

Kansas State Office

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**Kansas Natural Resources Conservation Service (NRCS)
Wetland Restoration Criteria and Guidelines (WRCG)
Effective: Tuesday, October 10, 2023 (For Fiscal Year 2024)**

PURPOSE AND OBJECTIVES

This document contains the technical information used to guide decision making for the Agricultural Conservation Easement Program–Wetland Reserve Easements (ACEP–WRE). This includes decisions related to eligibility, ranking, selection, restoration, enhancement, and management of wetlands and associated habitats. This Kansas-specific WRCG does not supersede the policy set forth in the Conservation Program Manual (CPM), Title 440–Programs, Part 528–Agricultural Conservation Easement Program. In the event of a conflict, the policy set forth in this part of the CPM prevails.

HISTORICAL WETLAND TYPES IN KANSAS

I. PLAYA WETLANDS

- a. Description: Playa wetlands are generally small, round, shallow depressions found at the low point of a closed watershed, with no natural outlet drainageway. These depressions make up an ecologically important resource in an otherwise flat landscape and are hydrologically charged via precipitation and runoff. Playas are ephemeral wetlands and may remain dry for most of the year. Playas provide habitat for migratory birds and other native wildlife, and support groundwater recharge and water quality. They also provide recreational opportunities (such as bird watching and hunting). Playas are typically found in the western third of Kansas.
- b. Adjacent Lands: Playas function in a closed system where surrounding adjacent lands established with native vegetation are a vital component to the watershed hydrology and should be managed for the benefit and protection of the playa. Adjacent lands consisting of native vegetation also create habitat for ground-nesting bird species and reduce sediment accumulation in the playa.

Criteria for considering adjacent lands: A ratio of up to 9:1 adjacent land (upland) to eligible wetland types (wetland), as stated in CPM, Title 440–Programs, Part 528–Agricultural Conservation Easement Program, could be considered for adjacent lands that are part of the playa watershed within the offer area. It is critical that the watershed is managed for the

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playa wetlands to function properly. Any areas included in the offer area that lie outside the playa watershed, may be considered for enrollment if strict application of the ratio would create unmanageable boundaries or remaining land not enrolled would be impractical or cost prohibitive for the landowner. Approval of these adjacent lands can be addressed on a case-by-case basis by Kansas Natural Resources Conservation Service (NRCS) State Conservationist (STC) for up to a 5:1 ratio of adjacent lands to eligible wetlands. Ratios exceeding 5:1 will require approval from the National Easement Programs Division (EPD) Director.

- c. Alternative Communities: Playa wetlands are a unique wetland found on the High Plains of western Kansas. There are no alternative communities that would be considered for habitat and wetland function. Trees are not a viable vegetative cover with playa wetlands, nor are stands of non-native grasses in the playa wetlands and associated buffers.
- d. Restoration: Hydrology restoration for playa wetlands is typically accomplished by the breeching or removing level terraces within the easement area, removing sediment, diverting surface water, and filling pits and drainage ditches. When possible, consideration should also be given to restore the hydrologic function within the broader watershed for the benefit of the playa.

Guidelines for restoration: Restoration activities must not impact the confining layer (clay lens) of the playa floor. To prevent damage to the confining layer, sediment will be removed only when accumulation exceeds four (4) inches in depth. Sediment removal should be based on soil investigations that document identifiable sediment. Areas of sediment accumulation are typically located in concentrated inlet flow areas and near the margins of the playa, due to farming activities. Excavated sediment will be spread out in strategic spoil areas that will not restrict hydrologic flow to the wetland, and deposition depth will be no more than eight (8) inches. Spoil areas will be located on the easement area within adjacent uplands and at least 120 feet from the playa edge. Spoil material may be mixed with topsoil by disking prior to seeding. To provide adequate protection to the restored playa, a buffer of at least 120 feet and all additional upland areas included in the easement must be planted back to historical vegetative cover, as described in the appropriate Ecological Site Description (ESD). A mixture of mid-grass and short-grass species representative of the historic High Plains plant community should be seeded. These species are typically sod-forming and have higher basal cover than bunchgrasses typical of the Conservation Reserve Program (CRP) seed mixes. Increased basal cover reduces the velocity of runoff and traps sediment more efficiently, thereby

