DRAFT Environmental Assessment

Prescriptive Grazing

at

Washita National Wildlife Refuge

April 2022

Prepared by

Washita National Wildlife Refuge

Butler, OK

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Environmental Assessment for Prescriptive Grazing at Washita National Wildlife Refuge

This Draft Environmental Assessment is being prepared to evaluate the effects associated with the proposed action and complies with the National Environmental Policy Act (NEPA) in accordance with Council on Environmental Quality regulations (40 CFR 1500-1509) and Department of the Interior (43 CFR 46; 516 DM 8) and U.S. Fish and Wildlife Service (550 FW 3) regulations and policies. The National Environmental Policy Act requires examination of the effects of proposed actions on the natural and human environment.

Proposed Action

Washita National Wildlife Refuge proposes to expand prescriptive grazing opportunities on the refuge.

The refuge proposes to expand prescriptive livestock grazing as an additional management tool that, in conjunction with fire, herbicide and mechanical manipulation would be used to achieve desired mixed-grass prairie conditions to benefit grassland-dependent wildlife. Grazing may be employed as a management tool in all refuge management units for which it would benefit native wildlife.

A proposed action may evolve during the NEPA process as the agency refines its proposal and gathers feedback from the public, tribes, and other agencies. Therefore, the final proposed action may be different from the original. The proposed action will be finalized at the conclusion of the public comment period for the EA.

Background

National wildlife refuges are guided by the mission and goals of the National Wildlife Refuge System (NWRS), the purposes of an individual refuge, Service policy, and laws and international treaties. Relevant guidance includes the National Wildlife Refuge System Administration Act of 1966, as amended by the National Wildlife Refuge System Improvement Act of 1997, Refuge Recreation Act of 1962, and selected portions of the Code of Federal Regulations and Fish and Wildlife Service Manual, the Bald and Golden Eagle Protection Act, as amended, 16 U.S.C. 668-668c, 50 CFR 22, and Executive Order 13112 – Invasive Species, 64 Fed. Reg. 6183 (1999).

The refuge was established pursuant to the Fish and Wildlife Coordination Act (16 USC 664), Migratory Bird Conservation Act (16 USC 715d), and the Refuge Recreation Act (16 USC 460 k-1). By cooperative agreement, administration of 8,075 acres of land and water on the northern portion of Foss Reservoir was transferred from the Bureau of Reclamation to the Bureau of Sport Fisheries and Wildlife (now the U.S. Fish and Wildlife Service) on April 15, 1961. The

primary purpose of the refuge is "... for use as an inviolate sanctuary, or for any other management purpose, for migratory birds." 16 U.S.C. § 715d (Migratory Bird Conservation Act).

The mission of the NWRS, as outlined by the National Wildlife Refuge System Administration Act (NWRSAA), as amended by the National Wildlife Refuge System Improvement Act (16 U.S.C. 668dd et seq.), is

"... to administer a national network of lands and waters for the conservation, management and, where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans"

Additionally, the NWRSAA mandates the Secretary of the Interior in administering the NWRS (16 U.S.C. 668dd(a)(4)) to:

- Provide for the conservation of fish, wildlife, and plants, and their habitats within the NWRS;
- Ensure that the biological integrity, diversity, and environmental health of the NWRS are maintained for the benefit of present and future generations of Americans;
- Ensure that the mission of the NWRS described at 16 U.S.C. 668dd(a)(2) and the purposes of each refuge are carried out;
- Ensure effective coordination, interaction, and cooperation with owners of land adjoining refuges and the fish and wildlife agency of the states in which the units of the NWRS are located;
- Assist in the maintenance of adequate water quantity and water quality to fulfill the mission of the NWRS and the purposes of each refuge;
- Recognize compatible wildlife-dependent recreational uses as the priority general public uses of the NWRS through which the American public can develop an appreciation for fish and wildlife;
- Ensure that opportunities are provided within the NWRS for compatible wildlife-dependent recreational uses; and
- Monitor the status and trends of fish, wildlife, and plants in each refuge.

Refuge grasslands have not been actively managed with grazing, except in the experimental grazing areas, for over 40 years. The lack of natural grazing and burning regimes combined with the arrival of invasive species has resulted in degradation of the native grasslands. Johnsongrass (*Sorghum halepense*) is the most widespread and damaging invasive species on the refuge, displacing approximately 50% (1,286 acres) of the remaining refuge grasslands. Experimental grazing on the refuge over the past 6 years has shown an 80% reduction in Johnsongrass infestation in the treatment area. Use of livestock grazing as an additional tool for

the management of native grasslands, in combination with existing tools, can increase effectiveness of Johnsongrass control while keeping costs low.

Purpose and Need for the Action

The purpose of this proposed action is to treat invasive species and restore and manage native grasslands with prescriptive grazing on Washita National Wildlife Refuge.

The proposed action is needed to meet the Service's priorities and mandates as outlined by the NWRSAA to "provide for the conservation of fish, wildlife, and plants, and their habitats within the System" and "ensure that the biological integrity, diversity, and environmental health of the System are maintained for the benefit of present and future generations of Americans" (16 U.S.C. 668dd(a)(4)).

In 2016, the refuge began an experimental grazing program to determine the effects of grazing on grassland species composition. The refuge has determined that prescriptive grazing is an effective tool for Johnsongrass suppression/eradication and native grassland management. The lack of natural grazing and burning regimes and the arrival of invasive species has degraded the native grasslands. Johnsongrass is the most widespread and damaging invasive species on the refuge, displacing approximately 50% (1,286 acres) of the remaining refuge grasslands. Experimental grazing on the refuge over the past 6 years has shown an 80% reduction in Johnsongrass infestation in the treatment area. Using livestock grazing as an additional tool for the management of native grasslands, in combination with existing tools, can increase effectiveness of Johnsongrass control while keeping costs low.

