

**REVIEW AND APPROVAL SIGNATURE SHEET
FOR
GRAZING MANAGEMENT PLAN**

Region: **5** Wildlife Area: **Klickitat** Manager: **Van Leuven**

New: Renewal: **X** No. of AUMs: **400** Acres: **4554** County: **Klickitat** Term: **4 years**

Begin Date: **May 23, 2023** End Date: **October 15, 2026** Livestock Turn-out Date: **May 23**

Permittees' Names and Address: **Pleasant Valley Livestock and Schuster Herefords, 877 Bickleton Highway, Goldendale, Washington, 98620**

REVIEW

Wildlife Area Manager/District Team	_____	Date: _____
Wildlife Area Manager/WAAC(Optional)	<u>Susan VanLeuven</u>	Date: 11/7/2022
Vegetation Management Team	<u>Jeffrey Burnham</u>	Date: 9/13/2022
Wildlife Conflict Specialist	<u>Todd Jacobsen</u>	Date: 11/15/2022
District Wildlife Biologist	<u>Stefani Bush</u>	Date: 11/15/22
District Habitat Biologist	<u>Amber Johnson</u>	Date: 11/15/2022
District Fish Biologist	<u>Matthew Gardner</u>	Date: 11/15/2022
Regional Wildlife Program Manager	Daren Hauswald Acting RPM	Date: 11/22/22
Regional Habitat Program Manager	<u>Madelaine Nolan</u>	Date: 11/27/2022
Regional Fish Program Manager	<u>Byron Gibson</u>	Date: 11/22/2022
Land Stewardship & Operations Section Manager	<u>Paul Deh</u>	Date: 11/29/2022

APPROVE

Lands Division Manager	<u>Cynthia Wilkerson</u>	Date: 12/2/22
Regional Director	<u>Kerim Lee</u>	Date: 11/28/2022

NOTE: This sheet must accompany the Grazing Management Plan
March 25, 2019

Control Numbers and Funding

This grazing permit is located on portions of:

Township 5 N Range 18 E Sections 3, 4, 8, 9, 10, 17

Township 6 N Range 18 E Section 33

The footprint of this permit includes lands associated with the following AC number and fund source:

AC#	Funder	Fund	Funder's Ref. No.	Type	Subtitle
110801	RCO	WWRP	16-1346	ACQUISITN	CH

GRAZING PLAN SUMMARY
PLEASANT VALLEY LIVESTOCK and SCHUSTER HEREFORDS
KLICKITAT WILDLIFE AREA
MAY 23, 2023 TO OCTOBER 15, 2026

Background

This permit is located on the Simcoe Mountains Unit of the Klickitat Wildlife Area. The property was acquired from Western Pacific Timber, LLC, which administered grazing leases with two parties on the lands that became the Simcoe Mountains Unit. These grazing privileges are being renewed to the extent that they are consistent with WDFW's purpose and regulations, and consistent with a memorandum of understanding signed with the Central Klickitat Conservation District and with the East Klickitat Conservation District. Livestock grazing has been an ongoing land use in the surrounding communities for many decades. WDFW is currently engaged in coordinated resource management (CRM)-type discussions with the Conservation Districts and other stakeholders in Klickitat County and with the Yakama Nation to finalize a property management plan for the Simcoe Mountains Unit. There has been broad consensus in these discussions that the Simcoe Mountains Unit will continue to be managed as a working landscape and the property management plan will include appropriately managed livestock grazing.

Resource Summary

The Klickitat Wildlife Area and surrounding lands encompass a variety of shrubsteppe and forested habitats including ponderosa pine and Oregon white oak. These habitats support many migratory and resident deer. Western gray squirrels and wild turkeys have also been recorded on the grazing area, with a high probability of use by golden eagles as well. The overall management goal is to allow livestock grazing as an element of a working landscape according to coordinated resource management practices, maintain or improve habitat conditions for wintering and migrating deer, and conserve Oregon white oak woodlands, which are listed as a priority habitat in Washington.

Recent Management

Following acquisition in 2019, WDFW issued temporary permits on this acreage in 2020, 2021, and 2022. Long-term monitoring sites were established in 2021 and sampled again in 2022. Riparian monitoring was also instituted in 2022. Monitoring suggests that current management is consistent with maintaining ecological integrity.

