



SUBJECTIVE EVALUATION OF TERRESTRIAL WILDLIFE HABITATS, 2004

Developed by: KANSAS DEPARTMENT OF WILDLIFE AND PARKS
ENVIRONMENTAL SERVICES SECTION (Revised 2004)



These subjective evaluation procedures are to be used to rapidly quantify a development project's probable impact on terrestrial wildlife habitats. These procedures have been developed and revised by current and former employees of the Kansas Fish & Game Commission (KDWP), Soil Conservation Service (NRCS), and from NRCS Kansas Fish and Wildlife Habitat Analysis Procedure (190-V-NMB, Amend. KS1, May 1984). They are designed to provide a reasonable holistic biological evaluation of the various habitat types. Findings from a project evaluation using these procedures are to be recorded on standard field forms (included).

Each habitat type or community present within the impact area will be rated. The assessment will provide a quantitative value (R) from 0.0 to 10.0 that represents the quality of the habitat being evaluated compared to the optimal habitat (i.e. reference site) type for the geographical area in question, with a score of 10.0 representing reference site conditions.

On the following pages, the evaluation steps for each habitat type are shown. Also included is a field key. Please keep in mind the criteria keys are only guides to obtain uniformity in evaluating different tracts. In general, the information provided is to serve as a standardized checklist for identifying habitat communities by placing a value on their quality. However, if professional judgment determines the habitat characteristics are different than those indicated by the key, or there exists a unique habitat or wildlife resource not adequately covered by the given criteria, a narrative description can be developed in the field and a quality rating made. Such field-developed evaluations must be documented through a narrative description of the criteria used and attaching it to the field report.

TERRESTRIAL WILDLIFE HABITATS

There are six main habitat types that this procedure is designed to evaluate:
(see individual guidelines for habitat descriptions)

1. Woodlands (both riparian and upland)
2. Rangeland
3. Pastureland
4. Cropland
5. Wetlands
6. Odd areas

For all habitat types the qualitative thresholds for ratings are:

Excellent Habitat = 8.0 - 10.0; Good = 5.6 - 7.9; Fair = 3.1 - 5.5; Poor = 0.0 - 3.0

With most seasonal and permanently resident terrestrial wildlife, a 10.0 habitat value generally represents the highest quality vegetative-structural community that can be achieved. High-quality wildlife habitat may be influenced by plant characteristics such as species composition, age class, or growth form. Other site characteristics that influence habitat quality include geomorphic variations in land structure (cliffs, rock outcrops, caves, etc.), and ecological site or spatial relationships to adjacent habitats that provide resource requirements for wildlife (forage materials, nesting sites, shelter, etc.)

When evaluating large areas, it is not uncommon to encounter several parcels of the same habitat type that have significantly different quality values due to various reasons (i.e. grazed mature woodland will have a lower quality than ungrazed mature woodland). Such parcels should be evaluated and documented separately. Use professional judgement when determining if these characteristics exist.

Interspersion (IV)

Interspersion is rated as a separate entity for all habitat communities. It is determined by counting the number of habitat types adjacent to the habitat being evaluated. The numbers of adjacent habitat types are summed, and the appropriate interspersion value is added to the quality rating (R), however, **a habitat's R-value cannot exceed 10 regardless of level of interspersion**. Adjacent habitat types to be evaluated for interspersion should include aquatic habitats as well. The following habitat types should be considered for interspersion:

1. Woodlands
2. Rangeland
3. Pastureland
4. Cropland
5. Wetlands
6. Odd areas
7. Streams (ephemeral, intermittent, perennial)
8. Impoundments (ponds, lakes, reservoirs)

The following table summarizes the interspersion values to be added to R-value of the habitat type being evaluated.

Number of adjacent habitat types					
	0	1	2	3	4+
IV value	-0.5	0	+0.5	1.0	1.5

WOODLAND EVALUATION

Woodland is an area having woody plant species that produce canopy cover of at least 25% of the basal area. Woodlands dominated by invasive exotic or naturalized species should be rated lower than sites having native species historically indigenous to that landscape. Sites that have woody colonization due to the suppression of fire or other management effects should be rated lower. Subjectivity to account for these instances should be applied by selecting an appropriate value from the range of points in the "Species Groups" ratings.