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improving the overall hydrologic function of the site. Land previously enrolled in CRP with established perennial grasses in the defined playa wetland will be converted to an appropriate wetland-dependent native plant community. Contact herbicides may be used to eliminate atypical plant species in the playa wetland. Land that was not enrolled in CRP (or otherwise lacks an established plant community in the playa wetland) will be allowed to naturally re-establish to wetland plants from the existing seed bank. Sediment may be removed in order to expose the natural seed bank. If the seed bank is insufficient to allow for the natural regeneration of a wetland-dependent plant community, the playa may be seeded using donor seed sources or commercially available wetland seeds that are appropriate for the area. With prior, written NRCS approval, disking, grazing, or prescribed burning of the playa wetlands and adjacent upland may be used for restoration and/or management. Additionally, site-specific plans for grazing and prescribed burning must be developed and approved prior to implementing these practices.

- e. Hydrology Restoration Offsite: Playa watersheds typically span far beyond the easement area controlled by the landowner, making it infeasible to completely restore full hydrology to the playa. Planners should consider offsite restoration activities that could contribute to a full hydrology restoration of the playa. Programs offered by Partner organizations may be an option for restoration assistance.

II. DEPRESSIONAL WETLANDS (Interdunal)

- a. Description: Interdunal wetlands are found in areas with sandy soils and are typically formed by eolian processes. These wetlands interact and fluctuate with the water table. Often, the hydrology is controlled by infiltration of surface water through the sandy mantle to an underlying paleoterrace high in clay that causes water to perch and move laterally. Interdunal wetlands also can be a flow-through system (such as a stream or marsh) where they gain their water from groundwater sources on one side and export their water on the opposite side of the cell. They are widely dispersed and can be small in individual size. They provide habitat for many species (including migratory birds) and provide recreational and educational opportunities. Interdunal wetlands are predominantly located in the Major Land Resource Area (MLRA) 79 – Great Bend Sand Plains in south-central Kansas, or in dunes adjacent to alluvial areas.
- b. Adjacent Lands: Interdunal wetlands are often widely dispersed on the landscape. Adjacent lands provide critical wildlife habitat, connectivity between wetland areas, and reduce fragmentation of localized wetland complexes.

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Criteria for considering adjacent lands:

Eligible wetland types (as determined by a wetland inventory) must:

- 1) be dispersed within the offer area, so there is at least one (1) wetland within 60% of 10-acre square grids, as plotted in the section(s) in which the offer area is located, and
- 2) have a ratio of 6:1 or less of adjacent lands to eligible wetlands.

Any additional acres outside these criteria may be considered for enrollment if strict application of the ratio would create unmanageable boundaries or if remaining land not enrolled would be impractical or cost prohibitive for the landowner. Approval of these adjacent lands can be addressed on a case-by-case basis by the Kansas NRCS STC for up to a 5:1 ratio of adjacent lands to eligible wetlands. Ratios exceeding 5:1 will require approval from the National EPD Director.

- c. Alternative Communities: Interdunal wetlands are not characteristic for the development of alternative vegetative communities. However, because their hydrology can be groundwater dependent, a deeper water habitat that is less likely to support cattail growth could be established.

Criteria for alternative community: One (1) deeper water habitat greater than four (4) feet, but less than six (6) feet in depth and up to 0.5 acres in surface area could be allowed per wetland easement. The side slopes cannot be steeper than 3:1. This alternative community would only be allowed through an approved Compatible Use Authorization (CUA) and developed at the landowner's expense.

- d. Restoration: Hydrology restoration for interdunal wetland areas is accomplished by plugging erosion channels that cause wetlands to drain and/or by the removal of sediment accumulation due to farming activities.

Guidelines for restoration: Accumulated sediment over four (4) inches in depth will be removed to restore the hydrologic capacity to the interdunal wetland. Excavated sediment will be spread out in strategic spoil areas that will not restrict hydrologic flow to the wetland and deposition depth will be no more than eight (8) inches. Spoil areas will be located on the easement area within adjacent uplands and at least 120 feet from the wetlands. Spoil material may be mixed with topsoil by disking prior to seeding. In order to provide adequate protection to the restored wetlands, a buffer of at least 120 feet and all additional upland areas included in the easement must be planted back to historical vegetative cover of native grasses and forbs, as

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described in the appropriate ESD. If ditch plugs are constructed, excavation will be less than 12 inches in order to provide soil material for the plug.