Alternatives

Alternative A – Do Not Implement Prescriptive Grazing on the Refuge– [No Action Alternative]

Under this alternative, the refuge would not expand experimental prescriptive grazing to all grassland areas on the refuge. This would allow Johnsongrass to proliferate in areas where it has already been controlled and continue to spread in uncontrolled areas. Refuge staff would continue to rely solely on prescribed fire and chemical treatments to manage grasslands, constrained by a lack of funding and capacity.

Alternative B – Implement Prescriptive Grazing on Refuge– [Proposed Action Alternative]

Under the Proposed Action Alternative, livestock grazing would be an additional management tool in conjunction with fire, herbicide, and mechanical manipulation. These tools would be used to achieve desired mixed-grass prairie conditions to benefit grassland-dependent wildlife.

Grazing would be employed as a management tool in all refuge management units for which it would benefit native wildlife. Grasslands comprise over 2,800 acres of the refuge and almost half of the grassland area is infested with Johnsongrass. Cattle grazing is a low cost, low effort tool necessary for the proper treatment of these grassland habitats.

Grazing periods and intensities would be based on prescribed stocking rates determined by the refuge based on measured forage availability. Grazing would occur during the spring and summer but may be adjusted based on forage conditions as evaluated by the refuge. The goal is to use grazing to control Johnsongrass and maintain mixed-grass prairie conditions to benefit grassland-dependent wildlife.

Grazing would comply with the Service's Cooperative Agricultural Use policy (620 FW 2). The refuge would select a private grazing cooperator through an open and competitive process from applicants for the Cooperative Agriculture Agreement, as offered on the national website, announced on the refuge website, and other local venues. The cooperator would be issued a Special Use Permit (SUP) including all regulations applicable to the grazing treatment. Special use permit conditions would include:

- Stocking rates, season, timing, intensity, and duration of all livestock grazing
- Anticipated stocking rate of 1-10 acres/animal unit (AU), averaging 5 acres/AU
- The permittee would be responsible for complying with state livestock health laws
- The permitee would maintain all existing fences and other improvements
- The permitee would construct and maintain fencing to contain livestock within grazing boundary
- Refuge approval would be required prior to placing any supplemental feeding or salt/mineral blocks
- No subleasing of grazing privileges would be allowed
- The refuge would not be responsible for any loss of livestock.
- Predator control on the refuge would not be allowed.
- The permittee would provide water for livestock at a location and using methods approved by the refuge.
- The refuge would approve the origin of livestock prior to introduction onto the grazing unit to prevent introduction of invasive species.

Measures to Avoid Conflicts:

- Grazing will take place mainly outside of the applicable hunting seasons on the refuge and thus would avoid any conflict with public hunting in the grazing areas.
- Grazing will be evaluated annually and continued only so long as it meets refuge habitat management objectives.

The proposed alternative would enable the refuge to manage grassland habitats and combat invasives species thereby providing for the conservation of grassland wildlife and their habitats. and ensuring the environmental health of the mixed-prairie habitat on the refuge.

Affected Environment and Environmental Consequences

This section is organized by affected resource categories and for each affected resource discusses both (1) the existing environmental and socioeconomic baseline in the action area for each resource and (2) the effects and impacts of the proposed action and any alternatives on each resource. The effects and impacts of the proposed action considered here are changes to the human environment, whether adverse or beneficial, that are reasonably foreseeable and have a reasonably close causal relationship to the proposed action or alternatives. This EA includes the written analyses of the environmental consequences on a resource only when the impacts on that resource could be more than negligible and therefore considered an "affected resource." Any resources that will not be more than negligibly impacted by the action have been dismissed from further analyses.

Washita NWR is an overlay of the Bureau of Reclamation's Foss Reservoir. The refuge consists of approximately 8,075 acres in Custer County, Oklahoma. Washita National Wildlife Refuge encompasses gently rolling hills with uplands vegetated predominately in grasslands and areas adjacent to streams vegetated by shrubs and trees. Approximately 2,000 acres of the refuge are cultivated and planted, primarily in small grains such as wheat with other crops such as grain sorghum grown on a rotational basis. Approximately 1,800 acres of the Refuge are included in Foss Reservoir. The Washita River winds through the Refuge and is the primary watercourse feeding Foss Reservoir. Other tributary creeks include Big Panther Creek, Little Panther Creek, Pitts Creek and Crooked Creek. The proposed action is located throughout the refuge in grassland, shrubland and woodland habitat types (see map in Appendix B).

For more information regarding and the general characteristics of the refuge's environment, please see section 3.2 of the Refuge's Comprehensive Conservation Plan, which can be found here: https://ecos.fws.gov/ServCat/Reference/Profile/27128.

The following resources either (1) do not exist within the project area or (2) would either not be affected or only negligibly affected by the proposed action. A summary of the preliminary analysis for each resource is in Appendix A.

- Geology and Soils
- Air Quality
- Visitor Use and Experience
- Floodplains
- Wilderness and Other Special Designations
- Socioeconomics

- Environmental Justice

Natural Resources

Wildlife and Aquatic Species

Affected Environment

Description of Affected Environment for the Affected Resource

Although Washita NWR was established primarily for ducks, geese, and sandhill cranes, its variety of habitats provides for a diversity of fish and wildlife common to western Oklahoma. These species, including game and non-game animals are important contributors to the overall biodiversity on the refuge. Management of many of these species remains a collaborative effort with the ODWC, who has primary responsibility for these species off refuge lands. Approximately 271 species of birds, 48 species of mammals, 60 species of reptiles and amphibians, and 28 species of fish occur on the refuge. The refuge has a comprehensive species list for birds and fish compiled from biological inventories. Accounts of mammals, reptiles, and amphibians are from range descriptions or opportunistic sightings, and systematic studies.