This permit expires in 2026, concurrent with the other WDFW grazing permit held by this permittee on an adjoining 3899 acres, but the lands included in the two permits have been managed as a single grazing operation since (and long before) WDFW acquisition.

Permitted Use

The grazing area is accessed by the permittee's cattle from the west, where they begin their summer pasture season on non-WDFW-managed lands. Animals are turned out onto the summer range in May and gradually move east until they reach the lands now under WDFW management, usually in mid-summer. They spend the rest of the season in that area until the gathering of the herd in fall.

The general season of use under this permit is from May 23 to October 15 with any exceptions authorized by the wildlife area manager. Total allotted animal unit-months (AUMs) on the permit area are 400 annually.

The Klickitat Wildlife Area Manager or designee will inspect the grazing unit and complete a grazing evaluation form a minimum of two times each year during the grazing period, in accordance with WAC 220-500-200. WDFW staff will also continue conducting long-term monitoring to evaluate ecological integrity.

WASHINGTON DEPARTMENT OF FISH AND WILDLIFE

DRAFT GRAZING PERMIT

THIS PERMIT is issued by the **WASHINGTON DEPARTMENT OF FISH AND WILDLIFE**, hereinafter referred to as "**WDFW**", to **Pleasant Valley Livestock and Schuster Herefords**, hereinafter referred to as "**PERMITTEES**" whose mailing address is **877 Bickleton Highway, Goldendale, Washington 98620**.

WDFW grants this permit to the undersigned Permittees, subject to the following mutually agreed terms and conditions:

1. TERM: The term of this permit shall be **4 grazing seasons, commencing May 23, 2023 and terminating October 15, 2026.**

2. LAND DESCRIPTION:

Portions of:
Township 5N , Range 18 E.W.M. Sections 3, 4, 8, 9, 10, 17
Township 6N , Range 18 E.W.M. Section 33

Said description is located in Klickitat County and contains **4554** acres more or less. (See Exhibit A - map attached).

3. DEFINITIONS:

- a. Animal Unit (AU):
 - (1) Bull..... 1 AU
 - (2) Cow with calf under age 6 months..... 1 AU
 - (3) Animal age 6 months to yearling..... .6 AU
 - (4) Horse..... 1.25 AU

NOTE: A cow with a calf under age 6 months when entering the range will be counted as one Animal Unit (AU) during that grazing period, regardless of age of the calf when the cow and calf are removed.

- b. Animal Unit Month (AUM): One AU, as defined above, grazing on the land for a period of thirty days.

4. AUM ALLOTMENT: The AUM allotment per year shall be no more than **400 AUMs**. This allotment may be changed as provided in paragraph 7.

5. AUM FEE: The AUM fee under this permit shall be established annually based on the Fair Market Value derived from the Agricultural Statistics Board (USDA figures for the State of Washington). All payments shall be mailed to Washington Department of Fish and Wildlife, P.O. Box 84254, Seattle, WA 98124-5554.

6. GRAZING PLAN: This permit is subject to a grazing management plan which is attached as Exhibit B and incorporated by reference into this permit as if recited herein.

7. CHANGE IN SIZE OF AREA AND CHANGE IN NUMBER OF AUMs IN ALLOTMENT: WDFW reserves the right to alter and change the provisions of the grazing use plan to include reduction in acres of pasture available and number of AUMs authorized when WDFW determines that such changes are required to benefit fish or wildlife management or public hunting and other recreational uses, or in case of natural disaster.

8. HB 1309 ECOSYSTEM STANDARD: This permit is subject to and complies with HB 1309 Ecosystem Standards as required on State owned agricultural and grazing land. A copy of said document is attached as Exhibit C and by reference hereto is made part of this permit.