Although trees dominate woodland areas, other vegetative cover such as shrubs, vines, grasses, and forbs often are often found intermixed within woodlands constituting the understory. The habitat value of the overall woodland is enhanced by the presence and abundance of these other vegetation types, as well as habitat provided by dead timber (standing/fallen) and other woody debris and leaf litter. Den trees are also included as a component in the evaluation because of the refuge and nesting habitat they provide to a variety of fauna.

Two categories of woodland can be identified:

Riparian Woodland = Timber along watercourses most readily identified where floodplains exist. Generally, in Kansas, these areas can be identified in the USDA-NRCS County Soil Survey Manual as flat to gently sloping well to poorly drained soils along watercourses. Deeply incised streams often have been separated from their floodplains due to a variety of natural and anthropogenic activities. Woodlands adjacent to these areas should be evaluated as riparian, and delineated by alluvial soil types from soil survey maps.

Upland Woodland = All timber not associated with a floodplain or stream. Upland woodlands typically can be delineated with the use of soil survey maps.

Procedure

1. Review the species group and plant form components of the woodland key. Traverse the tract sufficiently to obtain a reliable indication of vegetative composition and distribution. Record species of trees, shrubs, vines, grasses, and forbs encountered in as much detail as possible.
2. Record an estimated percentage of canopy cover.
3. Using the woodland key, tabulate the applicable component points (40 points maximum). Determine quality rating by dividing total component points by four (4). Identify adjacent habitat types and add interspersed value (IV).
4. If an evaluator's estimation of canopy density is challenged by an individual or entity to be less than the 25% required by the woodland definition, evidence should be presented to document this challenge. Specific measurements of canopy closure can be performed using a vertical point sampling device and tallying the number of hits where the crosshairs are covered by foliage, aerial photographs and dot matrix scales, spherical densitometers, hemispherical camera lens photographs, or by measuring tree crown widths and calculating the % surface area covered.

WOODLAND KEY Evaluate for composition and distribution of components throughout stand.

Estimated Canopy Cover (minimum 25%) _____ %

<u>Species Groups</u>	<u>Points</u>
All 5 species groups (Nut, Mast, Fruit, Seed, Evergreen)	6 to 10
4-5 species groups	3 to 6
Nut or mast + 2 other spp. groups	1 to 3
2-3 spp. groups	1 to 3
1 species group	1

<u>Plant Form</u>	<u>Score each plant form as</u>
Trees over 12" dbh	Abundant = 3 points
Trees over 25' tall	Common = 2 points
Trees 3'-25' tall	Sparse = 1 point
Trees up to 3' tall	Absent = 0 points
Shrubs	
Vines	
Grass	
Forbs	
Debris and/or Standing Dead, Snags	
Den Trees	

Total Points + IV = R
4

Circle adjacent habitat types: Rangeland Pasture Impoundment
 Cropland Wetland Odd Area Stream

Trees

Shrubs

Vines

Grass

Forbs

<u>Species Groups</u>
Nut Trees = Hickories, pecan, black walnut
Mast Trees = Oaks
Fruit Trees = Hackberry, mulberry, Osage-orange, paw paw, wild crab, hawthorn, red haw, black cherry, chokecherry, western soapberry, flowering dogwood, wooly buckthorn, persimmon, Smooth black haw
Seed Trees = All other deciduous trees
Evergreen = Eastern red cedar

RANGELAND EVALUATION

Rangeland is an area of native grasses, grass-like plants, forbs and shrubs. The grasses may be either naturally occurring or seeded by man. Rangeland may be used for either grazing or hay.

Grasslands ecosystems have historically undergone frequent periods of disturbance. Grazing mammals (domestic or wild) provide diverse effects on plant community composition and structure that are natural to the ecosystem; however, mismanagement by humans (i.e. overgrazing) will often degrade the grassland by altering plant composition. In addition, community disturbance has historically been provided by fire; however, poorly managed burning regimes influenced by humans and/or suppression of fire has also degraded grasslands from their historic community composition. Low-quality grasslands will generally be those having the greatest amounts of woody plants, increasers, and/or invaders. Woody plants, especially trees, are a deterrent to ground-nesting birds, and overdeveloped woody shrub invasion can act as corridors for mammalian species such as skunks and raccoons that will prey upon nests. Professional judgement should be used when evaluating a rangeland that contains woody vegetation. Sparsely scattered mature trees and shrub corridors along breaks and valleys within grasslands may not be a deterrent to wildlife adapted to open the prairie. The evaluator should consider the landscape and reference grasslands in the area when determining whether a tract is degraded by woody vegetation. Examples of rangelands that would provide low-quality habitat include tracts invaded by mature trees (especially Honey locust, Osage orange and Eastern Red Cedar), those that would require high economic costs to restore (chemical, physical restoration methods), and rangeland that has been over-utilized to the point where invasive and/or exotic plants are established (i.e. undesirable forbs, *Sericea Lespedeza*, etc.).