III. DEPRESSIONAL WETLANDS (Salt Marshes)

- a. Description: Inland salt marshes are unique wetlands that occur in limited locations in Kansas, primarily in the central portion of the State. They form complexes comprised of multiple dispersed wetlands that can be less than two (2) acres to 20 acres (or more) in size. Salt marsh complexes have high salinity levels in the soil that influence the wetlands and surrounding area. Due to the salinity, vegetative communities in salt marshes are distinctly different from others in the State. The hydrology of salt marshes is dependent upon groundwater, precipitation, and runoff and they usually have an inlet and outflow channel(s). Salt marshes provide a variety of habitats for wildlife (including shallow flats and semi-permanent pools). They are considered highly important stopover points for migratory birds, especially shorebirds.
- b. Adjacent Lands: Adjacent lands are interspersed within salt marsh wetland complexes. Larger salt marshes may include lacustrine fringe wetlands in adjacent areas. Adjacent lands reduce sedimentation from upland runoff and improve water quality in the wetland. Migratory species utilize adjacent lands for nesting and cover.

Criteria for considering adjacent lands:

Eligible wetland types (as determined by a wetland inventory) must:

- 1) **be dispersed within the offer area, so there is at least one (1) wetland greater than or equal to one (1) acre in size within 60% of 10 acre square grids, as plotted in the section(s) in which the offer area is located, and**
- 2) **have a ratio of 3:1 or less of adjacent lands to eligible wetlands.**

Any additional acres outside these criteria may be considered for enrollment if strict application of the ratio would create unmanageable boundaries or if remaining land not enrolled would be impractical or cost prohibitive for the landowner. Approval of these adjacent lands can be addressed on a case-by-case basis by the Kansas NRCS STC for up to a 5:1 ratio of adjacent lands to eligible lands. Ratios exceeding 5:1 will require approval from the National EPD Director. It must be determined that there are unique circumstances related to an entire salt marsh complex, and that an increase is deemed warranted for the protection of the wetland.

- c. Alternative Communities: Salt marsh wetlands are not characteristic for

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the development of alternative vegetative communities. However, because hydrology can be groundwater dependent, a deeper water habitat that is less likely to support cattail growth could be established.

Criteria for alternative community: One (1) deeper water habitat greater than four (4) feet but less than six (6) feet in depth and up to 0.5 acres in surface area could be allowed per wetland easement. The side slopes cannot be steeper than 3:1. This alternative community would only be allowed through an approved CUA and developed at the landowner's expense.

- d. Restoration: Wetland restoration of a salt marsh system is accomplished by plugging previous drainage systems, either surface or tile drains. In the process of plugging surface drains, low level dikes may be constructed to spread impounded water out, over the salt flat landscape. Any impoundments of water require the landowner to obtain a Water Appropriation Permit from the Kansas Department of Agriculture, Division of Water Resources (KDA-DWR). Low-level dikes create a ponded soil condition, similar to high rainfall runoff or flooding events that occurred prior to human manipulation of the watershed.

Guidelines for restoration: If low-level dikes are constructed, they should impound water to depths of one (1) to two (2) feet near the dike, and to just a few inches deep further back from the dike. Water control structures will be used in conjunction with low-level dikes to drain water from dike structures, mimicking the historic wet and dry cycles of salt marsh hydrology.

Macro-depressions, averaging approximately two (2) to three (3) feet deep, may be created for deeper water areas within an impoundment area or as standalone depressions. These macro-depressions are not drained, allowing natural wet/dry cycles to prevail.

Micro-depressions are irregular shaped areas six (6) to 12 inches deep and are not to exceed 1,000 square feet in size. Micro-depressions may be scraped out in the landscape to create multiple wetland areas. Hydrology is rarely permanent in micro-depression wetland areas.

To provide adequate protection to the restored wetlands, a buffer (at least 120 feet and all additional upland areas included in the easement) must be planted back to historical vegetative cover of native grasses and forbs, as described in the appropriate ESD. If possible, soil samples may be taken and submitted to the local MLRA Soil Survey Office to determine onsite salinity

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levels, in order to select vegetation adapted to local conditions.

IV. RIVERINE WETLANDS (Floodplains)

- a. Description: Riverine wetlands occur in floodplains and can have riparian corridors in association with stream and river channels. Riverine wetlands continue upstream until the features of the channel bed and bank disappear. They are primarily charged by precipitation and runoff, and secondarily by flooding events. Riverine wetlands provide protection from floods and can reduce nutrients and sediment downstream. They also provide habitat for many species of wildlife (especially migratory birds) and provide recreational and educational opportunities. Riverine wetlands are located throughout Kansas, but the largest area of interest for riverine wetland enrollment is in the eastern half of the State. Government Land Office (GLO) land survey maps from the 1800s of forested stream and river boundaries will be used to determine the applicability and feasibility for tree plantings. GLO maps will also be used in determining if alternative communities are appropriate for the site.

