FBRWS Biological and Natural Resources Survey Checklist

Date:	Preparer (Consultant): Contact Info:

Project Name:

County:

Section/Township/Range:

Segment: ☐ East ☐ Four Bears ☐ North ☐ Northeast ☐ South ☐ West
Segment Representative Contact Info:

Biological and Natural Resources Summary

Dominant Plant Species: (Insert here and/or use table below on page 3)

Noxious/Invasive Plant Species:

Wildlife Observed:

Distance and Direction to Nearest Drainage:

Dominant Soils:

Topsoil Depth:

Photo Log
Attach photographs to capture the landscape setting & dominant vegetation present at the proposed project area and buffer

Photo #	Description
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			Critical Field Element	Check Box	Discuss Minimization/Avoidance Measures/Survey Required/Additional Information
Biological Resources: Endangered Species					
Piping Plover					
1.			Does the project area occur within 0.5 mile of piping plover designated critical habitat?	Y ☐ N ☐	if yes, provide documentation to show this project will not result in any permanent negative effects to the habitat.
	1a.		Would construction activities take place during the active nesting season (April 15 – August 15)?	Y ☐ N ☐	If yes, survey and/or monitor required unless documentation can be provided to show monitoring for project is unwarranted. Provide results.
Rufa Red Knot					
2.			Does the project area contain suitable Rufa Red Knot stopover habitat?	Y ☐ N ☐	if yes, provide documentation to show this project will not result in any permanent negative effects to the habitat.
	2a.		Would construction activities occur during migration? (May 1 – June 1 or September 10 - November 1)	Y ☐ N ☐	If yes, NOTE: if a Rufa Red Knot is spotted within **.6 miles** of the project area, a stop work order will be issued and BOR and USFWS contacted.
Whooping Crane					
3.			Does the project area contain suitable Whooping Crane stopover habitat?	Y ☐ N ☐	if yes, provide documentation to show this project will not result in any permanent negative effects to the habitat.
	3a.		Would construction activities occur during migration? (March 15 – May 15 or September 10 – November 15)	Y ☐ N ☐	If yes, NOTE: if a Whooping Crane is spotted within **1 mile** of the project area, a stop work order will be issued and BOR and USFWS contacted.
Pallid Sturgeon					
4.			Does the project area contain suitable Pallid Sturgeon habitat?	Y ☐ N ☐	if yes, provide documentation to show this project will not result in any permanent negative effects to the habitat.
	4a.		Will construction occur within the migration and spawning period (April 15 – June 1)	Y ☐ N ☐	If yes, provide documentation to show mitigation techniques to be employed to prevent a reduction in water quality
Northern Long-eared Bat					
5.			Does the project area contain suitable roosting habitat for Northern Long-eared Bat?	Y ☐ N ☐	if yes, provide documentation to show this project will not result in any permanent negative effects to the habitat.
	5a.		Would construction include tree or woody vegetation removal while Northern Long-eared Bat is active? (April 1 – November 14)	Y ☐ N ☐	
	5b.		Would tree removal include trees with a DBH greater than 3 inches?	Y ☐ N ☐	If yes, this activity is non-permissible. Contact BOR to initiate consultation with the USFWS
Dakota Skipper					
6.			Would construction occur within areas containing potentially suitable habitat for Dakota Skipper, as confirmed by the habitat suitability model?	Y ☐ N ☐	If no, provide documentation. if yes, a qualitative field survey is required, provide documentation to show this project will not result in any permanent negative effects to the habitat.
Biological Resources: Other Species of Concern					
Bald and Golden Eagles					
7.			Are there any active or historic **Bald Eagle** nests visible within **660** feet (or 330 feet with visual screening) of the project area?	Y ☐ N ☐	Provide documentation.
	7a.		Would construction occur during the active nesting season for Bald Eagles (February 1 – July 15)	Y ☐ N ☐	If yes, this activity is non-permissible. Contact BOR to initiate consultation with the USFWS
8.			Are there any active or historic **Golden Eagle** nests visible within **2640** feet (or 660 feet with visual screening) of the project area?	Y ☐ N ☐	Provide documentation.
	8a.		Would construction occur during the active nesting season for Golden Eagles (February 1 – July 15)	Y ☐ N ☐	If yes, this activity is non-permissible. Contact BOR to initiate consultation with the USFWS