Description of Environmental Trends and Planned Actions

Grassland bird species and their habitat are declining across the continental US. Habitat loss and degradation are main contributors to this decline (Brennan 2005). Johnsongrass is the main cause of grassland habitat degradation on Washita NWR.

Impacts on Affected Resource

Alternative A

If prescriptive grazing is not implemented on the refuge, Johnsongrass would proliferate in areas where it has already been controlled and continue to spread in uncontrolled areas. The refuge would not have the resources to manage grassland areas with chemical or prescribed fire treatments alone. Grassland habitat degradation would result in decreased habitat to support grassland bird populations.

Alternative B

Moderate and rotational grazing have been shown to increase avian species diversity and richness in grassland areas (Duchardt et al. 2016, Kantrud and Kologiski 1983, Lituma et al. 2022, Pillsbury et al. 2011). Prescriptive grazing is also effective in controlling Johnsongrass where it is not feasible to mow or apply chemicals, especially when used in conjunction with prescribed burning (Horowitz 1972, Kerr 1978, Mitton 1996, Rocateli and Manuchehri 2017). Targeted grazing would allow the refuge to combat invasive Johnsongrass and restore mixed-grass prairie condition to degraded areas. This is turn will increase habitat needed to support grassland bird species.

Threatened and Endangered Species, and Other Special Status Species

Affected Environment

Description of Affected Environment for the Affected Resource

The Threatened or Endangered species that use the refuge during migration or as seasonal residents are whooping cranes (Grus americana), and interior least terns (*Sterna antillarum athalassos*). Whooping cranes rarely stop over at Washita NWR during their spring migration and are rarely seen in the general area during the fall. Interior least terns are rarely observed in the spring and summer. The Arkansas river shiner (*Notropis girardi*) is found within the county but has not been observed on the refuge. The lesser prairie chicken (*Tympanuchus pallidicinctus*), recently listed as Proposed Threatened, is present within the county, but has not been observed on the refuge in many years. At least one pair of bald eagles (*Haliaeetus leucocephalus*) routinely nest on the refuge. Known nests occur near the edge of Foss Lake in the southwest area of the refuge. The refuge is not designated critical habitat for any Threatened or Endangered Species.

Description of Environmental Trends and Planned Actions

The Arkansas river shiner has not been documented to occur at Washita NWR, though it does exist in other waterways within Custer County. The lesser prairie-chicken has not been documented on Washita NWR for over 20 years. The probable absence of these listed species from Washita NWR makes adverse impacts unlikely.

The Interior Least Tern is seen rarely on the Refuge on sandbars in the water or sandy beaches around the edge of Foss Lake during the summer months.

Whooping Cranes have been documented at Washita NWR 3 times in the past 15 years, with birds briefly roosting and feeding in shallow water/wetland habitats before continuing their migration. The extremely low occurrence of whooping cranes makes adverse impacts very unlikely. Additionally, grazing would largely occur during the summer rather than during the spring or fall whooping crane migration, further reducing the likelihood of adverse impacts.

Impacts on Affected Resource

Alternative A

Section 7 analysis has been reviewed and no impacts are expected to any threatened, endangered, or special status species on the refuge.

Alternative B

Section 7 analysis has been reviewed and no impacts are expected to any threatened, endangered, or special status species on the refuge. The prescriptive grazing treatments are not expected to have any effect on any listed species at the refuge due to the lack of occurrence and minimal impact to any areas of listed species habitat.

Habitat and Vegetation (including vegetation of special management concern)

Affected Environment

Description of Affected Environment for the Affected Resource

Washita NWR contains remnant areas of native central mixed-grass prairie identified in the Oklahoma Comprehensive Wildlife Conservation Strategy (2016) as a very high priority conservation landscape. Native mixed-grass prairies have a diverse species composition dominated by little bluestem (*Schizachyrium scoparium*). Much of the mixed-grass prairie habitat on the refuge suffers from Johnsongrass infestation and eastern redcedar (*Juniperus virginiana*) encroachment. Experimental grazing on the refuge over the past 6 years has shown an 80% reduction in Johnsongrass infestation in the treatment area. Use of livestock grazing as an additional tool for the management of native grasslands, in combination with existing tools, can increase effectiveness of Johnsongrass control while keeping costs low.

Description of Environmental Trends and Planned Actions

Refuge grasslands have not been actively managed with grazing, except in the experimental grazing areas for over 40 years. The lack of natural grazing and burning regimes combined with the arrival of invasive species has resulted in degradation of the native grasslands. Johnsongrass is the most widespread and damaging invasive species on the refuge, displacing approximately 50% (1,286 acres) of the remaining refuge grasslands.

Impacts on Affected Resource

Alternative A

If prescriptive grazing is not implemented on the refuge, Johnsongrass would proliferate in areas where it has already been controlled and continue to spread in uncontrolled areas. The refuge does not have the staff or funding to manage grassland areas with chemical or prescribed fire treatments alone.

Alternative B

Both the disturbance associated with grazing (Collins and Barber 1986) as well as the reduction in invasive Johnsongrass can have a positive effect on plant species diversity and richness (Klein and Smith 2020). The impacts of livestock grazing will depend on timing, intensity, and frequency. Grazing treatments will be based on measured forage availability as determined by the refuge. Targeted grazing will allow the refuge to combat invasive Johnsongrass and restore mixed-grass prairie condition to degraded areas.

Water Quality

Affected Environment

Description of Affected Environment for the Affected Resource

Primary sources of water at Washita NWR are the Washita River, Foss Reservoir, precipitation and groundwater. Open water and lakes cover the largest habitat area over the refuge with approximately 2200 surface acres inundated by Foss Reservoir. Washita NWR contains 25 river-

miles of rivers and streams. Average annual precipitation is 26 inches, with most of the precipitation occurring between April and October. The refuge lies on top of Washita River Alluvium and Terrace's aquifers.