- b. Adjacent Lands: Not all lands in the floodplain are considered wetlands. There are adjacent lands that support various plant communities of tree and herbaceous vegetation. Adjacent lands are critical in providing nesting and brooding habitat for migratory birds and other wildlife. Adjacent lands help reduce the amount of sediment received by the wetland and are vital in reducing downstream flooding. Adjacent lands contribute to the hydrology of the wetland from runoff during high rainfall events. The flooding of adjacent rivers and streams is the most dramatic hydrological input to the wetland and can cover large areas of the floodplain. For these reasons, it is important to include adjacent lands when considering easement offer areas.

Criteria for considering adjacent lands:

Eligible wetland types (as determined by a wetland inventory) must:

- 1) be dispersed within the offer area, so there is at least one (1) wetland (or portion of a larger wetland) greater than or equal to one (1) acre in size located within 50% of 10 acre square grids, as plotted in the section(s) in which the offer area is located, and**

- 2) has a ratio of 1:1 or less of adjacent lands to eligible wetlands.**

Any additional acres outside these criteria may be considered for enrollment if strict application of the ratio would create unmanageable boundaries or if remaining land not enrolled would be impractical or cost prohibitive for the landowner. Approval of these adjacent lands can be addressed on a case-by-case basis by the Kansas NRCS STC for up to a 5:1

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ratio of adjacent lands to eligible lands. Ratios exceeding 5:1 will require approval from the National EPD Director. It must be determined that there are unique circumstances related to an entire riverine wetland complex, and that an increase is deemed warranted for the protection of the wetland.

- c. Alternative Communities: Alternative communities in a riverine wetland system would include native grass plantings in historic forested areas, as documented in the original GLO land survey maps. Native grass plantings may be utilized as an alternative vegetative community in historic forested areas, *if the following criteria are met*:
- 1) **The historic forested area is greater than 25% of the offer area, and**
 - 2) **The remainder of the offer area not restored to wetlands will be planted to native warm season grasses and forbs.**

The exception to this is historical forested areas would need to be established to native hardwood trees within a 100-foot-wide riparian area adjacent to any stream that is adjacent to or within the offer area. In this case, the definition of a stream is those identified with a solid blue line as designated on United States Geological Survey (USGS) quad maps that contain a defined bed of five (5) feet in width or greater, and banks that are three (3) feet deep or greater.

- d. Restoration: Wetland restoration in a riverine system is accomplished by the removal of dikes or levees, if possible, in order to allow floodwater to spread out over the floodplain. Alternative methods for wetland restoration in a riverine system may include the construction of low-level dikes to capture and retain rainfall runoff and floodwater. These structures create a saturated soil condition similar to historical wet/dry cycles of wetlands that occurred prior to human manipulation of the watershed.

Guidelines for restoration: If low-level dikes are constructed, they will impound water to an average of 18 to 24 inches deep across the wetland. Water control structures are used in conjunction with low-level dikes to drain the water from dike structures, which mimic the historic wet/dry cycle of riverine wetland hydrology.

Macro-depressions, averaging approximately 12 to 24 inches deep, may be created for deeper water areas within an impoundment area or as standalone depressions. These macro-depressions are not drained, allowing natural wet/dry cycles to prevail, similar to landscape scars that are eroded from the floodplain during natural flood events.

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Micro-depressions are irregular shaped areas six (6) to 12 inches deep and are not exceed 1,000 square feet in size. Micro-depressions may be scraped out across a relatively flat or gently sloping floodplain with suitable soils to create multiple pockets of water. Along with low spoil piles from the excavations, micro-depression zones can greatly increase variations in microtopography, connectivity, and interspersions to increase plant and habitat diversity. Side slopes on excavated areas will typically be 1:10 or flatter. Wide areas with slopes 1:20 are especially beneficial to shore birds. All areas outside the restored wetland areas are planted back to the historical vegetative cover of either native grasses and forb species or native hardwood trees, or to an alternative community. The likelihood of hardwood tree vegetative cover increases along a west to east gradient in Kansas. GLO land survey maps from the 1800s of forested stream and river boundaries will be used to determine the applicability and feasibility for tree plantings.