9. CASH BONUS BID CREDIT: If Permittees, in acquiring or renewing this permit, paid a cash bonus bid WDFW, as provided in paragraph 7, reduces the total number of AUMs of grazing permitted during the term of this permit and such reduction exceeds five per cent (5%) of the total allowed AUMs, a credit of an equal percentage of the cash bonus bid shall be applied toward the grazing fees due for the last year this permit is in effect. Such a credit will not apply as a result of Permittees' failure to utilize all or part of the total AUMs permitted. The same credit procedure shall apply in the event WDFW cancels the permit as provided in paragraph 10, except in case of cancellation for noncompliance or cancellation by Permittees, in which case the cash bonus bid shall become forfeited as liquidated damages, without further process.

10. CANCELLATION OF PERMIT: WDFW reserves the right to cancel this permit (a) for noncompliance with the terms and conditions of the permit, (b) if the area described in the permit is included in a land use plan determined by the agency to be a higher and better use, or (c) if the property is sold or conveyed, or (d) if damage to wildlife or wildlife habitat occurs. Such cancellation shall be in writing and shall state the reason for cancellation. Notice shall be given as far in advance of cancellation as possible, and not less than thirty (30) days. If cancellation is for the reason of Permittees noncompliance, all investment in improvement projects made by Permittees, as provided in Paragraph 12, shall be forfeited as liquidated damages without further

process.

- 11. MONTHLY REPORT OF NUMBER OF AU'S ON PERMITTED AREA:** Permittees shall report at the end of thirty (30) days, or calendar month, to WDFW the number of Animal Units (AU's) grazed on the permitted area and the expected use for the next thirty (30) days. A report need not be submitted for those 30-day periods or calendar months cattle are not grazed on the area. Sufficient copies of a form to conveniently make this report will be supplied by WDFW.
- 12. RANGE IMPROVEMENT PROJECTS BY PERMITTEE:** Range improvements, such as seeding, water developments, fertilization, etc., may be performed by the Permittees only with written approval of WDFW. Written approval shall be attached to this permit and become a part hereof, and shall contain a description and/or plan of the approved project, a schedule of performance, a statement of cost and plan of crediting Permittees for their share of costs during the term of this permit.
- 13. MAJOR AND MINOR FENCE REPAIR:**
 - a. Major repair of a fence consists of complete replacement by WDFW when WDFW's examination of existing posts, wire and tension braces, and any other devices used in the fence, reveals that replacement is warranted. Said replacement will be accomplished within a reasonable period of time consistent with Permittees' use of the land and WDFW's operations. Permittees are expected to inform and consult with WDFW regularly as to general fence condition and particularly when, in the Permittees' experience, replacement appears necessary.
 - b. Minor fence maintenance shall be the responsibility of the Permittees. As is usual and customary in the industry, Permittees are expected to inspect and make minor repairs on a regular basis to ensure the fences will contain and control Permittees' livestock.
- 14. RESERVATION OF USE:** All lands covered by this permit shall at all times remain open to the public for lawful hunting and fishing and other recreational uses.
- 15. NO ASSIGNMENT OF PERMIT:** This permit, and the rights and privileges granted herein, shall not be assigned, transferred or sublet, in whole or in part.
- 16. LIABILITY:** Permittees shall not hold WDFW, its employees, agents, successors or assigns, liable for any damages or injuries caused by the Permittees' exercise of the rights herein granted. Permittees further agree to indemnify and hold harmless WDFW and its agents and employees, successors and assigns, from damages or claims of damages by whomsoever made and of any nature whatsoever arising out of or in any manner connected with Permittees' exercise of, or failure to exercise, the rights herein described.
- 17. VENUE:** In the event of a lawsuit involving this permit, jurisdiction and venue shall be proper only in the State of Washington, Thurston County Superior Court.
- 18. SEVERABILITY:** If any covenant or provision of this permit shall be adjudged void, such adjudication shall not affect the validity, obligation or performance of any other covenant or provision, or part thereof, which in itself is valid if such remainder conforms to the terms and requirements of applicable law and the intent of this permit.
- 19. ENTIRE AGREEMENT/INTEGRATION:** This document contains the entire agreement between the parties, and no statement, promise, representation, inducement or agreement made by WDFW or its agents or employees that is not contained in this written permit shall be valid, binding or enforceable. By signature below, the parties warrant that they have read and understood the agreement and agree to be bound by its terms.

