

CSP-2018-1 IN - Ag Land Crop Annual/Mixed

Soil Erosion

Sheet and Rill Erosion

Planning Criteria

Planning Criteria Met

Permanent ground cover greater than 90% and slope less than 10%;
OR, The water erosion rate is less than or equal to T.

Yes No

Evaluation Tests

Evaluation Test Met

A residue and tillage management system is implemented on all crops in the rotation that minimizes detachment and transport of soil particles caused by rainfall or irrigation. The system leaves crop residue on the soil surface and excludes primary inversion tillage implements (such as moldboard plow).

Yes No

Wind Erosion

Planning Criteria

Planning Criteria Met

Permanent ground cover greater than 90% and slope less than 10%;
OR, The wind erosion rate is less than or equal to T.

Yes No

Evaluation Tests

Evaluation Test Met

A residue and tillage management system is implemented on all crops in the rotation that prevents detachment and transport of soil particles caused by wind. The system leaves crop residue on the soil surface and excludes primary inversion tillage implements (such as moldboard plow).

Yes No

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Ephemeral Gully Erosion

Planning Criteria

Ephemeral gullies are not occurring; OR, Conservation practices and management activities are in place to prevent or control ephemeral gullies.

Planning Criteria Met

Yes No

Evaluation Tests

Temporary or permanent rills do not exist on the land management system; Or, All temporary or permanent rills are stabilized; AND all areas expected to have high erosion rates are stable.

Evaluation Test Met

Yes No

Classic Gully Erosion

Planning Criteria

Classic gullies are not present; Or, Classic gully management is adequate to stop the progression of head cutting and widening and offsite impacts are minimized by vegetation and/or structures.

Planning Criteria Met

Yes No

Evaluation Tests

Classic Gullies are not present; Or, All classic gullies are stabilized; AND, All areas expected to have high erosion rates are stable.

Evaluation Test Met

Yes No

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Streambank, Shoreline, Water Conveyance Channels

Planning Criteria

For shorelines and water conveyance channels; banks are stable or commensurate with normal geomorphological processes; AND, If bank erosion is present, it is beyond the client's control or commensurate with normal geomorphological processes; AND, For streambanks, SVAP2 bank condition element score greater than 5. If shorelines or water conveyance channels are not present, set this planning criteria to NA.

Planning Criteria Met

Yes No

Evaluation Tests

Excluding all fundamentally unstable, natural geomorphic streambanks and shorelines, all streambanks and shorelines on the land use show few signs of erosion or bank failure; AND, Each is stable and protected with natural materials. If shorelines and water conveyance channels do not exist on the land management system, set this test statement to NA.

Evaluation Test Met

Yes No

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Soil Quality Degradation

Organic Matter Depletion

Planning Criteria

Planning Criteria Met

Organic matter is not depleted below tolerable levels. SCI levels are greater than 0 on all fields in the land management system.

Yes No

Evaluation Tests

Evaluation Test Met

Cover crops are included in the crop rotation on 50% or more of the fields in the land management system to maintain adequate levels of soil organic matter.

Yes No

Tillage methods that lift/invert soil are not used. There is at least 30% residue cover on the soil surface at time of planting.

Yes No

Compaction

Planning Criteria

Planning Criteria Met

Soil compaction is not a problem: AND, Activities do not cause soil compaction problems AND can be documented with prior conservation planning or other on-site evaluation methods.

Yes No

Evaluation Tests

Evaluation Test Met

The crop rotation includes crops/cover crops with deep roots that extend through the soil profile to break up compacted layers. (see state lists)

Yes No

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Insufficient Water

Inefficient Use of Irrigation Water

Planning Criteria

The irrigation system components and management result in a Farm Irrigation Rating Index greater than 60; AND, Meets applicable State in-stream flow and lake and pond water levels requirements. If the land management system is not irrigated, set this planning criteria to NA.

Planning Criteria Met

Yes No

Evaluation Tests

An irrigation water management (IWM) plan is followed that meets the crop's needs, while maximizing irrigation water efficiency. The IWM plan schedules water application based on soil moisture monitoring and/or evapotranspiration monitoring, measures and records the amount of water used to irrigate, and the irrigation system's distribution uniformity has been evaluated and necessary changes were made. If the land management system is not irrigated, set this test statement to NA.

Evaluation Test Met

Yes No

A residue and tillage management system is implemented on all crops in the rotation which keeps at least 60% of the field surface covered after planting to increase plant available moisture. If the land management system is not irrigated, set this test statement to NA.

Yes No

Inefficient Moisture Management

Planning Criteria

Runoff and evapotranspiration levels are minimized on cropland. Soil loss levels are less than or equal to T, crop interval STIR values are less than 80, and SCI is 0 or greater.