Migratory Birds				
9.	Does the project area contain suitable habitat for migratory birds including stopover, nesting, and foraging habitat?		Y ☐ N ☐	if yes, provide documentation to show this project will not result in any permanent negative effects to the habitat.
	9a.	Would construction occur during the active avian nesting season (February 1 to July 15)?	Y ☐ N ☐	If yes, survey and/or monitor required unless documentation can be provided to show monitoring for project is unwarranted. provide documentation to show mitigation techniques to be employed to prevent negative effects to migratory birds.
Natural Resources				
Surface Waters and Wetlands				
10.	Are wetlands present within the project area?		Y ☐ N ☐	If yes, a wetland delineation is required unless documentation can be provided to show delineation for project is unwarranted. Provide results.
	10a.	Are impacts to wetlands expected as a result of this project?	Y ☐ N ☐	If yes, provide documentation to show mitigation techniques to be employed to prevent permanent negative effects to wetlands.
	10b.	Will construction occur during the fish spawning season (April 15 -June 1)?	Y ☐ N ☐	If yes, this activity may not be non-permissible. provide documentation to show activity will not violate ND spawning restrictions and provide mitigation techniques to be employed to prevent a reduction in water quality.
Soils				
11.	Are fine soils present within the project area?		Y ☐ N ☐	If yes, provide documentation and provide mitigation techniques to be employed to prevent excessive erosion.

Habitat Features Observed (Check if Present)
☐Wetlands ☐Perennial Stream ☐Intermittent or Ephemeral Stream ☐Riparian Woodland ☐Forest ☐Shrubland ☐Prairie ☐Wildflowers ☐Mixed Grass Prairie ☐Invasive Species/Noxious Weeds ☐Shelterbelt ☐Row Crops ☐Fallow Field ☐Actively Grazed Rangeland ☐Active Human Disturbance ☐Paved Road ☐Gravel Road ☐Trail/Walking Path ☐Other (Please Note)

Dominant Species Observed		

Dakota Skipper			
Step 1. Qualitative Field Survey			
1. List the dominant plant species (can use the table on page 3 above or attach list) within the proposed project area and buffer (480 feet):			
2. Provide an ocular estimate (%) of total plant cover within the proposed project area and buffer in a landscape setting:			
3. Provide an ocular estimate of cover by major growth forms			
Grass:	%	Shrub:	%
Forbs:	%	Trees:	%
4. Provide an ocular estimate of vertical structure of the vegetation			
Grass:	%	Shrub:	%
Forbs:	%	Trees:	%
5. Results of the qualitative field survey for the proposed project area and buffer (Check all that apply)			
If any	☐ 5a. There is >75% disturbed area	Describe the type of disturbed area present and estimate percentage:	
	☐ 5b. There is >50% invasive species present	Describe the type (growth form and species, if possible) of invasive species present and estimate percentage:	
	☐ 5c. There is >50% woody vegetation present	Describe the type (growth form and species, if possible) of woody vegetation present and estimate percentage:	
	☐ 5d. One or more of the above Parameters collectively exceeds 50%	Describe which parameters collectively exceed 50%:	
And	☐ 5e. Native prairie habitat is <0.25 acre (native grasses and forbs are dominant in the plant community)	Describe the native prairie habitat:	

Step 2. Results of Qualitative Field Survey

☐ A. If any of the first 4 conditions(5a-5d) listed under question 5 are checked and 5e is checked, submit this completed checklist and supporting documentation (e.g., GIS files, photographs, and accompanying data)	Documentation is complete. Submit this completed checklist and supporting documentation (e.g., GIS files, photographs, and accompanying data)
☐ B. If none of the conditions listed under question 5 are checked or 5e is not checked, a Quantitative Field Survey is required.	Proceed to **Step 3**

Step 3. Quantitative Field Survey

6. When was the survey conducted?	*Note: the recommended survey window is May 1 – October 15; although June is the ideal time for accurately identifying forb species. Prior BIA approval is needed if surveys are conducted outside of the survey window.*
7. If the survey was conducted outside of the recommended survey window, was there snow cover?	Y ☐ N ☐
8. What survey methodology was used to conduct the survey?	☐ Point-intercept method ☐ Daubenmire method