Description of Environmental Trends and Planned Actions

Land adjacent to, and upstream of, the refuge is primarily used for agricultural purposes and oil and gas production. Although elevated levels of some chemicals associated with petroleum production, livestock production, and crop production have been detected, water quality has generally been acceptable. Turbidity in the reservoir is fairly high due to the shallowness of the reservoir and the silty nature of river sediments.

Impacts on Affected Resource

Alternative A

Under Alternative A, no additional impacts to water quality are expected from continuation of current management.

Alternative B

Under alternative B, there is potential for slight increases in turbidity at water access points. Grazing has the potential of producing negative impacts on watershed hydrologic parameters including infiltration, run-off, temperature increase and sedimentation. Conservation measures including light, limited duration stocking will minimize impacts to water quality. In the broader context of land use and grazing within the watershed, on-refuge grazing would have a negligible impact on overall water quality for the reservoir.

Cultural Resources

Affected Environment

Description of Affected Environment for the Affected Resource

Archaeological finds on the refuge indicate a prior civilization of nomadic hunters. Bison horns, antlers, stone scrapers, and stone points chronicle the Native Americans' dependence on wildlife resources. Pottery shards, fire rings, and pole marks have also been found. Initial surveys indicated the existence of a village site and burial grounds dating back to the 1500s. Nomads tended to use the same camp site year after year as they traveled through the area. Most activity occurred on the second terrace level overlooking the Washita River. The area was probably also used as a campground by General Custer's 7th Cavalry.

Description of Environmental Trends and Planned Actions

Very little excavation has occurred on the refuge, and none is planned.

Impacts on Affected Resource

Alternative A

There are no anticipated direct, indirect or cumulative impacts to the cultural environment, as current conditions would be maintained, and no ground disturbance would occur.

Alternative B

There are no anticipated direct, indirect or cumulative impacts to the cultural environment, as no ground disturbance would occur. Grazing itself is not likely to adversely impact cultural resources. However, any range improvements (fences, water tanks, corrals, etc.) where ground disturbance has the potential to adversely impact archeological sites would be surveyed prior to authorization and impacts avoided or mitigated.

Monitoring

Grazing exclosures will be placed within both native grasslands and Johnsongrass within the grazing units. The refuge will perform weekly monitoring to evaluate the effects of prescriptive grazing as compared to exclosures. The refuge will adjust the timing, duration and stocking rates as necessary based on the effects seen inside and out of the exclosures to maximize Johnson grass eradication while minimizing over grazing of native grassland species.

Summary of Analysis

Alternative A – Do Not Implement Prescriptive Grazing on the Refuge – [No Action Alternative]

As described above, if prescriptive grazing is not implemented on the refuge, Johnsongrass would proliferate in areas where it has already been controlled and continue to spread in uncontrolled areas. The refuge does not have the staff or funding to manage grassland areas with chemical or prescribed fire treatments alone.

Although there would be no change in existing visitor access, if prescriptive grazing is not implemented on the refuge, hunting opportunities for dove, quail, turkey and rabbit may be reduced as invasive Johnsongrass continues to degrade mixed-grass prairie conditions on the refuge.

Alternative B – Implement Prescriptive Grazing on Refuge – [Proposed Action Alternative]

As described above, grazing treatments will generally minimize disturbance to wildlife populations, the environment, and non-consumptive users. The presence and activity of cattle in the grazing unit(s) may cause temporary disturbance to other wildlife in the area, but there are no foreseeable detrimental impacts to these species. Grazing has the potential of producing negative impacts on watershed hydrologic parameters including infiltration, run-off,

temperature increase and sedimentation. With light stocking rates and short-term grazing cycles, these potential negative impacts will be minimized through appropriate planning and monitoring.

Long-term impacts would be positive since grazing (along with fire) will be used as tool to improve plant vigor, stimulate nutrient cycling through the ecosystem, increase water absorption and distribution, and maintain or increase species diversity (Holechek et al. 1982, Launchbaugh and Walker 2006). Prescriptive grazing is effective in controlling Johnsongrass where it is not feasible to mow or apply chemicals, especially when used in conjunction with prescribed burning (Horowitz 1972, Kerr 1978, Mitton 1996, Rocateli and Manuchehri 2017). Targeted grazing can also improve grassland wildlife habitat (Holechek et al. 1982, Launchbaugh and Walker 2006) and result in greater plant and animal species richness (Kantrud and Kologiski 1983).

There are no anticipated detrimental cumulative impacts. Grazing treatments on the refuge would be limited, habitat response would be monitored, and adaptive management would be implemented to ensure that grazing does not result in cumulative detrimental impacts. Grazing, when implemented would occur in conjunction with other prairie management and restoration techniques. Managing prairie grasslands to provide a diversity of species and prairie conditions will benefit a wider array of wildlife and plants. Should grazing be implemented on the refuge as a management tool, the cumulative impacts will be beneficial based on improving habitat characteristics for selective species of wildlife.

This alternative meets the purpose and need of the Service as described above because it would allow the refuge to restore and manage native grasslands using grazing as an additional tool, in combination with existing tools, thereby increasing the effectiveness of Johnsongrass control while keeping costs low. The Service has determined that the proposed action is compatible with the purposes of Washita National Wildlife Refuge and the mission of the NWRS. The Compatibility Determination is attached (Appendix C).

List of Preparers

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Public Outreach

The draft environmental assessment will be available for public review and comment with the draft compatibility determination for 15 days from April 12, 2022 to April 26, 2022. A hard copy of this document will be posted at the Refuge Headquarters or Visitor Center, 20834 E 940 Rd, Butler, OK 73625. It will be made available electronically on the refuge website https://www.fws.gov/refuge/washita/.