The evaluator should keep in mind that the quality rating should reflect the grassland's ability to support wildlife rather than its ability to produce forage for livestock. Smaller patchy tracts where poor management has allowed fragmentation by windbreaks, cropfields, roads, etc also typify lower ratings. The highest ratings are intended to describe functioning native rangeland which is maintained in the historic successional stage. The size and management of the grassland supports the maintenance of key/barometer wildlife species. Large continuous tracts of native rangeland are generally higher in quality and are more beneficial to grassland-evolved species rather than rangeland fragmented by other habitat types (Horak, 1985). When evaluating native rangeland occurring in a minimum continuous tract of one (1) square mile or greater the evaluator should provide the appropriate amount of additional points to the score. Generally, higher rated rangeland will be at least 1-3 square miles in size. An exception to this would be where a site has rare or unique plant life.

Horak, G.J. 1985. Kansas prairie chickens. Kansas Fish and Game Commission, Pratt, KS.

Procedure

1. Review the species group and plant form components of the rangeland key. Transect the tract sufficiently to reasonably assure that an overall (average) evaluation can be made.
2. Using the rangeland key as a guide, determine the proper set of components for the tract in question and assign a quality rating indicative of existing habitat conditions. If a different combination of components exists, document them on the field report.
3. Add or subtract appropriate points based on the size of the rangeland. Identify adjacent habitat types and add interspersions value.

RANGELAND KEY

	Component Points
A. Decreasers reproducing stand	9.0- 10.0
B. Plants in healthy condition	
C. Herbaceous increasers not conspicuous	
D. Woody increasers are not conspicuous	
A. Decreasers conspicuous, can recover	6.0– 8.9
B. Woody invaders may be established, others reproducing markedly	
C. Woody increasers may be conspicuous	
A. Decreasers not conspicuous	3.0– 5.9
B. Annuals/invaders conspicuous	
C. Increasers established	
D. Broadcast herbicide use evident	
A. Decreasers absent	0 – 2.9
B. Invaders established – Trees mature and extensive	
C. Desirable wildlife food/cover nearly absent	

Tract is continuous for >1 square mile _____ + 1.5
 Tract is continuous for > 2 square mile _____ + 2.5
 Tract is fragmented by woody invasion, windbreaks, roads, crop fields, etc. _____ - 1.5 to - 2.5
 Rare or unique plant life (list and provide appropriate points) _____

Points + IV = R

Circle adjacent habitat types: Woodland Pasture Impoundment
 Cropland Wetland Odd Area Stream

PASTURE EVALUATION

Pasture is an area seeded by man to any cool or warm season domestic perennial grass. In general, stands of the domestic perennial grasses common in Kansas are of low-value to terrestrial wildlife. Their growth form and recommended use essentially eliminates any potential for providing dependable protective cover. Monocultures of native plants generally have lower wildlife habitat value than diverse mixtures of plant species. Quality of the grass (i.e. amount of exposed bare ground, grazing pressure, etc.) will also dictate the quality of the pasture along with the presence and/or absence of desirable and undesirable forbs. Desirable forbs consist of a mix of native perennials, bi-annuals, and annuals. In general, legumes and other flowering plants can have high wildlife habitat value for direct use as food or indirectly as habitat for insects, or as a benefit to improving soil quality. Aggressive and/or invasive native or exotic species are generally considered undesirable due to their tendency to develop monocultures. Consideration should be given to the soil type, nutrition, past management practices, and climate when determining the quality of the vegetation. The location of the vegetation in the landscape and the year-round support of resident wildlife and/or temporal use by migratory wildlife are factors that will add/detract from the quality rating.

Invasion of woody plants into pastures will improve the quality of a pasture. Any area seeded to annual grasses, regardless of their use or purpose, shall be designated cropland, not pasture.

Procedure

1. Review the components of the pasture key. View the tract being rated sufficiently to assure that an overall (average) evaluation can be made.
2. Using the pasture key, assign the appropriate habitat rating (R) for the components present and add interspersed value (IV) for the appropriate number of adjacent habitat types.