Planning Criteria Met

Yes No

Evaluation Tests

A residue and tillage management system is implemented on all crops in the rotation which keeps at least 60% of the field surface covered after planting to increase plant available moisture.

Evaluation Test Met

Yes No

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Water Quality Degradation

Pesticides in Surface Water

Planning Criteria

Planning Criteria Met

Pesticides are stored, handled, disposed and applied to prevent runoff, spills, leaks and leaching; AND, Conservation practices and techniques are in place to minimize ground water impacts.

Yes No

Evaluation Tests

Evaluation Test Met

Pesticides are not applied or stored on this land management system; Or, Pesticides are applied using a site-specific mixture of prevention, avoidance, monitoring, and suppression (PAMS) strategies. Environmental risk screening tool are used (such as WIN-PST or similar LGU approved tool); AND, application rates and timing are compliant with the label.

Yes No

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Nutrients in Surface water

Planning Criteria

Planning Criteria Met

Organic or inorganic nutrients are not applied and PLU is not grazed; OR Nutrient and amendment applications are based on soil or tissue tests and nutrient budgets for realistic yields and conservation practices and management practices are in place to minimize surface water impacts.

Yes No

Evaluation Tests

Evaluation Test Met

The land adjacent to a stream, river, or other waterbody on the side or sides you control: - has diverse, natural plant cover typical to that along other streams within the drainage basin; - extend from the stream bank/shoreline for a distance of 35 feet; OR, (if applicable) The minimum State buffer-width requirement, whichever is greater; AND, Have few places where concentrated runoff flows through.

Yes No

Nutrients are not applied on this land management system; OR, If nutrients are applied, a nutrient budget is used to determine all application rates, including: - Realistic yield goals, - Nutrient uptake requirements, and - Available nutrient accounting for each of the following: (a) N, P, K from representative soil tests (less than or equal to 3yrs), (b) Soil organic matter mineralization, (c) Legumes in rotation, (d) Previous applications of manure and other organic based materials, (e) Planned post-harvest residual soil test levels, (f) Available nutrient analysis for each nutrient source, and (g) Available nutrient uptake efficiencies from planned application rate, source, method, timing and placement. All state specific application setbacks are maintained for all nutrient applications.

Yes No

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Excess Pathogens and Chemicals from Manure, bio-solids or Compost Applications in Surface Water

Planning Criteria

Planning Criteria Met

Potential sources of pathogens or pharmaceuticals are not applied on the land; OR, Organic materials are applied, stored, and/or handled to mitigate negative impacts to surface water sources.

Yes No

Evaluation Tests

Evaluation Test Met

Manure, Composts, or other bio-solids are not stored or applied on this land management system; OR Manure and other bio solids are applied using a nutrient budget to determine all application rates, including: - Realistic yield goals, - Nutrient uptake requirements, and - Available nutrient accounting for each of the following: (a) N, P, K from representative soil tests (less than or equal to 3yrs), (b) Soil organic matter mineralization, (c) Legumes in rotation, (d) Avoiding manure applications when soils are frozen, snow covered, or saturated, (e) Planned post-harvest residual soil test levels, (f) Available nutrient analysis for each nutrient source, and (g) Available nutrient uptake efficiencies from planned application rate, source, method, timing and placement. All state specific application setbacks are maintained for all nutrient applications. Minimum setbacks are maintained from drainage ways, wells, ditched, streams, rivers, and water bodies. If manure or other bio solids are not applied, set this test statement to NA.

Yes No

Livestock access to stream is controlled; OR, Livestock are limited to small watering or crossing areas.

Yes No

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Excessive Sediment in Surface Water

Planning Criteria

Upslope treatment and buffer practices address concentrated flows to water bodies; AND, The SVAP2 - bank condition greater than or equal to 5; AND, The livestock and vehicle water crossings are stable; AND, The water erosion rate is less than or equal to T; AND, Wind erosion rate is less than or equal to T.

Planning Criteria Met

Yes No

Evaluation Tests

All temporary or permanent rills and gullies are stabilized; OR, Temporary or permanent rills and gullies do not exist.

Evaluation Test Met

Yes No

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Air Quality Impacts

Emissions of Ozone Precursors

Planning Criteria

Operations that produce ozone precursor emissions are not present; OR, or are managed to reduce emissions. Ozone precursor producing activities may include: Engines (combustion source), Pesticide application, Burning, CAFO /manure management, or fertilization (manure/commercial).