_____	_____
Date	Craig Schuster, dba Pleasant Valley Livestock, Permittee
_____	_____
Date	Clay Schuster, dba Schuster Herefords, Permittee
	WASHINGTON DEPARTMENT OF FISH AND WILDLIFE
_____	_____
Date	Cynthia Wilkerson, Lands Division Manager

Exhibit B:

Grazing Management Plan

Background

History. The Washington Department of Fish and Wildlife (WDFW) acquired the acreage included in the permit area in 2019. This acquisition occurred with coordination from the Central Klickitat and East Klickitat Conservation Districts, both of which previously agreed to a joint Memorandum of Understanding (MOU) at the time of initial acquisition. The MOU outlined the conditions under which a property management plan (PMP), specifically including livestock grazing, would be developed for the Simcoe Unit. The PMP remains under development in the form of ongoing, professionally facilitated discussions between WDFW, the Conservation Districts, and various public and private stakeholders in Klickitat County and with the Yakama Nation (YN). The lands were acquired from Western Pacific Timber, LLC (WPT), which administered grazing leases with the Permittee prior to WDFW ownership. These grazing privileges are being renewed here to the extent that they are consistent with WDFW's purpose and regulations (see below). A major purpose of the Klickitat Wildlife Area is to support wintering deer (WDFW 2016).

Purpose and Regulations. The Klickitat Wildlife Area Management Plan identifies grazing as an appropriate action to help manage deer habitat (WDFW 2016), and the draft PMP calls for livestock grazing to occur as an example of working lands and wildlife habitat in association with the coordinated resource management of the unit. This use of prescriptive grazing is consistent with Fish and Wildlife Commission Policy C-6003. This grazing management plan fulfills section 5 of WAC 220-500-200, livestock grazing on Department of Fish and Wildlife lands. Furthermore, an Ecosystem Standards (HB1309) review has been completed for the proposed permit in fulfillment of RCW 77.12.204.

Resource Description

Overview. The permit area encompasses about 4554 acres and is located well east of other units of the Klickitat Wildlife Area, approximately 15 miles northeast of Goldendale within the Quartz Creek and upper Rock Creek drainages. Most of the land west of the permit area is in private ownership, while areas north, east, and south of the permit area are managed by WDFW, Bureau of Land Management, the Yakama Nation, and private landowners. An active, separately issued grazing permit (to the same permittee) is in place on the adjacent WDFW ownership. Box Spring Road, which approaches from the east via the Bickleton Highway, and Box Canyon Road, which approaches from the west via US Highway 97, are the only public access routes to the permit area. A few drainages and springs provide water in a relatively small number of discrete locations during the grazing season. Elsewhere, canyon bottoms tend to be steep and inaccessible to cattle along most of their lengths on WDFW property.

Physical Environment. See Exhibit A. Elevations range from approximately 2400 feet to 3700 feet. The predominant aspect is southerly, where most drainages lead to Quartz Creek which is

itself a tributary of Rock Creek. Part of one section on the permit area drains southwest to Rock Creek. Average annual precipitation is estimated to be about 20-22 inches (PRISM Climate Group, Oregon State University). The soils in this area are often shallow—with depths restricted to 12 inches—or else deeper but extremely stony or skeletal. They are formed of residuum and colluvium over basaltic parent material, with some influence from loess and ash. Ponderosa pine site types, either mixed with Douglas fir, bitterbrush or Oregon white oak, are present. The main drainage through the permit area is a relatively narrow, steep-sided gorge largely inaccessible to cattle.

Current Condition. Ecological systems according to the NatureServe classification hierarchy consist mostly of East Cascades Oak-Ponderosa Pine Forest and Woodland, Intermountain Basins Big Sagebrush Steppe, and some Northern Rocky Mountain Dry-Mesic Montane Mixed Conifer Forest. Ponderosa pine can be found throughout the permit area, with Oregon white oak forming a few monospecific stands as well. While sagebrush itself is, at most, very uncommon, Oregon white oak and occasional bitterbrush predominate in the understory in areas of deeper soil. In the higher elevations, particularly in recently burned areas, snowbrush ceanothus (*Ceanothus velutinus*) forms dense thickets and dominates the shrub layer. Overall, the permit area consists of relatively intact native rangeland and is expected to continue providing important habitat.