V. RIVERINE WETLANDS (Riparian areas)

- a. Description: Riparian areas are ecotones that occur along water bodies. They are distinctively different from the surrounding lands because of their unique soil and hydrophytic vegetative characteristics, which are strongly influenced by free or unbound water in the soil. Riparian ecosystems occupy the transitional area between terrestrial and aquatic (lentic or lotic) ecosystems. Riparian areas along streams or other waterways are considered an eligible land type for ACEP-WRE, provided that the offered riparian area:
- directly links two (2) or more restored (or restorable) wetland areas that are less than one (1) mile apart, and
 - are currently protected by an existing easement or other resource protection (such as a State or Federal wildlife management area), or will be protected under the same ACEP-WRE easement transaction.

Eligible riparian areas should average no more than 300 feet in width (measured from the top of bank on one side), or 600 feet in width, if both sides of the waterbody are offered for enrollment, as per CPM, Title 440-Programs, Part 528-Agricultural Conservation Easement Program (ACEP), Subpart K-ACEP-WRE Application Process and Eligibility Requirements, 105-Land Eligibility, E-Eligible Land Types – Riparian Areas. Potentially-eligible riparian areas are along streams that are identified with a solid blue line as designated on USGS quad maps, or have year-round measurable flow in a typical water year.

- b. Adjacent Lands: There may be opportunity to restore wetlands that are
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adjacent to eligible riparian areas.

Criteria for adjacent lands: When riparian land eligibility accounts for the eligible acres, a 1:1 ratio of adjacent lands to eligible land types (riparian) could be considered if the adjacent lands include at least 20% eligible wetland types or greater. Any additional acres included in the offer area would only be considered for enrollment if strict application of the ratio would create unmanageable boundaries or if the remaining land not enrolled would be impractical or cost prohibitive for the landowner. Approval of these adjacent lands can be addressed on a case-by-case basis by the Kansas NRCS STC for up to a 5:1 ratio of adjacent lands to eligible wetlands. Ratios exceeding 5:1 will require approval from the National EPD Director.

- c. Alternative Communities: Native grass plantings may be utilized as an alternative vegetative community on historically forested areas ***if the following criteria are met:***
- 1) Alternative communities will be considered in areas outside of a 100-foot-wide riparian area that are currently being cropped.
 - 2) These areas may be established to warm season native grasses and forbs.
 - 3) Other communities that are not considered wetlands (that are part of the adjacent lands that are currently being cropped) can also be established to warm season native grasses and forbs.
- d. Restoration: The riparian area will be restored to protect and increase the functions and values of the connected wetlands.

Guidelines for restoration: The riparian area will be restored to the original flow channel (as best as possible) when the entire stream is included in the offer area.

Riparian vegetation will be planted back to the historical vegetative cover of native grasses and forbs or native hardwood trees. Historic forested riparian areas will have (at a minimum), a 100-foot-wide area from the streambank reestablished to native hardwood trees. Any area outside the 100-foot-wide forested area (that is considered cropland) can be planted to native warm season grasses and forbs as an alternative community.

Wetland areas within adjacent lands (or part of the eligible riparian area) must be restored using micro-depressions. Micro-depressions are scraped out across a relatively flat (or gently sloping) floodplain with suitable soils to

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create multiple pockets of water. Along with low spoil piles from the excavations, micro-depression zones can greatly increase variations in microtopography, connectivity, and interspersions to increase vegetation diversity, habitats, and organisms. Side slopes in these areas are typically 1:20 or flatter.

TECHNICAL CONSIDERATIONS FOR LAND ELIGIBILITY

Eligible Land Types – Farmed or Converted Wetlands

(found in Title 440–Conservation Programs Manual [CPM], Part 528 – Agricultural Conservation Easement Program (ACEP), Subpart K – ACEP-WRE Application Process and Eligibility Requirements, 528.105–Land Eligibility, C).

