provides soil cover by late fall, throughout the winter, and into the early spring. Runoff and erosion are reduced and no rills are visible on the soil surface in the spring. The cover crop is terminated with using a mechanical kill method (mowing, rolling, undercutting, etc.), prior to spring planting as late as feasible to maximize plant biomass production. Over time, soil health is improved due to the additional biomass, ground cover, and plant diversity introduced to the cropping system. Wind erosion is reduced by standing residues. Cover crop residues left on the surface may maximize weed control by increasing allelopathic and mulching effect.</p>	Area planted	Acre	\$81.25	\$121.87	\$121.87	\$146.24

**FARMSTEAD ENERGY IMPROVEMENT
Practice Code 374**

Non-Livestock Vegetative Practice

PRS Unit of Measurement: Number

Definition: Development and implementation of improvements to improve the energy efficiency of on-farm energy use.

Purpose: This practice may be applied as part of a conservation management system to reduce energy use.

Applicability: The practice applies to non-residential structures and energy using systems where reducing energy use is the identified goal.

Limitations: Contracts that include Agricultural Energy Management Plans or audits as required for 374 – Farmstead Energy Improvement shall have energy plans or audits sent to the Area Engineer who will forward a copy to Mark Garrison in the State Office for administrative review before certification of plans or installation of practices outlined in plans or audits.

Energy Initiative – Conservation Practice 374 Farmstead Energy Improvement with any of the following scenarios; Motors Large, Motors Medium, Motors Small, Motors up to 1 HP and Drying-Grain, where a less efficient motor is being replaced by a more energy efficient motor, **the old motor must be decommissioned and scrapped prior to payment.**

Financial Assistance for Farmstead Energy Improvement, payment scenario ID 33 Grain Dryer is eligible to treat the existing resource concern, including up to a 25% expansion of the existing extent of the resource concern. EQIP Financial Assistance is only eligible to treat existing resource concerns for all other scenarios. For the following scenario, Grain Dryer, the rated capacity of the dryer will be based on 10 points moisture removal from corn.

Maintenance: Practice must be maintained for a lifespan of 10 years.

Payment Schedule:

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
5	Ventilation - Exhaust	Scenario Description: Replacement of an exhaust fan with a more efficient exhaust fan. Payment includes fan, controls, wiring, associated appurtenances and labor to install. After Practice Description: High-efficiency ventilation system which reduces energy use. The new ventilation equipment will provide suitable air quality and reduce overall power requirements (kW) compared to the existing ventilation system as evidenced in an energy audit. Associated practices/activities: may include 122-AgEMP - HQ, and other activities within 374-Farmstead Energy Improvement. The resource concern is inefficient use of energy in the farm operation which increases dependence on non-renewable energy sources and can be addressed through improved energy efficiency. Any improvements are based on a Type 2 energy audit meeting the requirements of ASABE S612.	Each	Each	\$627.62	\$941.43	\$941.43	\$1,129.72

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
6	Ventilation - Horizontal Air Flow/Stir Fan	<p>Scenario Description: A system of fans is installed where none exist to create a horizontal air circulation pattern, and remove air stratification. The new system promotes efficient heat and moisture distribution. Payment includes fan controls, wiring, associated appurtenances and labor to install. After Practice Description: High-efficiency air circulation system which reduces energy use. In a typical 10,000 square foot greenhouse, 10 HAF fans are needed. The new equipment will provide suitable air quality and reduce overall power requirements (kW) compared to the existing system as evidenced in an energy audit. Associated practices/activities: may include 122-AgEMP - HQ, and other activities within 374-Farmstead Energy Improvement. The resource concern is inefficient use of energy in the farm operation which increases dependence on non-renewable energy sources and can be addressed through improved energy efficiency. Any improvements are based on a Type 2 energy audit meeting the requirements of ASABE S612.</p>	Each	Each	\$100.21	\$150.32	\$150.32	\$180.38
7	Ventilation - Cool Cell, Evaporative Cooling System	<p>Scenario Description: A cool cell evaporative cooling system is installed in a livestock barn to reduce total ventilation requirements in hot weather. Scenario is applicable where there is an existing, inefficient cooling system/ventilation system in place that will be replaced by the cool cell. Payment includes all materials and labor to install the evaporative cooling system. After Practice Description: A cool cell evaporative cooling system reduces energy use by allowing lower ventilation rates that will result in net energy savings. The new equipment will provide suitable air quality and reduce overall power requirements (kW) compared to the existing system as evidenced in an energy audit. Associated practices/activities: may include 122-AgEMP - HQ, and other activities within 374-Farmstead Energy Improvement. The resource concern is inefficient use of energy in the farm operation which increases dependence on non-renewable energy sources and can be addressed through improved energy efficiency. Any improvements are based on a Type 2 energy audit meeting the requirements of ASABE S612.</p>	Square Foot	Square Foot	\$13.03	\$19.55	\$19.55	\$23.46
8	Refrigeration - Plate Cooler	<p>Scenario Description: The installation of all stainless steel dual pass plate cooler, type 316 stainless steel. Payment includes plate cooler and labor to install. After Practice Description: High-efficiency milk cooling system which reduces energy use. The new milk cooling equipment will pre-cool the milk and reduce overall power requirements (kW) compared to the existing milk cooling system (where most of the cooling was accomplished in the bulk tank) as evidenced in an energy audit. Associated practices/activities: may include 122-AgEMP - HQ, and other activities within 374-Farmstead Energy Improvement. The resource concern is inefficient use of energy in the farm operation which increases dependence on non-renewable energy sources and can be addressed through improved energy efficiency. Any improvements are based on a Type 2 energy audit meeting the requirements of ASABE S612.</p>	Each	Each	\$2,313.15	\$3,469.72	\$3,469.72	\$4,163.66

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
9	Refrigeration - Scroll Compressor	<p>Scenario Description: Install a new comparably sized scroll compressor, associated controls, wiring, and materials to retrofit an existing refrigeration system. A new condenser is not included in this typical scenario. Payment includes compressor, controls, wiring, appurtenances and labor to install. After Practice Description: A more efficient scroll compressor, which will reduce energy use, is evidenced by the energy audit. A comparably sized scroll compressor provides refrigeration capacity at a higher efficiency than a reciprocating compressor. Newer scroll compressor systems typically reduce electricity use by 15 to 25 percent compared to reciprocating compressors. Associated practices/activities: may include 122-AgEMP - HQ, and other activities within 374-Farmstead Energy Improvement. The resource concern is inefficient use of energy in the farm operation which increases dependence on non-renewable energy sources and can be addressed through improved energy efficiency. Any improvements are based on a Type 2 energy audit meeting the requirements of ASABE S612.</p>	Horsepower	Horsepower	\$260.65	\$390.98	\$390.98	\$469.17
10	Refrigeration - Compressor Heat Recovery System	<p>Scenario Description: Install a new comparably sized compressor heat recovery unit. The unit includes insulated storage tanks with heat exchangers added to a refrigeration system. The system utilizes the heat extracted from the fluid (e.g. milk) that passes through the hot gas refrigerant line from the refrigeration system's compressors, to pre-heat water to approximately 110°F before it enters a conventional water heater. Energy savings comes from the reduced heating required in a water heater. Low ambient controls and/or condenser variable speed drives are part of the installation. The actual number of heat recovery units and their location will depend on the operating hours of the compressor and the configuration of the existing system. Payment includes all materials and appurtenances and labor to install. After Practice Description: A more efficient compressor heat recovery system is installed, which will reduce energy use, is evidenced by the energy audit. Associated practices/activities: may include 122-AgEMP - HQ, and other activities within 374-Farmstead Energy Improvement. The resource concern is inefficient use of energy in the farm operation which increases dependence on non-renewable energy sources and can be addressed through improved energy efficiency. Any improvements are based on a Type 2 energy audit meeting the requirements of ASABE S612.</p>	Each	Each	\$1,729.70	\$2,594.54	\$2,594.54	\$3,113.45
11	Controller - Variable Speed Drive for ≤1 HP Motor	<p>Scenario Description: Installation of a variable speed drive (VSD) for a ≤1 horsepower electric motor typically used in small dairy operations. Payment includes appearances, such as hook-ups, control panels, wiring, control blocks, filters, switches, pads, etc. and labor to install. Payment does not include the cost of the motor. After Practice Description: An on-farm energy audit has determined that energy use can be reduced through use of a VSD to control electric motors. After the VSD is applied, the motor speed can be adjusted to reduce power requirements and better match varied flow or pressure requirements. Associated practices/activities: may include 122-AgEMP - HQ, and other activities within 374-Farmstead Energy Improvement. The resource concern is inefficient use of energy in the farm operation which increases dependence on non-renewable energy sources and can be addressed through improved energy efficiency. Any improvements are based on a Type 2 energy audit meeting the requirements of ASABE S612.</p>	Horsepower	Horsepower	\$1,939.15	\$2,908.72	\$2,908.72	\$3,490.46