Determination

This section will be filled out upon completion of the public comment period and at the time of finalization of the Environmental Assessment.

- ☐ The Service's action will not result in a significant impact on the quality of the human environment. See the attached **"Finding of No Significant Impact".**
- ☐ The Service's action **may significantly affect** the quality of the human environment and the Service will prepare an Environmental Impact Statement.

Signatures

Submitted By:

Project Leader Signature:

Date:

Concurrence:

Refuge Supervisor Signature:

Date:

Approved:

Regional Chief, National Wildlife Refuge System Signature:

Date:

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Appendix A: Resources considered but not advanced for analysis

Visitor Use and Experience

The Refuge currently receives approximately 25,000 to 35,000 visitors per year. These visitors take part in a variety of public use activities including hunting, fishing, wildlife observation, and wildlife photography. Fishing visits account for about half of the total annual visitation. Hunting of big game (whitetail deer, turkey, and feral hogs), small game (rabbit and quail), and migratory birds (dove, geese, ducks, and sandhill cranes) is permitted in accordance with refuge regulations in various locations on the Refuge and accounts for <5% of visitation. Visitation levels at the refuge are stable to slightly decreasing over the last decade.

Grazing treatments will generally be during non-hunting seasons, so no disturbance to hunting visitors is expected. Restoration of mixed-grass prairie conditions may increase hunting opportunities for dove, quail, turkey and rabbit in grazed areas.

Geology and Soils

Sixteen soil types occur on the refuge. Six major range sites occur on the refuge: loamy bottomland, sandy prairie, loamy prairie, shallow prairie, eroded prairie, and deep sand. The majority of the refuge soils are well drained. The soil is a deep sandy loam or sandy silt loam which is highly erodible. The soil is over 10 feet deep in some areas of the refuge and generally overlies a sandy mineral horizon. Sand hills are encountered in some areas on the second terrace level where erosion has removed the topsoil. The Clairemont-Dale association is the most important soil type on the refuge. These sedimentary deposits make up the bottomland soils by the Washita River and are quite fertile.

Managed grazing would have slight benefits for soil health by increasing soil microbial activity that increases organic soil matter. Organic soil matter aids in the cycling of nutrients, increases the soil's ability to hold water, and increases the stability of the soil (Shawver 2020).

Air Quality

The Refuge is located in a rural environment and the overall air quality is considered good. The closest Air Quality Monitoring Station is in Weatherford, OK, 42 miles southeast of the Refuge and 70 miles west of Oklahoma City. Data collected by the Oklahoma Department of Environmental Quality indicate that air quality in Oklahoma meets or exceeds national standards as listed in 40 CFR 81.337. Proposed grazing on the refuge would result in a slight increase in stirring of dust; however, this impact is expected to be negligible and short-term at the local scale.

Floodplains

The floodplains on the refuge adjacent to the Washita River would not be impacted by prescribed grazing and would still preserve the natural and beneficial values served by the floodplains as directed by Executive Order 11988 (1977).

Wilderness or Other Special Designation

Washita NWR does not conform to the definition of a wilderness, as described in the Wilderness Act of 1964. Over 1,800 acres of the refuge were inundated when Foss Reservoir was impounded in the early 1960s. Of the remaining acreage, historical agricultural practices, construction of access roads, and other human activities have noticeably affected the landscape. In addition, due to existing rights-of-way, there are no extensive undisturbed areas that provide for outstanding solitude and primitive recreational opportunities. There are no other Special Designation Lands withing the Washita National Wildlife Refuge.

Socioeconomics

Washita NWR is located in Custer County (population 28,513), approximately 26 miles northeast of Elk City (population 11,561) and approximately 25 miles northwest of the city of Clinton (population 8,521). Oklahoma City, with a population of 681,054, is approximately 100 miles east of the refuge. Several small towns are within 60 miles of the refuge. Populations are estimates by the U.S. Census Bureau for 2020. Local populations trends have remained relatively flat within the last decade.

The presence and operation of Washita NWR has a definite socioeconomic effect on the surrounding communities, especially the towns of Butler, Hammon, Elk City, and Clinton. Refuge employees live in and/or shop in these four towns. The refuge buys many of its supplies locally. The majority of the refuge's annual budget is recycled in the local economy through the refuge staff, purchases with local stores for supplies, and contracts for local labor.

As required by the Refuge Revenue Sharing Act of 1978, Public Law 95-469, the Service annually compensates the county for federal lands taken off of county tax rolls. The revenue sharing check is calculated using a formula taking into account the land's appraised value and money available under the program. Checks are delivered annually to Custer County for the 14 acres of land that Washita NWR actually owns in fee title. The BOR still owns the remaining land.

Prescribed grazing could have minor positive impacts to local and regional economies. Economic impacts to the refuge would be minor. The small cost to administer the prescribed grazing program would be offset by savings to the refuge in reduction of direct labor to manage invasive species. There will be a small increase to refuge funding from grazing fees.