C. Eligible Land Types – Farmed or Converted Wetlands

- (1) Farmed wetland or converted wetland together with the adjacent land that is functionally dependent on the wetlands are eligible for enrollment, except that converted wetland are not eligible if the conversion was not commenced prior to December 23, 1985, except as provided for in section 528.105I(6) below.
- (2) For the purposes of ACEP-WRE eligibility only, lands may be considered farmed wetland or converted wetland if such land is identified by NRCS to be any of the following:
 - (i) Farmed or Converted Wetlands.—Wetlands farmed under natural conditions, farmed wetlands, prior converted cropland, commenced conversion wetlands, or farmed wetland pasture. NRCS makes this determination based on 180-NFSAM criteria.
 - (ii) Former or Degraded Wetlands.—Former or degraded wetlands that occur on lands that have been or are being used for the production of food and fiber, including rangeland, pastureland, hayland, and forest production lands, where the hydrology has been significantly degraded or modified and will be substantially

(440-528-M, 1st Ed., Amend. 131, Feb 2020)

528-K.14

Title 440 – Conservation Programs Manual

restored through the implementation of the wetland reserve plan of operations (WRPO).

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Kansas definitions for the terms “significantly degraded or modified” and “substantially restored” are stated below:

- Significantly degraded or modified: The land being offered for enrollment has more than 50 percent of the hydrology altered from its historic conditions.
- Substantially restored: More than 60 percent of the hydrology on lands considered to be significantly degraded or modified will be restored to historic conditions.

TECHNICAL CONSIDERATIONS FOR WAIVERS

The Kansas NRCS STC can provide waivers for certain landowner eligibility and land eligibility criteria. Waivers for land ownership of less than 24 months can be granted by the Kansas NRCS STC for certain situations, as stated in CPM, Title 440–Programs, Part 528–Agricultural Conservation Easement Program (ACEP), Subpart K528.103–Landowner Eligibility Determination, B. All other land ownership requests for less than the 24 months are forwarded to the Chief of NRCS for waiver consideration.

There will not be a technical consideration waiver for restoration costs that exceed the fair market value of the land by the Kansas NRCS STC, except for extenuating conditions, as determined by NRCS.

TECHNICAL CONSIDERATION FOR EXTENDING THE WIDTH FOR ELIGIBLE RIPARIAN AREA BUFFER SIZE

There needs to be a strong argument that the area being included increases the restoration opportunities to improve the functions and values of the wetlands being connected by the riparian area. An increase in riparian area width would be considered if there are additional wetlands that would meet eligible riparian criteria (no more than 100 feet from the edge of the standard 300 feet eligible riparian width). In these situations, the eligible riparian area will not be wider than 400 feet on one side on the stream bank.

TECHNICAL CONSIDERATIONS FOR RANKING

Ranking criteria have been established for use with Conservation Desktop (CD) and the Conservation Assessment and Ranking Tool (CART). Playa wetlands are a priority type wetland identified for restoration and protection in Kansas through the ranking process. Applications that include entire playas will receive higher ranking consideration than applications that only include part of a playa wetland, unless multiple landowners submit applications which include the entire playa. Criteria established for use with CART is published on the.

ACEP–WRE applications that contain less than 10 acres in size will not be considered for

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enrollment unless the area is contiguous to an existing wetland easement or is part of a larger, multi-owner ACEP-WRE joint application.

TECHNICAL CONSIDERATIONS FOR PRESCRIBING COMPATIBLE USE AUTHORIZATIONS (CUAs)

Water Level Management – Wetland hydrology was restored by the construction of low-level dikes, macro-depressions, and micro-depressions. Wetlands will have natural wet and dry cycles depending on rainfall, flood, and drought conditions. Water control structures were installed in dikes to allow for increased water level management to benefit migratory birds.

Drawdown – Water may be removed from a wetland cell by removing stoplogs (boards) from the water control structure after March 1 to allow for moist-soil plant production and maintenance activities within the wetland. Drawdowns that occur within the first 90 days of the growing season typically result in the greatest quantity of desirable seed production. Slow water drawdowns (which allow one inch of water drop per day) result in more desirable plant establishment and wildlife use. Stoplogs will be put back in the water control structure by October 31 at the latest, to allow the wetland to capture water for migratory bird use. Wetlands without a water control structure may be dewatered by other means to facilitate maintenance and management activities. An approved CUA for water level management (drawdown) is required prior to implementation in restored wetlands.

Flooding – Flooding a wetland cell by pumping water into the wetland can be used when the wetlands do not fill naturally (a water right for pumping issued by the KDA-DWR is required before pumping is allowed). The water appropriations application/permit number is required before a pumping water level management CUA can be approved. An approved CUA for water level management (flooding) is required prior to implementation in restored wetlands.