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
12	Controller - Variable Speed Drive for >1 to <10 HP Motor	<p>Scenario Description: Installation of a variable speed drive (VSD) for a >1 to <10 horsepower electric motor. Payment includes appearances, such as hook-ups, control panels, wiring, control blocks, filters, switches, pads, etc. and labor to install. Payment does not include the cost of the motor. After Practice Description: An on-farm energy audit has determined that energy use can be reduced through use of a VSD to control electric motors. After the VSD is applied, the motor speed can be adjusted to reduce power requirements and better match varied flow or pressure requirements. Associated practices/activities: may include 122-AgEMP - HQ, and other activities within 374-Farmstead Energy Improvement. The resource concern is inefficient use of energy in the farm operation which increases dependence on non-renewable energy sources and can be addressed through improved energy efficiency. Any improvements are based on a Type 2 energy audit meeting the requirements of ASABE S612.</p>	Horsepower	Horsepower	\$515.59	\$773.38	\$773.38	\$928.06
13	Controller - Variable Speed Drive for 10 to <50 HP Motor	<p>Scenario Description: Installation of a variable speed drive (VSD) for a >10 to <50 horsepower electric motor typically used in small dairy operations. Payment includes appearances, such as hook-ups, control panels, wiring, control blocks, filters, switches, pads, etc. and labor to install. Payment does not include the cost of the motor. After Practice Description: An on-farm energy audit has determined that energy use can be reduced through use of a VSD to control electric motors. After the VSD is applied, the motor speed can be adjusted to reduce power requirements and better match varied flow or pressure requirements. Associated practices/activities: may include 122-AgEMP - HQ, and other activities within 374-Farmstead Energy Improvement. The resource concern is inefficient use of energy in the farm operation which increases dependence on non-renewable energy sources and can be addressed through improved energy efficiency. Any improvements are based on a Type 2 energy audit meeting the requirements of ASABE S612.</p>	Horsepower	Horsepower	\$336.41	\$504.62	\$504.62	\$605.55
14	Controller - Variable Speed Drive for ≥ 50 HP Motor	<p>Scenario Description: Installation of a variable speed drive (VSD) for a ≥ 50 horsepower electric motor used to drive a ventilation fan, irrigation pumps, vacuum pump, or similar equipment involved with agricultural production. Payment includes appearances, such as hook-ups, control panels, wiring, control blocks, filters, switches, pads, etc. and labor to install. After Practice Description: An on-farm energy audit has determined that energy use can be reduced through use of a VSD to control electric motors. After the VSD is applied, the motor speed can be adjusted to reduce power requirements and better match varied flow or pressure requirements. Associated practices/activities: may include 122-AgEMP - HQ, and other activities within 374-Farmstead Energy Improvement. The resource concern is inefficient use of energy in the farm operation which increases dependence on non-renewable energy sources and can be addressed through improved energy efficiency. Any improvements are based on a Type 2 energy audit meeting the requirements of ASABE S612.</p>	Horsepower	Horsepower	\$59.07	\$88.61	\$88.61	\$106.33

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
15	Controller - Single Function Automatic Controller System	<p>Scenario Description: The typical scenario consists of a single function automatic control system installed on an existing manually controlled agricultural system such as, but not limited to, irrigation systems or agricultural building control systems. Typical components may include any of the following: wiring, sensors, data logger, logic controller, communication link, software, switches, and relay. Payment includes materials and appurtenances and labor to install. After Practice Description: An on-farm energy audit has determined that energy use can be reduced through use of an automatic controller that helps regulates the energy consumption of the existing system. Associated practices/activities may include: 122-AgEMP - HQ, and other activities within 374-Farmstead Energy Improvement. The resource concern is inefficient use of energy in the farm operation which increases dependence on non-renewable energy sources and can be addressed through improved energy efficiency. Any improvements are based on a Type 2 energy audit meeting the requirements of ASABE S612.</p>	Each system	Each	\$685.37	\$1,028.06	\$1,028.06	\$1,233.67
16	Controller - Multiple Function Automatic Controller System	<p>Scenario Description: The typical scenario consists of a multiple function automatic control system installed on an existing manually controlled agricultural system such as, but not limited to, agricultural building control systems. Typical components may include any of the following: wiring, sensors, data logger, logic controller, communication link, software, switches, and relay. Payment includes materials and appurtenances and labor to install. After Practice Description: An on-farm energy audit has determined that energy use can be reduced through use of an automatic controller that helps regulates the energy consumption of the existing system. Associated practices/activities may include: 122-AgEMP - HQ, and other activities within 374-Farmstead Energy Improvement. The resource concern is inefficient use of energy in the farm operation which increases dependence on non-renewable energy sources and can be addressed through improved energy efficiency. Any improvements are based on a Type 2 energy audit meeting the requirements of ASABE S612.</p>	Each system	Each	\$2,107.64	\$3,161.46	\$3,161.46	\$3,793.75
17	Motor - ≤ 1 HP Electric Motor Upgrade	<p>Scenario Description: Replacement of an existing electric motor with an upgraded electric motor typically used to drive a ventilation fan, irrigation pumps, vacuum pump, or similar equipment involved with agricultural production. The upgraded electric motor will be the same size as the existing less efficient motor it is replacing. This scenario is for motors ≤1 horsepower. Payment includes motor, appurtenances and labor to install. After Practice Description: An on-farm energy audit has determined that energy use can be reduced through use of NEMA premium efficiency motor. Associated practices/activities may include: 122-AgEMP - HQ, and other activities within 374-Farmstead Energy Improvement. The resource concern is inefficient use of energy in the farm operation which increases dependence on non-renewable energy sources and can be addressed through improved energy efficiency. Any improvements are based on a Type 2 energy audit meeting the requirements of ASABE S612.</p>	Horsepower	Horsepower	\$277.40	\$416.09	\$416.09	\$499.31

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
18	Motor - > 1 to <10 HP Electric Motor Upgrade	<p>Scenario Description: Replacement of an existing electric motor with an upgraded electric motor typically used to drive a ventilation fan, irrigation pumps, vacuum pump, or similar equipment involved with agricultural production. The upgraded electric motor will be the same size as the existing less efficient motor it is replacing. This scenario is for motors ranging from >1 horsepower to <10 horsepower. Payment includes motor, appurtenances and labor to install. After Practice Description: An on-farm energy audit has determined that energy use can be reduced through use of NEMA premium efficiency motor. Associated practices/activities may include: 122-AgEMP - HQ, and other activities within 374-Farmstead Energy Improvement. The resource concern is inefficient use of energy in the farm operation which increases dependence on non-renewable energy sources and can be addressed through improved energy efficiency. Any improvements are based on a Type 2 energy audit meeting the requirements of ASABE S612.</p>	Horsepower	Horsepower	\$82.91	\$124.36	\$124.36	\$149.23
19	Motor - 10 - <50 HP Electric Motor Upgrade	<p>Scenario Description: Replacement of an existing electric motor with an upgraded electric motor typically used to drive a ventilation fan, irrigation pumps, vacuum pump, or similar equipment involved with agricultural production. The upgraded electric motor will be the same size as the existing less efficient motor it is replacing. This scenario is for motors ranging from 10 horsepower to <50 horsepower. Payment includes motor, appurtenances and labor to install. After Practice Description: An on-farm energy audit has determined that energy use can be reduced through use of NEMA premium efficiency motor. Associated practices/activities may include: 122-AgEMP - HQ, and other activities within 374-Farmstead Energy Improvement. The resource concern is inefficient use of energy in the farm operation which increases dependence on non-renewable energy sources and can be addressed through improved energy efficiency. Any improvements are based on a Type 2 energy audit meeting the requirements of ASABE S612.</p>	Horsepower	Horsepower	\$68.02	\$102.04	\$102.04	\$122.44
20	Motor - ≥ 50 HP Electric Motor Upgrade	<p>Scenario Description: Replacement of an existing electric motor with an upgraded electric motor typically used to drive a ventilation fan, irrigation pumps, vacuum pump, or similar equipment involved with agricultural production. The upgraded electric motor will be the same size as the existing less efficient motor it is replacing. This scenario is for motors of 50 horsepower or greater. Payment includes motor, appurtenances and labor to install. After Practice Description: An on-farm energy audit has determined that energy use can be reduced through use of NEMA premium efficiency motor. Associated practices/activities may include: 122-AgEMP - HQ, and other activities within 374-Farmstead Energy Improvement. The resource concern is inefficient use of energy in the farm operation which increases dependence on non-renewable energy sources and can be addressed through improved energy efficiency. Any improvements are based on a Type 2 energy audit meeting the requirements of ASABE S612.</p>	Horsepower	Horsepower	\$37.75	\$56.62	\$56.62	\$67.94