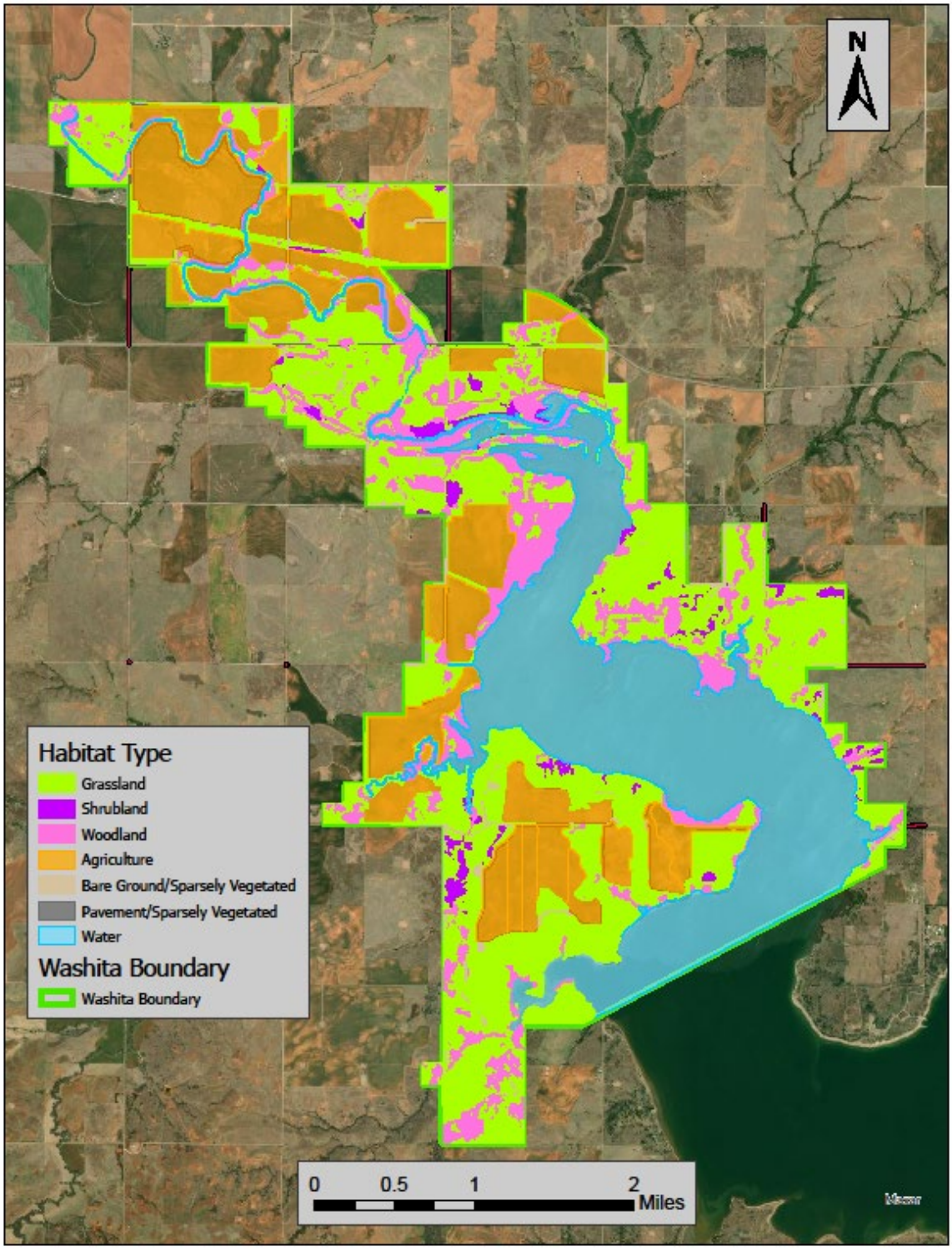
Environmental Justice

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing disproportionately high or adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities. This EA has not identified any adverse or beneficial effects for any alternative unique to minority or low-income populations in the

affected area. Additionally, none of the alternatives will disproportionately place any adverse environmental, economic, social, or health impacts on minority or low-income populations.

Appendix B

Map of Refuge Habitat Types



Appendix C

Draft Compatibility Determination for Grazing, Washita National Wildlife Refuge

REFUGE USE CATEGORY: Agriculture, Aquaculture, and Silviculture

REFUGE USE TYPE(S): Cooperative Grazing Program

REFUGE NAME: Washita National Wildlife Refuge

COUNTY: Custer County, Oklahoma

ESTABLISHING AND ACQUISITION AUTHORITY(IES):

The Washita National Wildlife Refuge was established under provisions of the Fish and Wildlife Coordination Act (16 USC 664), Migratory Bird Conservation Act (16 USC 715d), and the Refuge Recreation Act (16 USC 460 k-1). By cooperative agreement, administration of 8,075 acres of land and water on the northern portion of Foss Reservoir was transferred from the Bureau of Reclamation to the Bureau of Sport Fisheries and Wildlife (now the U.S. Fish and Wildlife Service) on April 15, 1961.

REFUGE PURPOSE(S):

1. The refuge "shall be administered by him [Secretary of the Interior] directly or in accordance with cooperative agreements ... and in accordance with such rules and regulations for the conservation, maintenance, and management of wildlife, resources thereof, and its habitat thereon, ..." 16 U.S.C. § 664 (Fish and Wildlife Coordination Act).
2. The refuge shall be administered "... for use as an inviolate sanctuary, or for any other management purpose, for migratory birds." 16 U.S.C. § 715d (Migratory Bird Conservation Act)
3. The refuge is "suitable for— (1) incidental fish and wildlife-oriented recreational development, (2) the protection of natural resources, (3) the conservation of endangered species or threatened species ..." 16 U.S.C. § 460k-1 "... the Secretary ... may accept and use ... real ... property. Such acceptance may be accomplished under the terms and conditions of restrictive covenants imposed by donors ..." 16 U.S.C. § 460k-2 (Refuge Recreation Act (16 U.S.C. § 460k-460k-4), as amended).

NATIONAL WILDLIFE REFUGE SYSTEM MISSION:

The mission of the National Wildlife Refuge System (Refuge System) is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans (Pub. L. 105-57; 111 Stat. 1252).

DESCRIPTION OF USE:

Is this an existing use?

In 2016, the refuge began an experimental grazing program to determine the effects of grazing on grassland species composition. The refuge has determined that development of a prescriptive grazing program is an effective tool for Johnsongrass suppression/eradication and native grassland management.