Priority Habitats and Sensitive Species. The Klickitat Wildlife Area in general supports numerous priority habitats and wildlife species and sensitive plant species. Baker's Hawksbeard (*Crepis bakeri*), a state endangered species, and Herman's dwarf rush (*Juncus hemiendytus* var. *hemiendytus*), a state threatened species, have been documented on the permit area. Beaked cryptantha is a state sensitive species occurring southeast of the permit area and may conceivably occur elsewhere in the area. Oregon white oak woodland is a priority habitat for conservation and the western gray squirrel, a state-threatened species, occupies pine and oak woodlands and occurs on the permit area. Golden eagle, which is a federal candidate species for listing, is also expected to use the area. The Simcoe Mountains Unit provides important habitat for mule deer and black-tailed deer. Quail and turkey have also been observed in or near the permit area. Salmonid fish (steelhead) use is documented in Quartz Creek and in the lowermost portion of Box Canyon, and is presumed for perhaps an additional mile. This is below the permit area, and salmonid species are not known to occur in streams within the permit area itself (WDFW Salmonscape, *personal conversation*).

Goals and Objectives

Goals. The main goal of this permit is to implement livestock grazing on working lands, via coordinated resource management, as called for in the MOU and PMP. Livestock grazing has been occurring for many years in this area and interagency consensus in 2016 was that range condition was good, and CRM-facilitated management may benefit public and private rangeland alike. A second goal is to improve or maintain viable habitat for deer, by encouraging shrub growth. Policy C-6003 stipulates that ecological integrity be maintained where livestock grazing is permitted.

Objectives. Maintain or increase average shrub cover, and maintain less than 50% utilization of woody species in general.

Grazing Prescription

Grazing Units and Intensity. Allowed animal unit months (AUMs) on the permit are 400 annually. WDFW estimates 900 pounds of dry forage per AUM. This is estimated to be a conservative stocking rate consistent with recent management, which as noted appears to have resulted in good range condition.

Timing. Precise timing, location, and duration of livestock use will depend on growing season conditions, utilization monitoring from current and previous years, and the wildlife area manager's judgment regarding soil and vegetation conditions. In general, allowable dates range from approximately May 23 to October 15, with any exceptions needing written authorization from the Wildlife Area Manager. It is likely that some portions of the permit area will not experience grazing until after the perennial grass critical growth period, but some portions probably will.

Other Responsibilities. During the term of this permit the Wildlife Area Manager shall determine the "on" and "off" dates. A minimum of one week's notice will be given for these dates. Any necessary reductions in AUM numbers will be determined by the Wildlife Area Manager. In addition, **WDFW shall:** approve any fence construction and repair, and retain ownership of these materials; collect any fees based on current grazing fee rates; and conduct vegetation monitoring, including long-term trend, utilization, and ecological integrity monitoring. The **Permittees shall:** provide a telephone number that affords 24-hour, 7 days/week contact; repair and maintain perimeter and division fences to contain cattle in desired pastures and attempt to keep unauthorized livestock belonging to other ranchers off of lands covered by permit, with all repairs and improvements requiring pre-approval by wildlife area manager; gather any stray cattle immediately upon notification; keep livestock well distributed across pastures using riders, salt, protein or low moisture blocks, or other means, with salt being placed as far as practical away from watering points and on naturally hardened sites to the extent possible; make a good faith effort to have 100% of livestock removed by the specified off-date; and pay fees as previously determined and described above. Weed control will be a coordinated effort between the lessee, WDFW, and Klickitat County, and the permittees shall notify WDFW and Klickitat County of any new sightings of noxious weeds on the permitted lands.

Annual Coordination. Coordination meetings of the CRM group are expected to occur at least annually in order to evaluate grazing management, facilitate adaptive management in response to changing conditions or lack of progress toward objectives, and coordinate any work on range infrastructure. WDFW and Permittees will participate in scheduled meetings.