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
21	Motor - Variable Speed Electric (Split Phase)	<p>Scenario Description: Installation of a multi speed electric motor typically used to drive a ventilation fan in a livestock production house. Payment includes motor and labor to install. Control panel is not included. Refer to associated control panel scenarios as needed. After Practice Description: An on-farm energy audit has determined that energy use can be reduced through use of a multi speed electric motor. After the motor is installed, the motor speed can be adjusted to reduce power requirements and better match varied flow or pressure requirements. Associated practices/activities: may include 122-AgEMP - HQ, and other activities within 374-Farmstead Energy Improvement. The resource concern is inefficient use of energy in the farm operation which increases dependence on non-renewable energy sources and can be addressed through improved energy efficiency. Any improvements are based on a Type 2 energy audit meeting the requirements of ASABE S612.</p>	Horsepower	Horsepower	\$106.45	\$159.67	\$159.67	\$191.60
22	Heating - Radiant Systems	<p>Scenario Description: Replace "pancake" Brood Heaters in a poultry house with Radiant Tube Heaters, or similar. Replacement will require the materials and labor to remove existing heating system, re-plumb gas lines, cables and wench system to retrofit new radiant tube heaters, and miscellaneous items to complete the installation. Alternate acceptable radiant heating systems can include radiant brooders and quad radiant systems as indicated in the energy audit. Payment includes materials and labor to install the new system. After Practice Description: Energy use is reduced through installation of a more efficient heater. Radiant tube heaters primarily warm objects within a direct line of sight (similar to the sun or an open fire). Air temperature is of relatively little importance for radiant heating systems to be effective. As a result, radiant systems are typically installed 5' or more above the floor level. This height extends the distribution of the radiant heat over a larger area than is possible with pancake style heaters. A roughly 16' diameter radiant heat zone heats over twice that of a conventional pancake brooder. The typical scenario consists of the replacement of 28 brood heaters with 6 radiant tube heaters. Associated practices/activities may include: 122-AgEMP - HQ, and other activities within 374-Farmstead Energy Improvement. The resource concern is inefficient use of energy in the farm operation which increases dependence on non-renewable energy sources and can be addressed through improved energy efficiency. Any improvements are based on a Type 2 energy audit meeting the requirements of ASABE S612.</p>	Each	Each	\$701.29	\$1,051.93	\$1,051.93	\$1,262.31

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
23	Heating - Building	<p>Scenario Description: Replace existing low efficiency heaters with new high efficiency heaters. High-efficiency heating systems include any heating unit with efficiency rating of 80%+ for fuel oil and 90%+ for natural gas and propane. Applications may be air heating/building environment and hydronic (boiler) heating for agricultural operations, including under bench, or root zone heating. An alternative to heater replacement might be the addition of climate control system and electronic temperature controls with +/- 1 degree F differential, to reduce the annual run time. Payment includes heater and labor to install. After Practice Description: Higher efficiency heaters reduce energy consumption, energy costs, and GHG emissions. These replacement systems can be fueled by natural gas, propane, or fuel oil. Associated practices/activities: 122-AgEMP - HQ and other activities within 374-Farmstead Energy Improvement. The resource concern is inefficient use of energy in the farm operation which increases dependence on non-renewable energy sources and can be addressed through improved energy efficiency. Any improvements are based on a Type 2 energy audit meeting the requirements of ASABE S612.</p>	Rated Heat Output	1,000 BTU/Hour	\$4.44	\$6.66	\$6.66	\$7.99
24	Heating - Attic Heat Recovery Vents	<p>Scenario Description: Install actuated inlets or automatic latching gravity inlets that draw warmer, drier air from the attic to assist with moisture and heat control when ventilation fans are being operated in poultry houses and swine barns. In certain situations it may be necessary to also upgrade the ventilation system in addition to the vent upgrades. Other systems to transfer heat, as detailed in ASABE S612-compliant energy audit may also be used. Payment includes materials and labor to install. After Practice Description: Attic vents or inlets allow dry warm air from the attic to circulated throughout the building in a 40' x 500' poultry house. By using pre-warmed air from the attic less energy is needed for heating 122-AgEMP - HQ and other activities within 374-Farmstead Energy Improvement. The resource concern is inefficient use of energy in the farm operation which increases dependence on non-renewable energy sources and can be addressed through improved energy efficiency. Any improvements are based on a Type 2 energy audit meeting the requirements of ASABE S612.</p>	Each inlet	Each	\$76.85	\$115.28	\$115.28	\$138.33
33	Grain Dryer	<p>Scenario Description: A more efficient replacement continuous dryer rated for the present dryer bushel/per hour capacity to treat existing energy concerns. The operation includes a microcomputer-based control system that adjusts the amount of time the crop remains in the dryer in order to achieve a consistent and accurate moisture content in the dried product. Alternate types of replacement dryers which reduce energy use are acceptable as defined by the energy audit. The upgraded grain dryer will be the same size as the existing less efficient grain dryer it is replacing. Payment includes materials and labor needed for the installation. After Practice Description: Energy use is reduced through installation of a more efficient continuous dryer that uses a microcomputer-based controller to reduce overdrying and total time of operation. The typical operation requires a rated capacity of 860 bushels per hour. Associated practices/activities may include: 122-AgEMP - HQ, and other activities within 374-Farmstead Energy Improvement. The resource concern is inefficient use of energy in the farm operation which increases dependence on non-renewable energy sources and can be addressed through improved energy efficiency. Any improvements are based on a Type 2 energy audit meeting the requirements of ASABE S612.</p>	Rated capacity of the dryer	Bushel per Hour	\$43.43	\$65.14	\$65.14	\$78.17

**IRRIGATION WATER MANAGEMENT
Practice Code 449**

Non-Livestock Structural Practice

PRS Unit of Measurement: Acre

Definition: The process of determining and controlling the volume, frequency, and application rate of irrigation water in a planned, efficient manner.

Purpose: Manage soil moisture to promote desired crop response, optimize use of available water supplies, minimize irrigation induced soil erosion, decrease non-point source pollution of surface and groundwater resources, manage salts in the crop root zone, manage air, soil, or plant micro-climate, proper and safe chemigation or fertigation, and improve air quality by managing soil moisture to reduce particulate matter movement.

Applicability: This practice is applicable to all irrigated lands. An irrigation system adapted for site conditions (soil, slope, crop grown, climate, water quantity and quality, air quality, etc.) must be available and capable of efficiently applying water to meet the intended purpose(s).

Limitations: In order for land to be eligible for an irrigation-related practice, that land must have been irrigated in two out of the last five years. This means that irrigation must have been part of managing the cropping system to meet the needs of the plant and to maintain the yields of an irrigated crop. To ensure the practice meets the program purpose, the irrigation practice must be addressing an identified resource concern, such as Soil Erosion – Irrigation Induced or Water Quantity – Inefficient Water Use. To document irrigation history, use the “Irrigation History Documentation.docx”.

Maintenance: Practice must be maintained for a lifespan of 1 year.