Forest Stand Improvement – Forested areas should be managed to promote a diverse mixture and age structure of trees to enhance wildlife habitat and protect wetland values and functions. Management activities should follow the recommendations of the Kansas Forest Service district forester. An approved CUA for forest stand improvement is required prior to implementation.

Prescribed Burning – Prescribed burning can be used to help maintain herbaceous vegetation, control noxious weeds, minimize tree encroachment, improve wildlife habitat, reduce accumulation of vegetation, and allow access for other management activities. Prescribed burning should be completed once every three (3) or four (4) years, depending on site conditions. Prescribed burning is not allowed during the primary nesting season (April 15 through July 15), unless approved by NRCS on a case-by-case basis. The generally accepted prescribed burning timeframe is March 1 through April 14 and July 16

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through September 30. Burning outside this timeframe can be considered on a case-by-case basis. Firebreak width will adhere to the guidelines set forth in Conservation Practice Standard (CPS) Prescribed Burning (Code 338) and CPS, Firebreak (Code 394). An approved CUA for prescribed burning with an approved burn plan is required prior to implementation.

Grazing – Grazing can be used occasionally to maintain herbaceous vegetation, setback succession, and promote diversity in restored grasslands. The type of livestock, number of head, number of grazing days, and habitat needs and objectives will be detailed in an approved grazing plan. Special caution must be utilized to ensure that livestock do not cause excessive trailing along the dike or damage water control structures. Grazing is not allowed in the same year and on the same acreage that is hayed or mowed. The grazed area will need to be closely monitored to ensure proper evaluation of the effects of the grazing event and to adjust timing and intensity based on the progression of meeting the specific objective and current site conditions. An approved annual CUA for prescribed grazing with an approved grazing plan is required prior to implementation.

Haying and Mowing – Haying and mowing can be used as a management practice to help maintain health and vigor of native vegetation and reduce woody vegetation encroachment. Haying and mowing may only occur from July 16 through September 1. Timing and extent should be considered to ensure adequate regrowth for winter cover and early spring nesting cover. Haying and mowing is not allowed in the same year on the same acreage that is grazed. Vegetation cut height should not be less than six (6) inches. Exceptions to haying or mowing timing and frequency may be considered by the STC. An approved CUA for haying is required prior to implementation.

Disking – Over time, natural plant succession will favor perennial plants over annual plants. Disking can be used to reduce perennial plant dominance and encourage annual seed and forb production.

Restored Wetland – Disturbance will be necessary to promote annual wetland plants and can be accomplished by disking within the wetland cell on a three (3) or four (4) year cycle, depending on weather and flooding conditions. Disk from April 1 through October 1, with best results if disking prior to July 15. Disk multiple times to break up heavy residue or when a single-disk-pass results in a rough seedbed. Disk six (6) to eight (8) inches deep on the first pass and four (4) to six (6) inches on subsequent passes. Depths and number of passes can vary, based on site conditions and existing residue. An approved CUA for vegetative management (disking – restored wetland) is required prior to implementation.

Restored Grassland – Disking restored grasslands help to setback grass dominance and create brood habitat for wildlife. Disking should be completed between October 1 through April 14, with best results if disking prior to February 28. Disk multiple times

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to break up heavy residue or when a single-disk-pass results in a rough seedbed. Disk four (4) to six (6) inches deep. Depths and number of passes can vary based on site conditions and existing residue. Disking should only be completed once in a three (3)-year period. Avoid disking if there is potential for soil erosion or in areas where noxious weeds are present. An approved CUA for vegetative management (disking - restored grassland) is required prior to implementation.

Native Grassland – Disking is not an approved management activity on native grassland acres with no history of cropping.

Brush Management – Over time a lack of disturbance activities will favor woody plant establishment. Controlling woody establishment will be necessary in restored wetland, restored grassland, and native grassland areas. Undesirable woody vegetation control, (e.g., cottonwood, Russian olive, elm, ash, cedar, honey locust, etc.) can occur anytime conditions are dry enough to not cause significant soil disturbance. The removal of woody species by bulldozer is not allowed. Cut trees are to be removed from the easement area or can be piled and burned in areas that minimize grass disturbance. Unburned debris needs to be removed from the easement area. Herbicides may be used on stumps of cut trees or as a foliar spray if applied according to label directions. An approved CUA for brush management is required prior to implementation.