PASTURE KEY

	<u>Component Points</u>
Grass in good-excellent condition with desirable forbs present:	
A. Warm season pasture	9
B. Cool season pasture	8
Grass in poor-fair condition with desirable forbs present:	
A. Warm season	7
B. Cool season	6
Grass in good-excellent condition with undesirable forbs abundant:	
A. Warm season	5
B. Cool season	4
Grass in poor condition with undesirable forbs present:	
All pastures	3
Grass in fair-good condition with no forbs present (herbicide use evident)	
All pastures	2
Grass in poor condition with no forbs	
All pastures	1
Any of the above with some established woody:	+ 1

Total Points + IV = R

Circle adjacent habitat types: Rangeland Woodland Impoundment
Cropland Wetland Odd Area Stream

CROPLAND EVALUATION

Cropland is an area used for production of row crops, small grain, legumes, or domestic annual forage crops. Cropland can provide dependable cover for a short time and abundant food seasonally; however, regardless of the type of crop grown, cropland is subjected to an annual major disturbance that results in poor wildlife habitat during some part of the year. In general, crop fields of milo, feed grains and corn provide cover and food for longer periods of time, especially during the winter months when these resources are in shortage. For this reason they are considered of higher habitat value to wildlife. Various management strategies can also influence the quality of habitat a crop field will provide. Parcels of abandoned cropland may be common where soils are poor. Such lands will be in various stages of succession and it may be more appropriate to evaluate these areas as 'odd' areas, rather than crop field. Use professional judgement if this circumstance arises.

Field size may influence the quality of the crop field's benefit to wildlife. Small field sizes are beneficial to wildlife species that are well adapted to disturbed plant communities having high amounts of "edge" and typically border riparian woodlands. Large field sizes are beneficial to wildlife species that are more intolerant of small fields (i.e. migratory waterfowl such as geese and some species of ducks and shorebirds). Evaluators should determine which criteria, if any, are applicable to the local conditions and score the site appropriately.

Crop rotation can have profound effects on wildlife. Double-cropping results in more frequent soil disturbance and potentially, higher mortality of resident wildlife and wildlife population recruitment. Annual cropping provides less soil disturbance than double-cropping and wildlife habitat is provided on a temporary basis. The significant influence on wildlife habitat quality with annual cropping is timing and spatial distribution of other suitable habitats. Landscape features such as corridors, predator traps and suitable cover are characteristics that affect wildlife habitat quality. Crop rotations that include alternate years of fallow and cropping reduce the disturbance to wildlife and provide quality cover and food supplies for extended periods of time resulting in higher wildlife productivity.

Unharvested crop can be important to wildlife habitat quality. Migratory birds often utilize these resources along with other wildlife whose food supplies are seasonally limited. Spatial and temporal distribution, palatability, and accessibility are characteristics that affect the value of unharvested crops. Unharvested crops located in or near winter cover are valued for resident wildlife that prefer disturbed "edge" habitat. Standing unharvested is more valuable than unharvested crop residue/waste.

Procedure

1. Review the components of the cropland key. View the tract being rated sufficiently to assure that an overall (average) evaluation can be made
2. Using the key, tabulate the applicable component points (20 points maximum). Determine quality rating by dividing total component points by two (2) and add the appropriate interspersion value (IV).

CROPLAND KEY

	Component Points
<u>Crop type:</u>	
A. Milo, feed grain, corn	7
B. Alfalfa, small grain	4
C. Soy beans, sunflowers	2
D. Cotton	1
E. Clean till	0
F. Other (describe)	evaluator assign point value
<hr style="border-top: 1px dashed black;"/>	
<u>Management:</u>	
A. Organic w/green manure, crop rotation	10
B. Mechanical tillage only (no pesticides)	7
C. Conservation tillage	5
D. Spring tillage	3
E. Fall tillage	2
F. Fall plowing	0
<hr style="border-top: 1px dashed black;"/>	
<u>Other Factors:</u>	
A. Field size	-1 to +1
B. Crop rotation	-1 to +1
C. Unharvested crop left	0 to +1
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$$\frac{\text{Total Points}}{2} + IV = R$$

Circle adjacent habitat types: Rangeland Pasture Impoundment
 Woodland Wetland Odd Area Stream

WETLAND EVALUATION

Wetlands are areas saturated by surface or ground water, with vegetation adapted for life under those conditions. These areas include swamps, bogs, fens, marshes and estuaries. Wetlands are among the most biologically productive natural ecosystems in the world, providing shelter and food to diverse species. For regulatory purposes under the Clean Water Act, the term wetlands means "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas." [taken from the EPA Regulations listed at 40 CFR 230.3(t)] The evaluator should identify in the key whether a wetland delineation should be performed pursuant to the Corps of Engineers 1987 Wetland Delineation Manual. This responsibility does not lie with KDWP.