Payment Schedule:

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
1	IWM for row crops	Scenario Description: Implementation of a water management plan for producers using a checkbook method (crop grown, soil moisture conditions prior to irrigation, dates of irrigation start and stop, depths of irrigation applied, duration of irrigations, and amount of rainfall). Payment applies to irrigation water management on a row crop operation. Associated Practices: 442-Irrigation System Sprinkler, 443-Irrigation System Surface and Subsurface, 433-Irrigation Water Measurement, 434-Soil Moisture Measurement, 433- Irrigation Flow Measurement. After Practice Description: Irrigations are scheduled based on measured crop water requirements. Records are used to evaluate results of past irrigation events and influence future irrigations. The irrigator keeps records of soil moisture, crop water use, rainfall amounts and irrigation timing and amounts. At the end of the irrigation season all the data has been reviewed and evaluated. Improvements planned for the next season have been determined.	Irrigated Area Managed	Acre	\$5.41	\$8.11	\$8.11	\$9.74

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
2	IWM for microirrigation systems and specialty crops	<p>Scenario Description: Implementation of a water management plan for producers using a checkbook method (crop grown, soil moisture conditions prior to irrigation, dates of irrigation start and stop, depths of irrigation applied, duration of irrigations, and amount of rainfall). Payment applies to irrigation water management on a specialty crop operation, or an operation utilizing micro-irrigation. Associated Practices: 441-Irrigation System Microirrigation, 433-Irrigation Water Measurement, 434-Soil Moisture Measurement, 433- Irrigation Flow Measurement. After Practice Description: Irrigations are scheduled based on measured crop water requirements. Records are used to evaluate results of past irrigation events and influence future irrigations. The irrigator keeps records of soil moisture, crop water use, rainfall amounts and irrigation timing and amounts. At the end of the irrigation season all the data has been reviewed and evaluated. Improvements planned for the next season have been determined.</p>	Irrigated Area Managed	Acre	\$13.29	\$19.93	\$19.93	\$23.92
3	IWM for Seasonal High Tunnels	<p>Scenario Description: Implementation of a water management plan for producers using a checkbook method (crop grown, soil moisture conditions prior to irrigation, dates of irrigation start and stop, depths of irrigation applied, duration of irrigations, and amount of rainfall). Payment applies to irrigation water management in Seasonal High Tunnels. Associated Practices: 441-Irrigation System Microirrigation, 433-Irrigation Water Measurement, 434-Soil Moisture Measurement, 433- Irrigation Flow Measurement. After Practice Description: Irrigations are scheduled based on measured crop water requirements. Records are used to evaluate results of past irrigation events and influence future irrigations. The irrigator keeps records of soil moisture, crop water use, and irrigation timing and amounts. At the end of the irrigation season all the data has been reviewed and evaluated. Improvements planned for the next season have been determined.</p>	Area under high tunnel	Each	\$199.30	\$298.95	\$298.95	\$358.74
4	Soil Moisture Sensors	<p>Scenario Description: This practice includes the installation of soil moisture sensors such as tensiometers, gyp blocks, capacitance sensors etc., that are installed and read to determine point in time soil moisture by depth; and the labor of using the equipment for the first year. The installation includes the purchase of soil moisture meters and sensors, installation equipment, and labor to install and utilize sensors and readings in making IWM decisions during first year. Typical Scenario involves installation of resistance sensor blocks in an 80 acre field of irrigated cropland. Producer periodically monitors soil moisture sensors during the growing season. Meters used to read sensors may be portable. Associated Practices: 449- Irrigation Water Management, 587-Structure for water Control, 328-Conservation Crop Rotation, and 590-Nutrient Management. After Practice Description: Producer has installed four sensors at each monitoring site to a depth of four feet with one sensor representing each foot of depth. Producer uses periodic soil moisture measurements to schedule irrigation resulting in improved irrigation water management and reduced energy use.</p>	Number of Measuring Sites	Each	\$584.96	\$877.44	\$877.44	\$1,052.93

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
5	Soil Moisture Sensors with Data Recorder	<p>Scenario Description: This practice includes the installation of electrical soil moisture sensors such as capacitance or resistance sensors that are monitored to determine soil moisture. The installation includes the purchase of soil moisture sensors, installation equipment (probe or auger), and a data logger to log continuous soil moisture data that can be downloaded to a personal computer and associated graphing software. Scenario also includes the labor associated with using the equipment for the first year. Typical Scenario involves installation of resistance sensor blocks in a 120 acre field of sprinkler irrigated cropland. Producer periodically monitors soil moisture sensors during the growing season. Associated Practices: 449-Irrigation Water Management, 587-Structure for water Control, 328-Conservation Crop Rotation, and 590-Nutrient Management. After Practice Description: Producer has installed four sensors at each monitoring site to a depth of four feet with one sensor representing each foot of depth. Producer periodically downloads continuously recorded soil moisture measurements that are used to schedule irrigation more effectively resulting in improved irrigation water management and reduced energy use.</p>	Number of Measuring Sites	Each	\$793.83	\$1,190.75	\$1,190.75	\$1,428.89

**LIGHTING SYSTEM IMPROVEMENT
Practice Code 670**

Non-Livestock Structural Practice

PRS Unit of Measurement: Number

Definition: Complete replacement or retrofitting of one or more components of an existing agricultural lighting system.

Purpose: This practice may be applied to reduce energy use.

Applicability: This practice applies to any agricultural facility with an existing lighting system and a completed lighting assessment that complies with the guidelines for a Type 2 on-farm energy audit for the major activity of lighting per ANSI/ASABE S612.

Limitations: Contracts that include Agricultural Energy Management Plans or audits as required for 670 – Lighting System Improvement shall have energy plans or audits sent to the Area Engineer who will forward a copy to Mark Garrison in the State Office for administrative review before certification of plans or installation of practices outlined in plans or audits.

Maintenance: Practice must be maintained for a lifespan of 10 year.

Payment Schedule:

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
1	Lighting - CFL	<p>Scenario Description: Installation of dimmable CFLs to replace incandescent lamps on a one-for-one basis. Light fixtures do not have to be replaced. CFL requirements: minimum 8 Watt, 4100 Kelvin, dimmable, grow-out bulb; industrial grade; suitably protected from dirt accumulation. In high humidity environments or areas subject to wash down, gasket or weatherproof housings are required to prevent corrosion and premature failure. Payment includes light bulbs and labor to install. After Practice Description: More efficient lighting is provided by Compact Fluorescent Lamps (CFLs) in order to reduce energy use as evidenced by the energy audit. Associated practices/activities: 122-AgEMP - HQ, 670-Lighting System Improvement, and other activities within 374-Farmstead Energy Improvement. The resource concern is inefficient use of energy in the farm operation which increases dependence on non-renewable energy sources and can be addressed through improved energy efficiency. Any improvements are based on a Type 2 energy audit meeting the requirements of ASABE S612.</p>	Each lamp replaced	Each	\$8.49	\$12.74	\$12.74	\$15.29

ID	Scenario Name	Scenario & After Practice Description	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
2	Lighting - LED	<p>Scenario Description: To install dimmable LEDs to replace incandescent lamps on a one-for-one basis. Light fixtures do not have to be replaced. LED requirements: minimum 6 Watt, 3700 Kelvin, dimmable, grow-out bulb; industrial grade; suitably protected from dirt accumulation. In high humidity environments or areas subject to wash down, gasket or weatherproof housings are required to prevent corrosion and premature failure. Payment includes light bulb and labor to install.</p> <p>After Practice Description: More efficient lighting is provided by Light-Emitting Diode (LED) lamps in order to reduce energy use as evidenced by the energy audit.</p> <p>Associated practices/activities: 122-AgEMP - HQ, 670-Lighting System Improvement, and other activities within 374-Farmstead Energy Improvement. The resource concern is inefficient use of energy in the farm operation which increases dependence on non-renewable energy sources and can be addressed through improved energy efficiency. Any improvements are based on a Type 2 energy audit meeting the requirements of ASABE S612.</p>	Each lamp replaced	Each	\$10.85	\$16.28	\$16.28	\$19.54
3	Lighting - Linear Fluorescent	<p>Scenario Description: The lighting system consists of a four-foot, three-lamp fixture with single electronic ballast. The high-efficiency lighting system uses high-efficiency T8 or T5 fluorescent lamps. Associated materials for installation of replacement fixtures are included. Appropriate disposal of existing lamps, ballasts and other materials is required. Payment includes lamps, ballast, fixtures and labor to install.</p> <p>After Practice Description: High-efficiency lighting system which reduces energy use. The new lighting equipment will provide suitable light levels and reduce overall power requirements (kW) compared to the existing lighting system as evidenced by the energy audit. Associated practices/activities: may include 122-AgEMP - HQ, 670-Lighting System Improvement, and other activities within 374-Farmstead Energy Improvement. The resource concern is inefficient use of energy in the farm operation which increases dependence on non-renewable energy sources and can be addressed through improved energy efficiency. Any improvements are based on a Type 2 energy audit meeting the requirements of ASABE S612.</p>	Each fixture replaced	Each	\$160.10	\$240.15	\$240.15	\$288.18
4	Lighting - Outdoor/High Bay	<p>Scenario Description: The lighting system consists of an outdoor/high bay light such as, but not limited to, pulse-start metal halide (PSMH) lamp with matched ballast. Associated materials for installation of replacement fixtures are included. Appropriate disposal of existing lamps, ballasts and other materials is required. Payment includes lamp and labor to install. After Practice Description: High-efficiency lighting system which reduces energy use. The new lighting equipment will provide suitable light levels and reduce overall power requirements (kW) compared to the existing lighting system as evidenced by the energy audit. Associated practices/activities: may include 122-AgEMP - HQ, 670-Lighting System Improvement, and other activities within 374-Farmstead Energy Improvement. The resource concern is inefficient use of energy in the farm operation which increases dependence on non-renewable energy sources and can be addressed through improved energy efficiency. Any improvements are based on a Type 2 energy audit meeting the requirements of ASABE S612.</p>	Each fixture replaced	Each	\$121.52	\$182.27	\$182.27	\$218.73

**PUMPING PLANT
Practice Code 533**

Livestock Structural Practice

PRS Unit of Measurement: Number

Definition: A pumping facility installed to transfer water for a conservation need.