9. Results (Provide % cover of each species [provide dominant species with percentage; can use the table on page 3 above or attach list]):

Invasive Species:	%	Woody vegetative Species:	%
Native Prairie Species:	%		

10. Based on species' dominance calculations for the native prairie habitat in the proposed project area and buffer (480 feet) (check all that apply)

☐ Requisite species are dominant	See Table 1 below
☐ Five requisite species are present	including a minimum of 2 forb species
☐ Total plant cover consists of >75% native prairie species and <15% woody vegetation	

Step 4. Results of Quantitative Field Survey

Select A, B, or C based on the results of quantitative field survey, see description on page A-6 ☐ A. ☐ B. ☐ C.	☐ No Occupancy Survey Required ☐ Occupancy Survey Required

☐ A. If **fewer** than 3 of the statements under Question 10 above are checked, **Then:** submit this completed checklist and supporting documentation	Documentation is complete. Submit this completed checklist and supporting documentation (e.g., GIS files, photographs, and accompanying data)
☐ B. If **all** 3 statements are checked under Question 10, **then** Confirmed DASK Habitat would be considered present within the proposed project area and buffer (480 feet). **And** If less than 17% Confirmed DASK Habitat is present, **And** the proposed project area and buffer are not overlapping a DASK Hotspot **And** no direct impacts to the Confirmed DASK Habitat would occur **Then:** submit this completed checklist and supporting documentation	Documentation is complete. Submit this completed checklist and supporting documentation (e.g., GIS files, photographs, and accompanying data) **NOTE:** **If greater than 17%** Confirmed DASK Habitat is present within the proposed project area and buffer, direct disturbance to Confirmed DASK Habitat is being pursued or the proposed project area and buffer are overlapping a DASK Hotspot. **Then: occupancy surveys is required**. This activity is non-permissible. Contact BOR to initiate consultation with the USFWS
☐ C. If **all** 3 statements are checked under Question 10, **then** Confirmed DASK Habitat would be considered present within the proposed project area and buffer(480 feet). **And** if less than 8% of Confirmed DASK Habitat is present within the proposed project area and buffer **And** the proposed project area and buffer overlap a DASK Hotspot **And** no direct impacts to the Confirmed DASK Habitat would occur **Then:** submit this completed checklist and supporting documentation	Documentation is complete. Submit this completed checklist and supporting documentation (e.g., GIS files, photographs, and accompanying data) **NOTE:** **If greater than 8%** Confirmed DASK Habitat is present within the proposed project area and buffer, direct disturbance to Confirmed DASK Habitat is being pursued or the proposed project area and buffer are overlapping a DASK Hotspot. **Then**: **occupancy surveys is required**. This activity is non-permissible. Contact BOR to initiate consultation with the USFWS

Acronyms/Symbols Used in the On-site Checklist:

- number
% - percent
‘ – feet
“ – inches
< - less than
> - greater than
Y/N – yes/no

USFWS – United States Fish and Wildlife Service
BOR– Bureau of Reclamation
DBH – diameter at breast height
Info – information

DASK – Dakota skipper
proposed project area - the specific area of proposed surface disturbance including fenceline
buffer - 480‘ buffer

Additional Notes:

Detailed Dakota Skipper Field Habitat Survey Requirements

Ecological Site Survey Qualitative Requirements

A qualified third-party representative will conduct a qualitative ecological survey of the proposed project area and buffer (i.e., the specific area of proposed surface disturbance) before construction, along with appropriate analysis and reporting. The representative is considered qualified if the individual is trained in biological sciences and/or has equivalent field experience.[1]

Qualitative surveys are intended to be ocular estimates that verify results from the desktop screening approach or, alternatively, reveal the need for follow-up quantitative surveys. They also provide basic ecological information about the area. Data to be collected during the qualitative surveys include the following:

- List of dominant plant species
- Estimates of total plant cover at the proposed project area, along with an estimate of cover by major growth forms (grass, forb, shrub, and tree)
- Estimate of vertical structure of the vegetation
- Photographs that capture the landscape setting as well as dominant vegetation components

Quantitative Vegetation Survey Requirements

A qualified third-party representative will conduct a quantitative vegetation survey of the native prairie habitat observed within the proposed project area and buffer[1], along with appropriate analysis and reporting. The representative is considered qualified if the individual: 1) is trained in biological sciences and/or has equivalent field experience, and 2) has significant experience in plant identification and survey methodologies in the appropriate ecotypes.