Benefits and Effects

Wildlife. Properly managed grazing is compatible with wildlife and may be associated with increased diversity (Vavra 2005). Research has suggested that grazing livestock can lead to increased forage nutritional quality (Anderson and Scherzinger 1975, Pitt 1986, Ganskopp et al. 2007), although Ganskopp et al. (2004) notes that increases in nutrition can be accompanied by reductions in forage standing crop, and Wagoner et al. (2013) failed to document an increase in forage nutritional value for deer in Washington after spring livestock grazing. Yeo et al. (1993) found that wintering deer in Idaho preferred previously-grazed areas to ungrazed locations, but that elk were sometimes displaced by grazing cattle. Taylor et al. (2004) observed that fall cattle grazing could result in increasing abundance of some desirable forbs that are important for deer, and in the spring, mule deer may choose areas subjected to at least moderate fall cattle grazing (Willms et al. 1979). Other literature suggests that nongame wildlife can benefit from the moderate grazing, although proposed monitoring would not directly assess benefits to these populations. Johnson et al. (2012) concluded that grasslands managed for livestock in northeastern Oregon were compatible with conserving ground-nesting passerines such as savannah sparrows and horned larks. Poorly managed livestock grazing can affect soils, vegetation, and wildlife (Connelly et al. 2004, Stinson and Schroeder 2012). This grazing permit is expected to avoid negative outcomes through a low stocking rate, a utilization move trigger, and regular monitoring.

Vegetation. Managed grazing by livestock can change the species composition of plant communities, increase production of selected species, and increase habitat diversity by changing plant community structure across the landscape (Vavra 2005). The level of proposed grazing has been consistent with maintenance or increase of plant diversity compared to ungrazed areas (Olf and Ritchie 1998, Mainer and Hobbs 2006). Although many cool-season bunchgrasses might tolerate up to 60% use during the dormant season (Laycock 1967), moderate to heavy livestock grazing during the critical growth period for native bunchgrasses (i.e., boot stage to seed ripe phenological stages, usually late spring to early summer) can result in reduced vigor as evidenced by fewer seed stalks, lower vegetative production, and smaller crown size (Mueggler 1972, Pyke 2011). Heavy grazing during the critical growth period for several years can lead to mortality of key species and a concomitant increase in less palatable plants (Wilson et al. 1966). Many examples exist of resource damage caused by inappropriate grazing (Fleischner 1994, Belsky et al. 1999, Reisner et al. 2013), but the proposed grazing system mostly avoids critical period use. Light to moderate cattle grazing can function as a low-severity disturbance. Some plant communities may need such disturbances in order to increase their resilience to more high-severity disturbances (Davies et al. 2009), and Davies et al. (2009) also found that after 10 years, a burned (ungrazed) community experienced reduced perennial vegetation and a cheatgrass invasion, while a grazed treatment did not.

Elsewhere on grazed portions of the Klickitat Wildlife Area, actively maintained exclosures may provide an opportunity to compare conditions, although a 2007 study of native ungulate exclosures found it difficult to generalize about exclusion effects due to the number of differences based on climate and on dominant type and density of native ungulate (Rexroad et al.). Anderson (1994) observed that 20 years of light to moderate livestock grazing in Utah were

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associated with slightly increased vegetation and microphytic cover in grazed areas relative to ungrazed controls. A three-phase exclosure system setup in Nevada resulted in “vegetation stagnation,” wherein reduced bitterbrush production was observed after only 1-2 years of livestock grazing exclusion, perhaps because of increased competition from protected grasses and forbs (Tueller and Tower 1979).