What is the use?

This Compatibility Determination evaluates the use of domestic livestock grazing as a management tool to manage grasslands on the refuge. Livestock grazing is proposed as an additional management tool that, in conjunction with fire, herbicide and mechanical manipulation would be utilized to achieve desired mixed-grass prairie conditions to benefit grassland-dependent wildlife.

Is the use a priority public use?

No. This is a refuge management economic use per 603 FW 2.6N.

Where would the use be conducted?

Grazing may be employed as a management tool in all refuge management units for which it would benefit native wildlife. Grasslands comprise over 2,800 acres of the refuge and almost half of the grassland area is infested with Johnsongrass. Cattle grazing is a low cost, low effort tool necessary for the proper treatment of these grassland habitats.

When would the use be conducted?

Grazing periods and intensities will be based on prescribed stocking rates determined by the refuge based on measured forage availability. Grazing will occur during the spring and summer but may be adjusted based on forage conditions as evaluated by the refuge. The goal is to utilize grazing to control Johnsongrass and maintain mixed-grass prairie conditions to benefit grassland-dependent wildlife.

How would the use be conducted?

Grazing will comply with the Service's Cooperative Agricultural Use policy (620 FW 2). The refuge will select a private grazing cooperator through an open and competitive process from the applicants for the Cooperative Agriculture Agreement offered on the national website and announced on the refuge website and other local venues. The cooperator will be issued a Special Use Permit (SUP) including all regulations applicable to the grazing treatment.

Stocking rates, season, timing, intensity, and duration of all livestock grazing occurring on the Refuge will be designed to remove Johnsongrass and encourage establishment and maintenance of native grasses and forbs. Conversion of infested areas from a monoculture of

Johnsongrass to a native mixed-grass prairie would greatly benefit both resident and migratory wildlife. Expected stocking rates will be 1-10 acres/animal unit (AU), averaging 5 acres/AU. The grazing treatment area will be monitored, and grazing effects will be recorded. The permittee will be responsible for complying with state livestock health laws, maintaining in good repair all existing fences and other improvements, and construction and maintenance of adequate fencing to contain livestock within grazing boundary. The permittee must obtain refuge approval for any supplemental feeding or placement of salt/mineral blocks. No subleasing of grazing privileges is allowed. The refuge is not responsible for any loss of livestock. Predator control on the refuge is not allowed. The permittee shall provide water for livestock at a location and using methods approved by the refuge. The refuge must approve the origin of livestock prior to introduction onto the grazing unit to prevent introduction of invasive species.

Why is this use being proposed?

Refuge grasslands have not been actively managed with grazing, except in the experimental grazing areas for over 40 years. The lack of natural grazing and burning regimes combined with the arrival of invasive species has resulted in degradation of the native grasslands. Johnsongrass is the most widespread and damaging invasive species on the refuge, displacing approximately 50% (1,286 acres) of the remaining refuge grasslands. Experimental grazing on the refuge over the past 6 years has shown an 80% reduction in Johnsongrass infestation in the treatment area. Use of livestock grazing as an additional tool for the management of native grasslands, in combination with existing tools, can increase effectiveness of Johnsongrass control while keeping costs low.

Availability of Resources

Through the issuance of refuge SUPs, this use is a cooperative, commercial program whereby the permittee is leased the grazing rights and the refuge dictates the number of cattle to meet objectives. Direct annual costs to administer this program and facilities are primarily in the form of staff time. It is anticipated that refuge staff will collectively spend approximately 5 days/year (divided between biologist and manager) and $3,500 in salary, materials and supplies annually to administer a grazing program. Regular communication with the permittees, rotation and rest planning, boundary and interior fence inspection, vegetation monitoring and wildlife use monitoring are all necessary to gather information and make informed decisions to use this tool.

In summary:

- Special equipment, facilities, or improvements necessary to support the use: will be provided by the permittee as part of the SUP agreement and will offset their grazing fees.
- Maintenance costs: funded through regular management activities and/or provided by permittee as part of the SUP agreement.
- Monitoring costs: Staff monitor usage of the refuge through current funding capacity,

no additional funding is needed.

- Offsetting revenues: Revenues from the grazing program are estimated to be between $500-$5000 annually depending on units offered for grazing and applicant bids.

Offsetting revenues:

Grazing permittees will be responsible for providing and maintaining all fencing and watering infrastructure. Permittees will assume all risk associated with grazing Johnsongrass, which can pose dangers to livestock due to prussic acid and nitrate poisoning concerns. Successful applicants will be selected through an open and competitive bid process. Applications will be scored and ranked using objective criteria described in the application package. Revenues from the grazing program are estimated to be between $500-$5000 annually depending on units offered for grazing and applicant bids.

ANTICIPATED IMPACTS OF THE USE:

Short-term Impacts:

The impacts of livestock grazing will depend on timing, intensity, and frequency. Grazing treatments will generally minimize disturbance to wildlife populations, the environment, and non-consumptive users. The presence and activity of cattle in the grazing unit(s) may cause temporary disturbance to other wildlife in the area, but there are no foreseeable detrimental impacts to these species. Vehicle traffic will increase very slightly during grazing treatments as permittees must regularly check their cattle. Loss of vegetation will occur, though this will be a positive impact as the majority of the vegetation removed will be invasive Johnsongrass. Soil and plant disturbance will occur in the grazing unit but will be temporary because of the limited and controlled use associated with the grazing treatments. Grazing has the potential of producing negative impacts on watershed hydrologic parameters including infiltration, run-off, temperature increase and sedimentation. With light stocking rates and short-term grazing cycles, these potential negative impacts will be minimized through appropriate planning and monitoring

Long-term Impacts:

Properly managed grazing can help maintain and encourage native grasses and forbs, open up areas for wildlife use, and reduce potential fire danger. Associated hoof action from grazing will help aerate the soils and reseed native plants, preventing plant stagnation and promoting plant succession. Grazing, when properly managed for the habitat and soil type, can provide a variety of habitats suitable for a broad range of species (Kantrud and Kologiski 1983). Although there is the potential for cattle to spread invasive species, this is considered minor due to the provisions in the SUPs that require the origin of the livestock to be approved by the Refuge. No detrimental long-term impacts from prescriptive grazing are anticipated.