The purpose of quantitative vegetation surveys is to determine if field-verified high-quality habitat as it relates to the life history and associated vegetation requirements for the Dakota skipper is present[1]. As such, data collection is focused on identifying both the presence and abundance of requisite plant species, woody species, and invasive species. To prevent the need for follow-up vegetation surveys, the recommended survey window is May 1 through October 15, with the month of June as the ideal time for accurately identifying forb species.[2]

A qualified third-party representative will conduct a quantitative vegetation survey using point intercept or Daubenmire methodologies. The area to be characterized in the evaluation should consist of the native prairie habitat within the proposed project area and buffer. Cover should be identified using the following categories: plant (record species), litter, bare ground, and rock.

Point-intercept method: Data should be collected along a minimum of four randomly located 50-meter (m) transects within each ecological site, and measurements should be taken at 1-m increments. A minimum of 200 points per cover type should be sampled to increase the likelihood that sparsely distributed forbs are detected during the surveys (Elzinga et al. 1998). More transects may be needed based on vegetation heterogeneity. Percent cover is determined by the number of "hits" along transects. Final vegetation estimates for native species cover, woody plant cover, invasive species cover, and requisite plant species cover must include a 90% confidence interval computed around the mean values estimated from the vegetation surveys.

Daubenmire method: Data should be collected from within a minimum of 10 randomly located 0.25-m Daubenmire frames. Aerial cover should be estimated so that total cover sums to 100% within each frame; however, plants must be rooted within the frame to be counted towards total cover. More Daubenmire frames may be needed based on

[1] The field surveys will need to be resurveyed after 5 years of the initial survey if disturbance has not occurred.

[2] Initial surveys may be conducted outside of the recommended survey window, but they should be limited to periods during which snow cover is absent. The results of initial surveys should be considered preliminary, however, and they may be used to determine areas within the study area that are absent of habitat. Prior Bureau of Reclamation (BOR) approval is needed if surveys are conducted outside of the survey window.

vegetation heterogeneity. Final vegetation estimates for native species cover, woody plant cover, invasive species cover, and requisite plant species cover must include a 90% confidence interval computed around the mean values estimated from the vegetation surveys.

Auxiliary data collection: After the line transect or Daubenmire frame has been laid out, but before collecting the data, a photograph of the transect/frame should be taken with transect/frame identification information and the date clearly visible. Global Positioning System (GPS) coordinates of the transect/frame should also be recorded so that the location can be re-visited if needed.

The vegetation cover of the proposed project area and buffer should also be documented with high quality digital photos. Photos will be taken in the four cardinal directions from the center stake, providing a clear depiction of vegetation on the proposed location.

The slope of the proposed project area and buffer should also be documented using a clinometer. If the slope varies within the proposed project area and buffer, several measurements should be taken to document this. Aspect of the slope should also be documented.

Data Analysis and Determining Dominance

Data collected along transects will be aggregated for the proposed project area so that mean values can be assigned to the following categories:

- Percent cover by invasive species
- Percent cover by woody vegetation
- Percent cover by native prairie species[3]
- Percent cover by Dakota skipper requisite species
- Percent cover of each species

Dominance will be determined by assessing mean cover of requisite plant species versus other species identified during quantitative vegetation surveys. Requisite plant species dominance occurs under the following conditions:

- Mean cover by a single requisite species exceeds 50%
- More than 50% of the dominant species, as determined by individual species cover, are requisite plant species (requisite plant species are identified in from Table 1). The 50/20 rule should be used to identify dominant species. Steps in selecting dominant species are as follows:
- Rank all species from most to least abundant according to absolute cover percentages.
- Select plant species from the ranked list, in decreasing order of coverage until the cumulative coverage of selected species exceeds 50% of total coverage. If two are more species are equal in coverage, they should be selected. The selected plant species are considered to be dominants.
- In addition, select any other species that, by itself, is at least 20% cover.
- Generate a count for dominant requisite species and dominant other species.
- If the percent dominant requisite species exceeds 50% (as calculated by dominant requisite species divided by dominant other species x 100%), than dominance by requisite species has been achieved.
- If Kentucky bluegrass (*Poa pratensis*) is observed as a dominant species in the field, and the best judgment of the surveyor is that it could be Dakota Skipper (DASK) habitat and DASK occurrence could potentially be present, it is recommended that the surveyor contact BOR for further discussion and next steps.

[3] Classifications for plant species to indicate native prairie habitat are determined by the U.S. Department of Agricultural PLANTS database (United Stated Department of Agriculture [USDA] and Natural Resource Conservation Service [NRCS] 2021). The North Dakota Department of Agriculture (ND DOA) Noxious Weeds list (ND DOA 2017) will be secondarily reviewed for classifying plant species as native prairie species versus noxious weeds.

Table 1. Requisite Plant Species

Key Plant Species	Common Name	Forb or Grass
Amorpha canescens	Leadplant	Forb
Andropogon gerardii	Big bluestem	Grass
Artemisia frigida	Prairie sagewort	Forb
Astragalus crassicarpus	Groundplum milkvetch	Forb
Bouteloua curtipendula	Sideoats grama	Grass
Calylophus serrulatus	Yellow sundrops	Forb
Campanula rotundifolia	Bluebell bellflower	Forb
Dalea candida	White prairie clover	Forb
Dalea purpurea	Purple prairie clover	Forb
Echinacea angustifolia	Purple coneflower	Forb
Erigeron strigosus	Daisy fleabane	Forb
Gaillardia aristata	Common gaillardia/blanketflower	Forb
Geum triflorum	Old man's whiskers/prairie smoke	Forb
Hesperostipa comata	Needle-and-thread grass	Grass
Hesperostipa spartea	Porcupine grasses	Grass
Liatris aspera	Tall blazing star	Forb
Liatris punctata	Dotted blazing star	Forb
Lilium philadelphicum	Prairie Lily/Wood Lily	Forb
Nassella viridula	Green needlegrass	Grass
Packera plattensis	Prairie groundsel	Forb
Pascopyrum smithii	Western wheatgrass	Grass
Pulsatilla patens	Eastern pasqueflower	Forb
Ratibida columnifera	Upright prairie coneflower	Forb
Rudbeckia hirta	Black-eyed susan	Forb
Schizachyrium scoparium	Little bluestem	Grass
Sorghastrum nutans	Indiangrass	Grass
Sporobolus heterolepis	Prairie dropseed	Grass
Symphyotrichum sericeum	Western silver aster	Forb
Zizia aptera	Meadow zizia/heartleaf golden alexanders	Forb

Source: United States Fish and Wildlife Service (USFWS) 2015; Royer et al. 2014

References:

Elzinga, C., Salzer, D., and Willoughby, J. 1998. Measuring and Monitoring Plant Populations. BLM/RS/ST- 98/005+1730

North Dakota Department of Agriculture (NDDOA). Noxious Weeds. Available online at: https://www.nd.gov/ndda/noxious-weeds Accessed 5/27/2021

Royer, R.A., Royer, M.R., and Royer, E.A. 2014. Dakota skipper field survey and habitat assessment at twelve North Dakota sites during the 2014 season. A final report submitted to the U.S. Department of the Interior, Fish and Wildlife Service Twin Cities Field Office. October 1, 2014.

United States Department of Agriculture (USDA) and Natural Resources Conservation Service (NRCS). 2021. The PLANTS Database. National Plant Data Team, Greensboro, NC USA. Available online at: http://plants.sc.egov.usda.gov. Accessed 05/27/2021

United States Fish and Wildlife Service (USFWS). 2015. Dakota skipper guidance for interagency cooperation under Section 7(a)(2) of the Endangered Species Act. U.S. Fish and Wildlife Service, Regions 3 and 6. February 2015.