Additional Measures

Priority Habitats and Sensitive Species. Range and vegetation conditions elsewhere on the wildlife area suggest that conservatively stocked livestock grazing will not adversely affect priority habitats and species (PHS) resources or reduce ecological integrity. At present, no additional PHS-associated measures are required, but WDFW reserves the right to adjust the grazing plan should it become necessary for species conservation. Any adjustments would be addressed through the CRM environment. The stubble height requirement described in the next section is under agency consideration for oak woodland conservation and is therefore included for the current term of this permit. Certain plant or mushroom resources may exist on the permit area that have cultural value to the YN. Adverse effects from livestock grazing on these resources has not been documented. Beaked cryptantha, known to be found near, but not on the permit area, generally flowers prior to the grazing season and may be unidentifiable for most of the season’s duration (WDNR/WNHP 2011), suggesting at most a minimal effect from livestock during the allowed grazing season. Baker’s hawksbeard and Herman’s dwarf rush were found during a plant inventory of the grazing permit area in 2020. The recorder noted that the area where Baker’s hawksbeard was found was lightly grazed. Baker’s hawksbeard is found in areas of sparse vegetation, where cattle tend not to linger. Herman’s dwarf rush is a minute plant associated with vernal pools in arid areas. Due to the pattern and timing of cattle dispersal on the pasture, it is unlikely that cattle are present when this plant is actively growing and producing seed, and its small size makes it unattractive to cattle for forage. The presence of these plants in the context of a long history of grazing suggests that cattle grazing, as it has been practiced, is compatible with maintenance of these plant populations.

Utilization Triggers. As conditions can be expected to deteriorate if more than 50% of annual production is utilized on a yearly basis (Holechek et al. 1982), the permittee will be notified that livestock must be moved to the next pasture in the rotation, or to alternate range as appropriate, if average seasonal utilization of a given pasture is found to have exceeded any of the following three move triggers: 1) 50% of perennial grass production (biomass), or 50% landscape appearance use, determined by the type of monitoring used; 2) 50% of current leaders on either antelope bitterbrush or Oregon white oak; and 3) herbaceous forage to the extent that average stubble height has been reduced to less than 4 inches (stubble height averages are not to include Sandberg bluegrass or bulbous bluegrass). Range condition and utilization may be stringently monitored during drought years, owing to the potential for lasting damage from a combination of significant drought and heavy utilization (Anderson 1991, Evers et al. 2013).

Weed Control. Any Class A weeds will be treated as soon as possible upon discovery, because models indicate that seeking, identifying, and treating small new infestations is more effective and cost-efficient than treating large, highly visible, well-established invasive populations (Frid

et al. 2013). Control of these and other weeds consumes a substantial portion of the wildlife area's annual budget, so disturbed or other areas susceptible to invasion will be watched closely. Permittee will report noxious weed discoveries to WDFW and Klickitat County.

Fire. In the event that permitted lands are affected by a wildfire or prescribed fire, livestock may be prohibited from accessing the affected areas for at least one, and possibly two, growing seasons following the fire (Bunting et al. 1998). If taken, this action will be at the wildlife area manager's discretion, for the purpose of allowing perennial grasses and forbs to recover without the additional stress of grazing (Knick et al. 2011). Depending on fire severity, some late-season use might be possible within one year following fire.

Default Sanitation Measures to Reduce Wolf-Livestock Conflict. WDFW manages lands to preserve, protect, and perpetuate the conservation of wildlife while recognizing the value and role livestock grazing has on habitat management and community character. To reduce the likelihood of losing both wolves and livestock, an overriding goal of this permit is to minimize the potential for wolf-livestock interactions, and the nonlethal deterrence measures listed below will be implemented on the permitted areas within this Grazing Management Plan. WDFW may consider temporarily removing livestock from a permitted area. The Permittee(s) will work with local WDFW staff to deploy the nonlethal measures described below. WDFW will work to provide cost-share for these measures where funds allow.

Required:

- **Carcass sanitation** – Permittees will promptly notify Wildlife Area Manager of livestock carcasses found on active pastures. Carcasses posing an immediate risk of wolf-livestock interactions will be either removed from WDFW lands or buried (after consultation with, and agreement from, Wildlife Area Manager).
- **Removal of sick or injured livestock** – Sick or injured livestock will be removed from WDFW property as soon as possible. Permittees will promptly notify Wildlife Area Manager that livestock have been removed. Sick or injured livestock may not be left on the permit area after the grazing season has concluded for the year.
- **Avoidance of known, active den and rendezvous sites** –
 - Salt blocks or other attractants such as mineral stations, molasses blocks, etc. – Salt blocks or other attractants will not knowingly be placed near an active den or rendezvous site. If an active den or rendezvous site is discovered, any previously established nearby salt block or attractant will be relocated. Appropriate minimum distances will be determined on a site-specific basis in consultation with Wildlife Area Manager and will depend primarily on topography around the den sites.
 - Minimal allotment maintenance activities – Prolonged maintenance activities (fencing, water source construction, etc.) will not be allowed near active den and rendezvous sites. The minimum appropriate distances will be determined on a site-specific basis and will depend primarily on topography around the site. Maintenance activities that

mitigate wolf-livestock interactions may be allowed after consultation with Wildlife Area Manager.