Purpose: The transfer of non-potable water for a conservation need, such as supplying water for livestock.

Applicability: To provide a water supply for such purposes as irrigation, livestock, or wildlife, maintain critical water levels in swamps, marshes, open water, or for newly constructed wetlands and ponds, to transfer manure and/or process wastewater to a storage facility or for utilization as part of a waste management system, provide drainage by the removal of surface runoff water or groundwater.

Limitations:

Maintenance: Practice must be maintained for a lifespan of 15 years.

Payment Schedule:

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
1	Wastewater Pump < 1 Hp	<p>Scenario Description: Scenario is for the implementation of an electric chopper screw pump of less than 1 horsepower. Implementation examples include, but are not limited to, pumping wastewater from the source to a storage facility such as in a dairy milk parlor, or pumping supernatant from the sump of a settling basin to a level spreader device upstream of a Vegetated Treatment Area, in flat topography where gravity flow from the settling basin is not feasible. Payment includes the pump and controls, installation and concrete pad base for the pump. Dairy milk parlor wastewater. Associated Practices: 374 - Farmstead Energy Improvement; 313 - Waste Storage Facility; 634 - Waste Transfer; 633 Waste Utilization; 632 Solid/liquid Waste Separation Facility; 635 Vegetated Treatment Area.</p> <p>After Practice Description: Practice typically installed for transfer of wastewater to a storage facility using 3/4 HP chopper/screw pump. Dairy milk parlor wastewater is directed to a waste storage facility, or feedlot runoff is directed to a solid/liquid settling basin, and supernatant is pumped from the sump of the settling basin to a Vegetated Treatment Area. Contaminated water no longer enters the stream. Cost represents typical situations for conventional, organic, and transitioning to organic producers.</p>	Per Pump	Each	\$9,108.97	\$13,663.46	\$13,663.46	\$16,396.15

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
2	Wastewater Pump 1-5 Hp	<p>Scenario Description: Scenario is for the implementation of an electric chopper screw pump of 1-5 horsepower. Implementation examples include, but are not limited to, pumping wastewater from the source to a storage facility such as in a dairy milk parlor, or pumping supernatant from the sump of a settling basin to a level spreader device upstream of a Vegetated Treatment Area, in flat topography where gravity flow from the settling basin is not feasible. Payment includes the pump and controls, installation and concrete pad base for the pump. Dairy milk parlor wastewater. Associated Practices: 374 - Farmstead Energy Improvement; 313 - Waste Storage Facility; 634 - Waste Transfer; 633 Waste Utilization; 632 Solid/Liquid Waste Separation Facility; 635 Vegetated Treatment Area. After Practice Description: Practice typically installed for transfer of wastewater to a storage facility using 3 HP chopper/screw pump. Dairy milk parlor wastewater is directed to a waste storage facility, or feedlot runoff is directed to a solid/liquid settling basin, and supernatant is pumped from the sump of the settling basin to a Vegetated Treatment Area. Contaminated water no longer enters the stream. Cost represents typical situations for conventional, organic, and transitioning to organic producers.</p>	Per Pump	Each	\$13,652.91	\$20,479.36	\$20,479.36	\$24,575.23
3	Manure Pump >5 Hp	<p>Scenario Description: Scenario is for the implementation of an electric chopper screw pump of >5 horsepower from the source to a storage facility. Implementation examples include, but are not limited to, situations where a dairy or swine operation is pumping manure to an above ground storage facility. Payment includes the pump and controls, installation and concrete pad. Associated Practices: 374 - Farmstead Energy Improvement; 313 - Waste Storage Facility; 634 - Waste Transfer; 633 Waste Utilization; 632 Solid/Liquid Waste Separation Facility; 635 Vegetated Treatment Area. After Practice Description: Practice typically installed for transfer of manure to a storage facility using 10 HP chopper/screw pump. Manure is directed to a waste storage facility, or feedlot runoff is directed to a solid/liquid settling basin, and supernatant is pumped from the sump of the settling basin to a Vegetated Treatment Area. Contaminated water no longer enters the stream. Cost represents typical situations for conventional, organic, and transitioning to organic producers.</p>	Per Pump	Each	\$8,282.07	\$12,423.10	\$12,423.10	\$14,907.72
4	Small Wastewater Fuel Driven Pump ≤ 50 Hp	<p>Scenario Description: Scenario is for the implementation of a fuel or PTO-driven pump of ≤ 50 horsepower for transferring manure or wastewater. Implementation examples include, but are not limited to, pumping wastewater from a storage facility to an end use such as a field, or transferring manure and wastewater from a shallow pit under a hog confinement building to a deep pit manure storage on the headquarters site. Payment includes all controls and appurtenances needed to mount the pump and connect the pump to the piping system. The piping system and any associated reception tank are specified under 634 - Waste Transfer. Resource Concerns: Water Quality degradation - Excess nutrients in surface and ground waters. Associated Practices: 374 - Farmstead Energy Improvement; 313 - Waste Storage Facility; 634 - Waste Transfer. After Practice Description: For semi-solid or liquid waste, wastes that have been collected through a waste transfer system are now efficiently transferred to appropriate treatment or storage facilities or crop application. Due to topography, gravity transfer is not possible and a properly sized pump is needed to transfer waste as part of a waste transfer system.</p>	Per Pump	Each	\$11,405.97	\$17,108.95	\$17,108.95	\$20,530.74

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
5	Large Wastewater Fuel Driven Pump > 50 Hp	<p>Scenario Description: Scenario is for the implementation of a fuel or PTO-driven pump of >50 horsepower for transferring manure or wastewater. Implementation examples include, but are not limited to, moving wastewater from a waste holding pond to a dragline field application system, supplying wastewater to a sprinkler irrigation system, or any other transfer of wastewater from a storage facility to an end use. Includes all controls and appurtenances needed to mount the pump and connect the pump to the piping system. The piping system and any associated reception tank are specified under 634 - Waste Transfer. Resource Concerns: Water Quality degradation - Excess nutrients in surface and ground waters. Associated Practices: 374 - Farmstead Energy Improvement; 313 - Waste Storage Facility; 634 - Waste Transfer. After Practice Description: For semi-solid or liquid waste, wastes that have been collected through a waste transfer system are now efficiently transferred to appropriate treatment or storage facilities or crop application. Due to topography, gravity transfer is not possible and a properly sized pump is needed to transfer waste as part of a waste transfer system.</p>	Per Pump	Each	\$14,741.94	\$22,112.91	\$22,112.91	\$26,535.49
6	Solar Pump for Well	<p>Scenario Description: The scenario is for the installation of a solar panel array, pump, pressure tank, and appurtenances in a well for supplying water to livestock in situations where standard electric power is inaccessible. The installation includes the pump, wiring, drop pipe, solar panels, mounts, inverter, and all appurtenances. Payment does not include battery backup. Associated Practices: 516 - Livestock Pipeline; 642 Water Well, 528 Prescribed Grazing and, 614 - Watering Facility. After Practice Description: The typical scenario assumes installation of a 200-watt photovoltaic (PV) panel. The installation includes the pump, wiring, pipeline in the well, solar panels, frame mounts, inverter, and all appurtenances. Water will be pumped to an existing storage tank at a higher elevation from which it will be used to pressurize the Livestock Pipeline (516) or Irrigation Pipeline (430). Grazing - Livestock exclusion from surface water will result in improved surface water quality and reduced erosion.</p>	Pump	Each	\$1,196.71	\$1,795.06	\$1,795.06	\$2,154.08
7	Solar Pump for Pond	<p>Scenario Description: The scenario is for the installation of a solar panel array, and pump from a pond for supplying water to livestock in situations where standard electric power is inaccessible. The installation includes the pump, wiring, drop pipe, solar panels, mounts, inverter, and all appurtenances. Payment does not include battery backup. Associated Practices: 516 - Livestock Pipeline; 528 Prescribed Grazing and, 614 - Watering Facility. After Practice Description: The typical scenario assumes installation of a 200-watt photovoltaic (PV) panel. The installation includes the pump, wiring, solar panels, frame mounts, inverter, and all appurtenances. Water will be pumped to an existing pond at a higher elevation from which it will be used to pressurize the Livestock Pipeline (516) or Irrigation Pipeline (430). Grazing - Livestock exclusion from surface water will result in improved surface water quality and reduced erosion.</p>	Pump	Each	\$980.64	\$1,470.97	\$1,470.97	\$1,765.16