Weed Control – Pest species (including, but not limited to, phragmites, sesbania, brome, fescue, reed canary grass, as well as State-listed noxious weeds) will be controlled to reduce competition, prevent seed production, and encourage growth and establishment of desirable grass and forb species. Noxious weeds are to be controlled by the landowner, per the Warranty Easement Deed (WED). Refer to the current year “Chemical Weed Control for Field Crops, Pastures, Rangeland, and Non-Cropland Guide”, published by Kansas State University for all chemical treatment recommendations and methods. Always read and follow all label directions. An approved CUA for weed control is required prior to implementation.

Dike Maintenance – Dike(s) represent a major financial investment constructed on the easement to restore wetland hydrology and enhance wildlife habitat. Dikes were seeded to a mixture of native grasses and forbs. They should be maintained as herbaceous vegetation. They may be maintained by mowing from the front toe of the dike to the back toe of the dike. Dike mowing will be allowed from July 16 through September 1 with a mowing height of no less than six (6) inches. Damage to the dike caused by wildlife or flooding should be repaired immediately and match the designed site conditions. An approved CUA for dike maintenance is required prior to implementation.

Food Plot – Food plots may be planted on up to 5% of the total easement acres to provide winter food for wildlife. Food plots may only be planted in areas that were previously cropped prior to easement acquisition. They are not allowed in native grassland areas.

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Food plots may be prepared and planted to small grains, row crops, legumes, or a variety of cover crops with no harvest allowed. Soybeans are not allowed due to toxicity concerns. No chemicals can be used with food plots that are established within wetland cells. Landowners are responsible for understanding and complying with applicable State and Federal wildlife baiting laws applicable to local and migratory wildlife. An approved CUA is required for food plots in restored wetland and restored grassland areas prior to implementation.

Trails – Trails may be developed to provide access by foot or ATV/UTV for management activities, recreational access, and general quiet enjoyment of the easement. Trails can be mowed paths or a designated path used to drive through the easement. The general public will not have access to these trails. Trails can be mowed twice during the year to a maximum width of 20 feet and mowing height shall be no less than six (6) inches. Trail mowing may only be done one (1) time during the nesting season (from April 15 through July 15) and one (1) additional time prior to September 1. Trail use during wet soil conditions is limited to foot traffic only. Gravel or other amendments are not allowed on trails. An approved CUA for trails is required prior to implementation.

Blinds – Wildlife viewing or hunting blinds (considered reserved to the landowner under the terms of the WED) are limited to hunting or observation blinds that will accommodate no more than four (4) people and are temporary, non-permanent, and easily assembled, disassembled, and moved without heavy equipment are not subject to the CUA process. This includes ladder stands, hanging tree stands, pop up ground blinds, or other blinds that are not attached to the ground, does not hinder vegetation growth, and are easily assembled and disassembled on site (within a two [2]-hour timeframe). Temporary hunting blinds are to be removed at the end of the hunting season. In contrast, semi-permanent hunting or observation blinds are subject to the CUA process. Hunting and observation blinds that are considered a semi-permanent design are subject to the following restrictions:

- They must have external dimensions of no more than 80 square feet and eight (8) feet in height (with a total height not to exceed 25 feet if on an elevated platform).
- They must blend into the landscape and causes minimal ground or vegetation disturbance for installation or removal.

Utilities (e.g., electricity, propane tanks, or running water) associated with semi-permanent hunting and observation blinds are prohibited. Only one (1) semi-permanent blind is allowed per moist soil wetland area. Semi-permanent blinds on upland sites are limited to one (1) per easement for easements up to 80 acres, and one (1) semi-permanent blind for each additional 80 acres of easement area. The landowner is responsible for all costs associated with the removal of the blind(s) and the repair of any impacts to the easement area as a result of construction, installation, or removal. Any blind(s) not

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maintained will be considered abandoned and are to be removed from the easement area. The blind is only authorized if a CUA is in place. Any non-renewed CUA for semi-permanent blinds will require the structure to be removed immediately upon notification from NRCS. Semi-permanent structures that are currently approved through an active CUA that do not meet these criteria will be allowed to remain on the easement through the expiration of the current CUA, at which point any non-compliant structures will be removed by the landowner.

Other: NRCS technical assistance is available at any time. ***Any manipulation of vegetation or hydrology requires an approved CUA prior to implementation.***

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ATTACHMENT

Figure 1. Map of each historical wetland type in Kansas and their relative locations within the State.