Long-term impacts are expected to be positive since grazing (along with fire) will be used as tool to improve plant vigor, stimulate nutrient cycling through the ecosystem, increase water absorption and distribution, and maintain or increase species diversity (Holecheck et al. 1982, Launchbaugh and Walker 2006). Prescriptive grazing is effective in controlling Johnsongrass where it is not feasible to mow or apply chemical, especially when used in conjunction with prescribed burning (Horowitz 1972, Kerr 1978, Mitton 1996, Rocateli and Manuchehri 2017). Targeted grazing can also improve grassland wildlife habitat (Holecheck et al. 1982, Launchbaugh and Walker 2006) and result in greater plant and animal species richness (Kantrud and Kologiski 1983). Experimental grazing on the refuge over the past 6 years has shown an 80% reduction in Johnsongrass infestation in the treatment area. Improving native mixed-grass prairie would benefit grassland dependent wildlife, including grassland bird species of concern, increase public use opportunities on the refuge, and expand partnerships with the public, hunting organizations, and the Oklahoma Department of Wildlife Conservation. Strict stipulations and monitoring will ensure all impacts associated with grazing are beneficial for grassland health. Monitoring will also ensure that grazing is being properly and effectively utilized as a management tool.

Indirect and Cumulative Impacts:

There are no anticipated detrimental cumulative impacts. Grazing treatments on the refuge would be limited, habitat response would be monitored, and adaptive management would be implemented to ensure that grazing does not result in cumulative detrimental impacts. Grazing, when implemented would occur in conjunction with other prairie management and restoration techniques. Managing prairie grasslands to provide a diversity of species and prairie conditions will benefit a wider array of wildlife and plants. Should grazing be implemented on the refuge as a management tool, the cumulative impacts will be beneficial based on improving habitat characteristics for selective species of wildlife.

PUBLIC REVIEW AND COMMENT:

The draft compatibility determination will be available for public review and comment for 15 days from April 12, 2022 to April 26, 2022. A hard copy of this document will be posted at the Refuge Headquarters or Visitor Center, 20834 E 940 Rd, Butler, OK 73625. It will be made available electronically on the refuge website https://www.fws.gov/refuge/washita/.

DETERMINATION

- ☐ Use is not compatible.
- ☐ Use is compatible with the following stipulations.

STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:

1. Grazing will only occur in the unit identified by Special Use Permit and in accordance with the Service's Cooperative Agricultural Use policy (620 FW 2).
2. All fencing cost associated with maintaining all existing fences and construction and maintenance of adequate fencing to contain livestock will be borne by the permittee.
3. Permittee assumes all responsibility for animal husbandry.
4. No insecticides, including insecticidal dusting bags, will be allowed.
5. No supplemental feeding or placement of salt/mineral block will be allowed without specific authorization from Refuge Manager.
6. Control and confinement of the livestock will be the responsibility of the permittee.
7. No subleasing of grazing privileges is allowed.
8. Permitee shall be aware of and comply with state livestock health laws.
9. Predator control on the Refuge will not be allowed.
10. The permittee will be responsible for providing water for livestock at a location and using methods approved by the refuge.
11. The refuge must approve the origin of livestock prior to introduction onto the grazing unit to prevent introduction of invasive species.
12. The refuge is not responsible for any loss of livestock.
13. The refuge will conduct monitoring before and after grazing treatments. These data will be used to determine if desired conditions are being met. If grazing does not achieve desired effects or results in unexpected adverse effects on habitat/wildlife, the Refuge Manager reserves the right to modify or discontinue the grazing treatment.

JUSTIFICATION:

Prescriptive grazing is effective in controlling Johnsongrass where it is not feasible to mow or apply chemical, especially when used in conjunction with prescribed burning (Horowitz 1972, Kerr 1978, Mitton 1996, Rocateli and Manuchehri 2017). Targeted grazing can also improve grassland wildlife habitat (Holecheck et al. 1982, Launchbaugh and Walker 2006) and result in greater plant and animal species richness (Kantrud and Kologiski 1983). Experimental grazing on the refuge over the past 6 years has shown an 80% reduction in Johnsongrass infestation in the treatment area. Improving native mixed-grass prairie would benefit grassland dependent wildlife, including grassland bird species of concern and increase public use opportunities on the refuge. The proposed grazing treatments will be designed to minimize conflict with other priority public uses, reduce adverse impacts to biological resources, and are consistent with the Refuge goals, objectives, and management activities described in the Washita-Optima CCP. A prescriptive grazing program would not adversely impact fish, wildlife, plants or habitat or the biological integrity, diversity, and environmental health of the refuge and NWRS.

Through the compatibility determination process, the refuge has determined that conducting grazing treatments, in accordance with the stipulations provided above, will not materially interfere with, or detract from the fulfillment of the NWRS mission or the purpose for which the refuge was established. The refuge will monitor this use and adjust the activity as necessary to protect and enhance refuge resources.

Signature: Refuge Manager _____

(Signature and Date)

Concurrence: Regional Chief _____

(Signature and Date)

Mandatory 10- or 15-year Re-Evaluation Date

2032

Literature Cited/References

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Kantrud, H. A. and R. L. Kologiski. 1983. Avian associations of the northern Great Plains grasslands. Journal of Biogeography, 331-350.

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