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
8	Irrigation Pump	<p>Scenario Description: The practice is installed to pump irrigation water from the source to a final destination. Payment includes the pump and controls, installation and concrete pad. Associated Practices: 430 Irrigation Pipeline, 442 Irrigation System - Sprinkler, 449 Irrigation Water Management, 590 nutrient management, 595 integrated pest management; 374-Farmstead Energy Improvement. After Practice Description: Practice typically installed for transfer of irrigation water to a final destination using 50 HP pump. Conservation benefits of the installation are improved efficiency for the delivery of irrigation water. Cost represents typical situations for conventional, organic, and transitioning to organic producers.</p>	per pump	Each	\$14,252.37	\$21,378.55	\$21,378.55	\$25,654.26
9	Micro Irrigation Pump	<p>Scenario Description: The practice is installed to pump irrigation water from the source to a final destination for a micro irrigation system. Payment includes the pump and controls, installation and concrete pad. Associated Practices: 430 Irrigation Pipeline, 441 Irrigation System - Microirrigation, 449 Irrigation Water Management, 590 nutrient management, 595 integrated pest management, and 374-Farmstead Energy Improvement. After Practice Description: Practice typically installed for transfer of irrigation water to a final destination using 1 HP pump. Conservation benefits of the installation are improved efficiency for the delivery of irrigation water. Cost represents typical situations for conventional, organic, and transitioning to organic producers.</p>	per pump	Each	\$682.14	\$1,023.21	\$1,023.21	\$1,227.85
10	Livestock Water, Shallow Well Pump (≤ 25 ft deep)	<p>Scenario Description: The scenario is for the installation of a pump and pressure tank in a shallow well (≤ 25 feet deep) or collection for supplying water to livestock. Associated Practices: 528 Prescribed Grazing, 516 Pipeline, 614 Watering Facility, 642 Water Well; 574 Spring Development. After Practice Description: Practice typically installed for 30 animal units and consists of installing a centrifugal pump, pressure tank, and appurtenances for a shallow draw watering system. Conservation benefits of the installation are proper grazing distribution, which will allow a degraded site to be restored. Cost represents typical situations for conventional, organic, and transitioning to organic producers.</p>	per pump	Each	\$661.78	\$992.66	\$992.66	\$1,191.20

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
12	Livestock Water, Shallow Well Pump (≤ 25 ft deep) with Buried Pump House	<p>Scenario Description: The scenario is for the installation of a pump and pressure tank in a shallow well (≤ 25 feet deep) or collection for supplying water to livestock. Payment also includes a buried pump house for situations where there is not an existing sheltered location for the pump to be installed. Associated Practices: 528 Prescribed Grazing, 516 Pipeline, 614 Watering Facility, 642 Water Well; 574 Spring Development. After Practice Description: Practice typically installed for 30 animal units and consists of installing a centrifugal pump, pressure tank, and appurtenances for a shallow draw watering system. A 160 cu ft concrete well house is buried. A buried pump house is utilized where the ground is such that burying is not difficult and the climate conditions warrant burying for improved protection. Conservation benefits of the installation are proper grazing distribution, which will allow a degraded site to be restored. Cost represents typical situations for conventional, organic, and transitioning to organic producers.</p>	per pump	Each	\$1,977.12	\$2,965.68	\$2,965.68	\$3,558.82
13	Livestock Water, Deep Well Pump (>25 ft deep)	<p>Scenario Description: The scenario is for the installation of a pump and pressure tank in a deep well (> 25 feet) for supplying water to livestock. Associated Practices: 528 Prescribed Grazing, 516 Pipeline, 614 Watering Facility, 642 Water Well. After Practice Description: Practice typically installed for 30 animal units and consists of installing a jet or submersible pump, pressure tank, and appurtenances for a watering system. When utilizing a pond or stream a sump will be installed and used rather than a well. Conservation benefits of the installation are proper grazing distribution, which will allow a degraded site to be restored. Cost represents typical situations for conventional, organic, and transitioning to organic producers.</p>	per pump	Each	\$847.11	\$1,270.66	\$1,270.66	\$1,524.79
15	Livestock Water, Deep Well Pump (> 25 ft deep) with Buried Pump House	<p>Scenario Description: The scenario is for the installation of a pump and pressure tank in a deep well (> 25 feet) for supplying water to livestock. Payment also includes a buried pump house for situations where there is not an existing sheltered location for the pump to be installed. Scenario is for pump houses of > 140 cu ft volume. Associated Practices: 528 Prescribed Grazing, 516 Pipeline, 614 Watering Facility, 642 Water Well. After Practice Description: Practice typically installed for 30 animal units and consists of installing a jet or submersible pump, pressure tank, and appurtenances for a watering system. A 160 cu ft concrete well house is buried. A buried pump house is utilized where the ground is such that burying is not difficult and the climate conditions warrant burying for improved protection. Conservation benefits of the installation are proper grazing distribution, which will allow a degraded site to be restored. Cost represents typical situations for conventional, organic, and transitioning to organic producers.</p>	per pump	Each	\$2,158.61	\$3,237.92	\$3,237.92	\$3,885.50

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
16	Pump with Sump	<p>Scenario Description: The scenario is for the installation of a pump, pressure tank, and sump that supplies a dependable water supply to livestock from a pond, stream, or spring development. Associated Practices: 528 Prescribed Grazing, 516 Pipeline, 614 Watering Facility, 642 Water Well. After Practice Description: Practice typically installed for 30 animal units and consists of installing a pump, pressure tank, sump, and appurtenances for a watering system from a pond or stream or spring development. Cost represents typical situations for conventional, organic, and transitioning to organic producers.</p>	per pump	Each	\$1,992.36	\$2,988.53	\$2,988.53	\$3,586.24
17	Milk Transfer Pump	<p>Scenario Description: The typical scenario is for the installation of a 1 HP motor and transfer pump with appurtenances, used in a dairy milking system to transfer milk from the milk receiver to the bulk tank. The motor will be used in conjunction with a VSD. This practice is to be used exclusively for implementing recommendations from on-farm energy audits. After Practice Description: An on-farm energy audit has determined that energy use can be reduced through use of a more efficient motor and pump combination. A VSD will be used with the motor/pump combination so that the motor speed can be adjusted to reduce power requirements and better match varied flow or pressure requirements. Associated practices/activities: may include 122-AgEMP - HQ, and other activities within 374-Farmstead Energy Improvement. The resource concern is inefficient use of energy in the farm operation which increases dependence on non-renewable energy sources and can be addressed through improved energy efficiency. Any improvements are based on a Type 2 energy audit meeting the requirements of ASABE S612.</p>	per pump	Each	\$273.63	\$410.45	\$410.45	\$492.53
18	Vacuum Pump	<p>Scenario Description: The typical scenario is for the installation of a 10 HP motor and vacuum pump with appurtenances, used in a dairy milking system to transfer the milk from the animal to the milk receiver. The motor will be used in conjunction with a VSD. This practice is to be used exclusively for implementing recommendations from on-farm energy audits. After Practice Description: An on-farm energy audit has determined that energy use can be reduced through use of a more efficient motor and pump combination. A VSD will be used with the motor/pump combination so that the motor speed can be adjusted to reduce power requirements and better match varied flow or pressure requirements. Associated practices/activities: may include 122-AgEMP - HQ, and other activities within 374-Farmstead Energy Improvement. The resource concern is inefficient use of energy in the farm operation which increases dependence on non-renewable energy sources and can be addressed through improved energy efficiency. Any improvements are based on a Type 2 energy audit meeting the requirements of ASABE S612.</p>	per pump	Each	\$2,505.11	\$3,757.67	\$3,757.67	\$4,509.20

RESIDUE AND TILLAGE MANAGEMENT, REDUCED TILL
Practice 345

Non-Livestock Management Practice

PRS Unit of Measurement: Acre

Definition: Managing the amount, orientation and distribution of crop and other plant residue on the soil surface year round while limiting the soil-disturbing activities used to grow crops in systems where the entire field surface is tilled prior to planting.