Management considerations

Management can influence the subjective scoring for wildlife habitat value of various types of wetlands in Kansas. For example, whether a hay meadow wetland is considered lower-quality habitat than a natural, native, or non-manipulated wetland may depend on the management of the habitat. Haying can maintain an herbaceous wetland plant community where the hazard of woody invasion exists; however, if properly maintained and/or subject to periodic burning, herbaceous wetlands will have wildlife habitat values that are higher than those that become rank with plant residue and create conditions favorable for tree establishment. Grazing mammals are a historic component of wetlands and can provide increased plant diversity and wildlife habitat value. The intensity and duration of use also affect wildlife habitat quality and should be a consideration for scoring.

Wetlands of various types are geographically distributed throughout the state of Kansas. Glacial hill seeps and playa depressions are unique geographic wetland types. The relative regional scarcity of a specific type of wetland should be a consideration in weighting scores.

Types of Wetlands

Isolated and Natural

Even most isolated and natural wetlands in Kansas have some hydrology manipulation. The influence of roadways and other alterations to the watershed affects the amount of surface runoff. The construction of flood control structures (reservoirs and lakes) also influences wetland hydrology. Generally small closed depressions may be less effected because of their smaller watersheds or subsurface hydrology. These communities have potential for supporting isolated populations of plants and animals (some that may be very rare) because of the low intensity of disturbance. Since most of the historic wetlands of Kansas have been destroyed or highly modified, these isolated and natural wetland sites have high value. At this time, isolated wetlands are considered non-jurisdictional by the USCOE.

Riverine and adjacent wetlands subject to USCOE jurisdiction

These wetlands have a reduced value that is based on their eligibility for regulatory protections. As long as the Clean Waters Act and USCOE regulatory protection exists, the future of this more common type of wetlands is better insured as compared to those having no regulatory protections. Examples include floodplain scours, oxbows, braided channels and streamside seeps, to name several. Many of these wetlands too, have been greatly altered by man's activities. Some native fish & wildlife have been extirpated and others have become rare because of these alterations.

Restored wetland with native plants and enhanced hydrology

These wetlands are located in sites that were previously wet and were converted to non-wetland for one reason or another. The most common conversion includes de-watering the wetland site through surface ditching, installing drainage tile, runoff diversions or filling by natural sedimentation or artificial filling. While wetland plants re-colonize restored wetland sites, not all potential species may be represented that are found in natural undisturbed sites. Often, where these sites are not protected by easement, regulatory protections do not exist, especially if they are isolated and are used for agricultural purposes as well (haying or grazing).

Naturally farmed wetland with native plant community disturbed

Naturally farmed wetlands are those found in the agricultural landscape in which the hydrology has not been altered at the site. Farm production, when dry enough, may be allowed periodically. Often those crops may then be seasonally flooded and unharvested, or harvested after hard freezing conditions exists. Native vegetation is dominated by annual wetland plants. The species composition is influenced by the frequency of saturation, inundation or timing of soil disturbance. When weather conditions allow, these types of wetlands are very beneficial to migratory birds. These wetlands are protected by USCOE regulations when adjacent to "Other Waters (OW)" or "waters of the U.S. (WUSA)". If isolated, Food Security Act protection is in effect if the farm producer participates in the federal farm program (i.e. Swampbuster).

Hydrology manipulated for farming ("PC", "FW" or "FWP")

These agricultural wetland sites may or may not support the criteria to be a wetland (hydrophytes, hydrology and hydric soils). The common characteristic of these sites is that their hydrology has been manipulated before December 23, 1985. Therefore, each type of site has political protections for maintenance of production agriculture. These sites may be incompletely drained. "**PC**" is prior converted which has inundation in most years (i.e. >50% chance) that is less than 15 consecutive days during the growing season or 10% of the growing season, whichever is less, AND has a crop history before 12/23/1985. "**FW**" is farmed wetland (this is not the same as a naturally farmed wetland). In fact, a "**FW**" may be wetter than many natural wetlands. A "**FW**" is defined as a site with hydrology inundation during most years (i.e. >50% chance) of 15 consecutive or more days during the growing season or 10% of the growing season, whichever is less, AND has a crop history before 12/23/1985. "**FWP**" is farmed wetland pasture that is inundated for 7 consecutive or more days OR saturated for 14 consecutive or more days during the growing season most years (i.e. > 50% chance) with no cropping history before 12/23/1985, but managed for hay or pasture. These sites have less wildlife benefit as habitat because of the level of disturbance, lack of hydrology or other habitat components. When weather conditions permit, these agriculturally impaired wetland sites may provide season wildlife habitat benefits to resident and migratory wildlife.