Planning Criteria Met

Yes No

Evaluation Tests

Pesticides are not applied; OR, an IPM plan is followed which reduces ozone precursors. IPM includes applications of pesticides, including fumigants, be applied in a way that emissions of ozone precursors are reduced; Application methods may include: spot spraying, pest/target sensing application equipment, alternative pesticide formulations, or low emission fumigation methods.

Evaluation Test Met

Yes No

Emission of Greenhouse Gases (GHGs)

Planning Criteria

Activities that produce GHGs emissions are not present: OR, activities that produce GHGs emissions are managed to reduce those emissions; AND, Carbon sequestration is enhanced through reduced tillage methods or other practices. GHG producing activities that should be considered include: Fertilization (manure/commercial), Tillage methods, grazing management, and forestry practices; AND GHGs are not regulated in this planning area.

Planning Criteria Met

Yes No

Evaluation Tests

Nitrogen is not applied: OR, nitrogen is applied as close as possible to crop uptake (within 30 days prior to crop planting or greenup) at recommended application rates.

Evaluation Test Met

Yes No

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Degraded Plant Condition

Excessive Plant Pest Pressure

Planning Criteria

Plant pest damage to plants is below economic or environmental thresholds; AND, plant pests, including noxious and invasive species are managed.

Planning Criteria Met

Yes No

Evaluation Tests

Weeds, insects, and diseases do not limit crop production.

Evaluation Test Met

Yes No

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Fish and Wildlife - Inadequate Habitat

Inadequate Habitat - Food

Planning Criteria

The WHSI rating is greater than or equal to 0.5; AND, (when surface stream present) The SVAP2 - fish habitat complexity element score is greater than or equal to 7; AND, The SVAP2 - aquatic invertebrate habitat element score is greater than or equal to 7; OR, Conservation practices and managements are in place that meet or exceed species or guild-specific habitat model thresholds; OR, Food is available in quality and extent to support habitat requirements for the species of interest.

Planning Criteria Met

Yes No

Evaluation Tests

Unharvested grain crops are intentionally left in the field as wildlife food on an annual basis; OR, A no-till system is used that provides food for selected wildlife species.

Evaluation Test Met

Yes No

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Inadequate Habitat - Cover/Shelter

Planning Criteria

The WHSI rating is greater than or equal to 0.5; AND, (when surface stream present) the SVAP2 - barriers to movement element score is greater than or equal to 7; AND, the SVAP2 - fish habitat complexity element score is greater than or equal to 7; AND, the SVAP2 - aquatic invertebrate habitat element score is greater than or equal to 7; OR conservation practices and management practices are in place that meet or exceed species or guild-specific habitat model thresholds; OR, habitat cover is of available quality and extent to support requirements for the species of interest.

Planning Criteria Met

Yes No

Evaluation Tests

A no-till system is used that provides cover for wildlife. The orientation of the residue between harvest and establishment of the new crop supports wildlife cover.

Evaluation Test Met

Yes No

Plant growth and cover is managed to develop and maintain habitat to help chosen wildlife species. (see State Wildlife Action Plan)

Yes No

Inadequate Habitat - Water

Planning Criteria

The WHSI rating is greater than or equal to 0.5;AND, (when surface stream present) The SVAP2 - aquatic invertebrate habitat element score is greater than or equal to 7; OR, Conservation practices and managements are in place that meet or exceed species or guild-specific habitat model thresholds; OR, Water is available in quality and extent to support habitat requirements for the species of interest.

Planning Criteria Met

Yes No

Evaluation Tests

Water for habitat is accessible and at the right depth, duration, and time of year for chosen wildlife species (See State Wildlife Action Plan)

Evaluation Test Met

Yes No

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Inadequate Habitat - Habitat Continuity (Space)

Planning Criteria

Planning Criteria Met

The WHSI rating is greater than or equal to 0.5; AND, (when surface stream present) The SVAP2 - barriers to movement element score is greater than or equal to 7; AND, The SVAP2 - aquatic invertebrate habitat element score is greater than or equal to 7; OR, Conservation practices and managements are in place that meet or exceed species or guild-specific habitat model thresholds; OR, The connectivity of habitat components are adequate to support stable populations of target species.

Yes No

Evaluation Tests

Evaluation Test Met

Connectivity between food resources and cover and shelter is provided for the target wildlife species. (see State Wildlife Action Plan)

Yes No

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Inefficient Energy Use

Farming/Ranching Practices and Field Operations

Planning Criteria

Planning Criteria Met

Reduced tillage systems or energy conserving implements are being used to improve energy efficiency for field operations. If irrigated, improved efficiency irrigation pumps are being used on the majority of irrigated fields.

Yes No

Evaluation Tests

Evaluation Test Met

Reduced tillage and other field operations are used to reduce field passes and overall energy consumption.

Yes No