Purpose:

- Reduce sheet and rill erosion.
- Reduce wind erosion.
- Maintain or improve soil quality.
- Increase plant-available moisture.
- Reduce energy use.

Applicability: This practice applies to all cropland and other land where crops are planted. This practice includes tillage methods commonly referred to as mulch tillage or chiseling and disking. It applies to stubble mulching on summer-fallowed land, to tillage for annually planted crops and to tillage for planting perennial crops. It also includes some planting operations, such as hoe drills, air seeders and “no-till” drills that disturb a large percentage of the soil surface during the planting operation.

Limitations: Residue and Tillage Management (345) is only offered in the Energy and Organic Initiatives.

Maintenance: Practice will be maintained for a minimum lifespan of 1 year.

Payment Schedule:

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
1	Mulch Till Basic	<p>Scenario Description: Mulch-till is managing the amount, orientation and distribution of crop and other plant residue on the soil surface year round while limiting the soil-disturbing activities used to grow crops in systems where the entire field surface is tilled prior to planting. This practice includes tillage methods commonly referred to as mulch tillage or chiseling and disking. It applies to stubble mulching on summer-fallowed land, to tillage for annually planted crops and to tillage for planted crops and to tillage for planting perennial crops. All residue shall be uniformly distributed on the surface throughout critical wind erosion period. All residue shall be uniformly distributed over the entire field and not burned or removed. These periods of intensive tillage have led to excessive soil loss, often above the Soil Loss Tolerance (T), due to the loss of critical crop or weed residue. The RUSLE2 model will be used to review the farming operation and determine if enough residue is being retained throughout the rotation to keep soil loss below T. The producer will then remove operations, or select alternate operations, to reduce erosion below T. After Practice Description: Mulch tillage applies to all cropland and other lands where crops are planned. It applies to stubble mulching on summer fallowed land to tillage for annually planted crops and to tillage for plating perennial crops. It also includes some planting operation such as hoe, drill, air seeder and no-till drill that disturb a large percentage of the soil surface using the planting operation. Tillage occurs after crop harvest. In warmer areas, winter weeds or cover crops grow throughout the winter months. The residue that remains on the soil surface provides soil cover during late fall, throughout the winter, and into the early spring. Runoff and erosion are reduced and no rills are visible on the soil surface in the spring. Wind erosion is reduced by standing residues. Winter weeds or the cover crop is terminated with tillage, a roller-crimper, shredding, or a combination of these methods prior to spring planting as late as feasible. Over time, soil health is improved due to the additional biomass, ground cover, soil infiltration, and plant diversity in the cropping system.</p>	Acre Planted	Acre	\$0.00	\$0.00	\$19.22	\$23.07

**RESIDUE AND TILLAGE MANAGEMENT, NO-TILL
Practice 329**

Non-Livestock Management Practice

PRS Unit of Measurement: Acre

Definition: Managing the amount, orientation, and distribution of crop and other plant residue on the soil surface year round while limiting soil-disturbing activities to only those necessary to place nutrients, condition residue, and plant crops.

Purpose: To reduce sheet and rill, and wind erosion; improve soil organic matter content; reduce CO₂ losses from the soil; reduce soil particulate emissions; increase plant-available moisture, provide food and escape cover for wildlife.

Applicability: This practice applies to all cropland and other land where crops are planted. These planting methods are commonly referred to as no-till, strip till, direct seed, zero till, slot till, or zone till. Approved implements are: no-till and strip-type fertilizer and manure injectors and applicators; and similar implements that only disturb strips and slots. All others are considered to be full-width or capable of full disturbance and therefore not compatible.

Soil disturbance percentage is determined by measuring the amount of the row width that is disturbed by soil preparation and planting equipment. For example, for a 30" row, up to 9" can be disturbed by drilling equipment and still qualify as No-till for EQIP.

STIR (Soil Tillage Intensity Ratio) is estimated using the Revised Universal Soil Loss Equation 2 (RUSLE2) which estimates soil loss from rill and inter-rill erosion caused by rainfall on cropland, for several alternative combinations of crop system and management practices. It also considers specified soil types, rainfall patterns, and topography.

Limitations: This practice is payable only to producers who have not previously used the practice for a full rotation, example: If the applicant has only no-tilled the soybean year of a corn-soybean rotation they are eligible, but if the applicant had no-tilled both corn and soybeans anywhere in there operation they are not eligible. Applicants who previously received financial assistance from any government program for applying this practice, are not eligible for EQIP financial assistance for no-till or strip-till. When no-till is scheduled for more than one year, the scheduled years must run consecutively. The maximum number of years payment can be made for is 3. **Residue and Tillage Management, No-Till or Strip-Till is capped (lifetime) at \$24,000/Participant and \$36,000/Historically Underserved Participant. The No-Till scenario "No-Till/Strip-Till" will be used for both organic and non-organic applications.**

Maintenance: Practice will be maintained for a minimum lifespan of 1 year.

Payment Schedule:

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
1	No-Till/Strip-Till	<p>Scenario Description: This practice typically involves conversion from a clean-tilled (conventional tilled) system to no-till or strip-till (conservation tilled) system on cropland. This involves managing the amount, orientation and distribution of crop and other plant residue on the soil surface year round while limiting soil-disturbing activities used to grow and harvest crops in systems. The practice is used to reduce sheet and rill erosion, reduce wind erosion, improve soil quality, reduce CO2 losses from the soil, reduce energy use, increase plant available moisture and provide food and escape cover for wildlife. The no-till/strip-till system includes chemical weed control (rather than cultivation). System is applicable in both irrigated and non-irrigated fields. After Practice Description: Managing crop residue on the surface of a field (typical 100 acre) year around according to the 329 practice plan while limiting soil disturbing activities to those which place nutrients, and plant crops that meet the minimum criteria in the 329 practice standard. All crops are seeded/planted with a no-till drill or no-till/strip-till planter, which minimizes soil disturbance while establishing good seed-soil contact. All residues are to be maintained on the soil surface in a uniform distribution over the entire field and not burned or removed. Crop residues provide soil surface cover throughout the year. Runoff and erosion are reduced and no rills are visible on the soil surface. Wind erosion is reduced by standing residues and surface cover. Over time, soil health is improved due to the additional biomass (crop residues), ground cover, and soil infiltration. Crop residues and/or cover crop residues left on the soil surface may maximize weed control by increasing allelopathic and mulching effect, and provides cover for wildlife. The practice would require reducing soil disturbance and erosion and increasing biomass returned to the soil in sufficient amounts to achieve increased SCI and decreased STIR.</p>	Area planted	Acre	\$9.29	\$13.93	\$13.93	\$16.72

**RESIDUE AND TILLAGE MANAGEMENT, RIDGE-TILL
Practice Code 346**

Non-Livestock Management Practice

PRS Unit of Measurement: Acre

Definition: Managing the amount, orientation, and distribution of crop and other plant residues on the soil surface year-round, while growing crops on pre-formed ridges alternated with furrows protected by crop residue.

Purpose: To reduce sheet and rill, and wind erosion; maintain or improve soil condition; manage snow to increase plant-available moisture; modify cool wet site conditions; provide food and escape cover for wildlife.

Applicability: This practice applies to all cropland and other land where crops are planted. These tillage and planting methods are commonly referred to as ridge till or ridge planting. It does not include no-till planting on ridges, or bedding or listing operations that bury crop residues.

Limitations: This practice is payable only to producers who have never used the practice. When ridge till is scheduled for more than one year, the scheduled years must run consecutively. **The maximum number of years payment can be made for is 3. Residue and Tillage Management, Ridge-Till is capped (lifetime) at \$10,000/Participant and \$15,000/Historically Underserved Participant.**

Maintenance: Practice will be maintained for a minimum lifespan of 1 year.