Wetland with invasive & exotic plant life

Wetlands with invasive and exotic plant life have the lowest value as wildlife habitat when compared to other wetland types in Kansas. The most significant plant species in Kansas include: Reed Canarygrass, Purple Loosestrife, Tall Fescue, Salt Cedar, Common Reed and Cocklebur. The invasive nature generally suppresses native wetland plant diversity and wildlife use. The level of infestation is generally total because of the aggressive nature of these plants. Often, these plants also have other detrimental effects on wetland ecology. They may not be desirable source of food for wildlife. Some species may evapotranspire soil moisture to the extent of causing dry conditions. This is significant in drier climates.

Procedure

STEP 1: View the wetland sufficiently to determine the wetland classification.

STEP 2: Using wetland key, classify the wetland and provide the appropriate component points and add interspersation value.

WETLAND KEY _____ Delineation necessary? (1987 COE Manual)

	<u>Component Points</u>
Isolated & natural: native plants & no hydrology manipulation. Emergent vegetation present	8.0 - 10.0
Riverine and adjacent wetlands subject to US Army COE jurisdiction	7.0 – 7.9
Restored wetland: native plants, enhanced hydrology possible.	5.0 – 6.9
Naturally farmed: native plant community disturbance.	3.0 – 4.9
Hydrology manipulated for farming ("PC", "FW" or "FWP")	2.0 – 2.9
Wetland with invasive & exotic plant life.	0.0 – 1.9

Total Points + IV = R

Circle adjacent habitat types: Rangeland Pasture Impoundment
Cropland Woodland Odd Area Stream

ODD AREA EVALUATION

Odd areas include small tracts of land which generally do not meet the criteria of other habitat communities. Some examples include: farmsteads, field corners, small abandoned crop fields, vegetated gullies, permanently vegetated fencerows or field borders, waterways, or any other such area which provides wildlife food and/or cover and adds vegetative diversity to the landscape. The area should be evaluated for both woody and/or herbaceous vegetation that may exist along with 'other' habitat features.

Procedure

1. View the entire area sufficiently to enable evaluation of all components of the habitat.
2. Using the odd area key, tabulate the component points, determine quality rating (R), and add interspersions value.

ODD AREA KEY

	<u>Component Points</u>
<u>Woody Vegetation</u>	
Abundant trees, shrubs, vines; all age; excellent food/cover	5
Woody spp. abundant; even-all age; food/cover good/excellent	4
Woody spp. common; even-all age; food/ cover good	3
Woody spp. sparse; even-all age; food/cover fair	2
Woody spp. sparse; cover poor	1
<u>Herbaceous Vegetation</u>	
Abundant perennial native grass & forbs; food/cover excellent	5
Abundant native veg.; food/cover good	4
Native veg. common; annuals/increasers established; food/cover fair	3
Native veg. sparse; introduced grasses may be estab.; food/cover fair-poor	2
Introduced veg. abundant; food/cover poor	1
<u>Other</u>	
Large brush piles, quarries, farm equipment/outbuildings, junk piles, silos, etc.	+1

Total Points + IV = R

Circle adjacent habitat types: Rangeland Pasture Impoundment
 Cropland Wetland Woodland Stream



Kansas Department of Wildlife and Parks Terrestrial Habitat Summary

File No: D1.0402 Track No.: _____

Watershed District: _____ Site No.: _____

Date: _____

County: _____

_____/4 Sec: _____ Twp: _____ Rge: _____

Evaluator (s): _____

Habitat Types Impacted	R-Value	Acres:	Habitat Units = (R value * Acres)
Riparian Woodland			
Upland Woodland			
Rangeland			
Pasture			
Cropland			
Wetland			
Odd Area			

Riparian Woodland (List species of trees, shrubs, vines, grasses, forbs) _____

Upland Woodland (List species of trees, shrubs, vines, grasses, forbs) _____

Rangeland (List plant species observed having importance to wildlife) _____