Payment Schedule:

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
1	Ridge Till	<p>Scenario Description: This practice typically involves conversion from a conventional tillage system to a ridge tillage (conservation tillage) system on cropland. This involves managing the amount, orientation and distribution of crop and other plant residue on the soil surface year round while limiting soil-disturbing activities used to grow and harvest crops in systems. The practice is used to reduce wind erosion, reduce sheet and rill erosion, improve soil quality, reduce energy use, and increase plant available moisture. The ridge till system includes using a ridge till planter and chemical weed control, and may also include a period of chemical fallow. This residue management system is applicable to both irrigated and non-irrigated fields. This system will manage soil erosion to T and maintain a positive SCI. After Practice Description: Practice applied per the conservation practice standard 346 to meet the planned purposes. Managing crop residue on the surface year around while limiting soil disturbing activities to those which reshape ridges, place nutrients, and plant crops. All crops are seeded/planted with a ridge till planter, which minimizes soil disturbance while establishing good seed-soil contact. All residues are to be maintained on the soil surface in a uniform distribution over the entire field and not burned or removed. Crop residues provide soil surface cover throughout the year. Runoff and erosion are reduced and no rills are visible on the soil surface. Wind erosion is reduced by standing residues and surface cover. Over time, soil health is improved due to the additional crop residues, ground cover, and soil infiltration. This practice will require reducing soil erosion to T and maintain a positive SCI.</p>	Area planted	Acre	\$17.96	\$26.94	\$26.94	\$32.33

**WINDBREAK/SHELTERBELT ESTABLISHMENT
Practice Code 380**

Non-Livestock Vegetative Practice

PRS Unit of Measurement: Feet

Definition: Linear plantings of multiple rows of trees or shrubs established for environmental purposes. The planting of trees and shrubs around farmsteads, building sites, around field edges and along roads.

Purposes: To reduce soil losses from wind erosion, protect growing plants, manage snow deposition, provide shelter for structures, wildlife, livestock and people, enhance wildlife habitat by providing travel corridors linking existing habitat, provide noise or visual screens, improve air quality by intercepting air borne particulate matter, chemicals and odors.

Applicability: On any area where woody plants are desired and can be grown and where wind, noise, air quality, or visual problems are a concern.

Limitations:

Maintenance: Practice must be maintained for a lifespan of 15 years.

Payment Schedule:

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
1	3 row windbreak, containerized planting stock	<p>Scenario Description: Three or more rows of containerized trees, shrubs or a combination of trees and shrubs are planted for wind protection, odor management, energy conservation, wildlife habitat, air quality, snow management or to provide a visual screen. This practice is typically applied on cropland at field edges, around homesteads or around confinement facilities. Payment includes materials, labor and equipment needed to hand plant the stock and foregone income for land removed from crop production where windbreak is installed. Site preparation is not included and must be implemented through associated practice 490 Tree/Shrub Site Preparation. Additional associated practices may include: 315 Herbaceous Weed Control, 660 Tree/Shrub Pruning, 484 Mulching After Practice Description: A windbreak of containerized trees and shrubs is installed by hand planting trees 20 ft apart and shrubs 6 ft apart with 16' between rows. Wind velocity suitably reduced to reduce soil erosion, energy loss or to manage snow deposition. Additional wildlife food and cover, mixing of odor plumes and visual screening.</p>	length of windbreak row(s)	Feet	\$1.96	\$2.94	\$2.94	\$3.53

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
2	3 row windbreak, bare-root seedling planting stock	<p>Scenario Description: Three or more rows of bare-root trees, shrubs or a combination of trees and shrubs are planted for wind protection, odor management, energy conservation, wildlife habitat, air quality, snow management or to provide a visual screen. This practice is typically applied on cropland at field edges, around homesteads or around confinement facilities. Payment includes materials, labor and equipment needed to machine the stock and foregone income for land removed from crop production where windbreak is installed. Site preparation is not included and must be implemented through associated practice 490 Tree/Shrub Site Preparation. Additional associated practices may include: 315 Herbaceous Weed Control, 660 Tree/Shrub Pruning, 484 Mulching</p> <p>After Practice Description: A windbreak of bare-root trees and shrubs is installed by machine planting trees 10 ft apart and shrubs 5 ft apart with 16' between rows. Wind velocity suitably reduced to reduce soil erosion, energy loss or to manage snow deposition. Additional wildlife food and cover, mixing of odor plumes and visual screening.</p>	length of windbreak row(s)	Feet	\$0.62	\$0.93	\$0.93	\$1.12
3	1 row windbreak, containerized tree planting stock	<p>Scenario Description: One row of containerized hardwood and/or conifer trees planted for wind protection, odor management, energy conservation, wildlife habitat, air quality, snow management or to provide a visual screen. This practice is typically applied on cropland at field edges, around homesteads or around confinement facilities. Payment includes materials, labor and equipment needed to hand plant the stock and foregone income for land removed from crop production where windbreak is installed. Site preparation is not included and must be implemented through associated practice 490 Tree/Shrub Site Preparation. Additional associated practices may include: 315 Herbaceous Weed Control, 660 Tree/Shrub Pruning, 484 Mulching.</p> <p>After Practice Description: A windbreak of containerized trees is installed by hand planting trees 20 ft apart. Wind velocity suitably reduced to reduce soil erosion, energy loss or to manage snow deposition. Additional wildlife food and cover, mixing of odor plumes and visual screening.</p>	length of windbreak row(s)	Feet	\$0.39	\$0.58	\$0.58	\$0.70
4	1 row windbreak, containerized shrub planting stock	<p>Scenario Description: One row of containerized shrubs planted for wind protection, odor management, energy conservation, wildlife habitat, air quality, snow management or to provide a visual screen. This practice is typically applied on cropland at field edges, around homesteads or around confinement facilities. Payment includes materials, labor and equipment needed to hand plant the stock and foregone income for land removed from crop production where windbreak is installed. Site preparation is not included and must be implemented through associated practice 490 Tree/Shrub Site Preparation. Additional associated practices may include: 315 Herbaceous Weed Control, 660 Tree/Shrub Pruning, 484 Mulching.</p> <p>After Practice Description: A windbreak of containerized shrubs is installed by hand planting shrubs 6 ft apart. Wind velocity suitably reduced to reduce soil erosion, energy loss or to manage snow deposition. Additional wildlife food and cover, mixing of odor plumes and visual screening.</p>	length of windbreak row(s)	Feet	\$1.22	\$1.83	\$1.83	\$2.20
5	1 row windbreak, bare-root tree seedling planting stock	<p>Scenario Description: One row of bare-root trees planted for wind protection, odor management, energy conservation, wildlife habitat, air quality, snow management or to provide a visual screen. This practice is typically applied on cropland at field edges, around homesteads or around confinement facilities. Payment includes materials, labor and equipment needed to machine the stock and foregone income for land removed from crop production where windbreak is installed. Site preparation is not included and must be implemented through associated practice 490 Tree/Shrub Site Preparation. Additional associated practices may include: 315 Herbaceous Weed Control, 660 Tree/Shrub Pruning, 484 Mulching.</p> <p>After Practice Description: A windbreak of bare-root trees is installed by machine planting trees 10 ft apart. Wind velocity suitably reduced to reduce soil erosion, energy loss or to manage snow deposition. Additional wildlife food and cover, mixing of odor plumes and visual screening.</p>	length of windbreak row(s)	Feet	\$0.19	\$0.29	\$0.29	\$0.35

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
6	1 row windbreak, bare-root shrub seedling planting stock	<p>Scenario Description: One row of bare-root shrubs planted for wind protection, odor management, energy conservation, wildlife habitat, air quality, snow management or to provide a visual screen. This practice is typically applied on cropland at field edges, around homesteads or around confinement facilities. Payment includes materials, labor and equipment needed to machine the stock and foregone income for land removed from crop production where windbreak is installed. Site preparation is not included and must be implemented through associated practice 490 Tree/Shrub Site Preparation. Additional associated practices may include: 315 Herbaceous Weed Control, 660 Tree/Shrub Pruning, 484 Mulching. After Practice Description: A windbreak of bare-root shrubs is installed by machine planting shrubs 5 ft apart. Wind velocity suitably reduced to reduce soil erosion, energy loss or to manage snow deposition. Additional wildlife food and cover, mixing of odor plumes and visual screening.</p>	length of windbreak row(s)	Feet	\$0.27	\$0.41	\$0.41	\$0.49