- **Human presence –**
 - Locating livestock – Missing, sick, or injured livestock will be sought as soon as possible.
 - Moving livestock – Increased vigilance will be required immediately following any moving of livestock to a new grazing unit until the livestock are calm and (in the case of cow-calf pair operation) cow-calf pairs are together.
- **Documentation –** The Permittees will report the timing and implementation of all nonlethal deterrence actions to the Wildlife Area Manager at least every two weeks while WDFW land is being grazed and documented following each grazing season.
- **Reporting suspected depredations –** A Permittee who suspects that a wolf has injured or killed permitted livestock will report this by calling WILDCOMM at 360-902-2600 to notify WDFW Enforcement. If there is no answer, Permittee will leave a voicemail and then attempt to contact Wildlife Conflict Specialist at 360-600-4920 on the day of discovery. Actions taken after locating injured or dead livestock may assist with determining the cause of death. To protect evidence:
 - Place a tarp over the carcass; then
 - Keep all people and domestic animals from the area;
 - Do not touch anything;
 - Avoid walking in and around the area; and
 - Take photographs of the scene or place a trail camera at the site if one is available.
- **Actions in the event of recent depredations by the local wolf pack –**
 - Human presence – Livestock will be accompanied by sufficient human presence on a daily or near daily basis to maintain direct awareness regarding any potential wolf interactions. The Permittees will be prepared to manage the livestock to minimize the chance of depredations should wolves be present.
 - Additional measures – may be recommended by WDFW as a result of internal discussion and Wolf Advisory Group consideration.
- **ANNUAL OPERATIONAL PLAN**

In addition to the measures described above, this grazing permit may become subject to an “annual operational plan” (AOP) in the event that wolves begin using the permit area. AOPs represent a collaborative approach to minimize conflict between livestock and wolves, which remain protected under Washington law. An AOP consists of 1) a wolf-livestock conflict risk assessment conducted by WDFW staff; 2) preliminary identification of any additional nonlethal deterrent measures required on the permit area; 3) consensus-based process between

Permittees and Wildlife Area Manager to finalize required nonlethal deterrent measures; and 4) new risk assessment and evaluation of nonlethal deterrent measures if either of two high-risk events occur. High-risk events are defined as 1) development of wolf activity center (e.g. den site) on or within 1 mile of permit area; and 2) confirmed wolf depredation anywhere within a local pack territory. Even though AOPs are developed collaboratively, they will be **required** if wolves are using the permit area. Except for the standard sanitation measures listed in the previous section, an AOP is a process and has no automatically applicable requirements. Any necessary measures would be implemented on a site-specific, case-by-case basis. AOPs apply to a single calendar year only. The AOP process is specific to a single calendar year only, and begins again each year that wolves might use the area.

Monitoring

Utilization. The wildlife area manager will conduct the minimum twice-yearly monitoring required by WAC 220-50-200, and document utilization, any weed problems, objectives, and general comments. Utilization will be monitored at least once during, and once at the conclusion of, the growing season at locations accessible to livestock. If significant stands of native perennial bunchgrasses are located, height-weight monitoring may be performed; otherwise, landscape appearance monitoring (BLM 1999) will be used to measure herbaceous utilization. WDFW will attempt to document any non-permitted grazing that occurs due to livestock belonging to other owners. Permittees are not liable for others' livestock or feral horses, but excessive utilization, regardless of the agent, may trigger the need for rest or deferment of the grazing unit.

Long-term and Ecological Integrity. WDFW will use a series of vegetation monitoring plots to track longer-term dynamics of plant communities and soil conditions in the presence of livestock grazing. Current assessments emphasize ecological criteria (Knick et al. 2011). Locations will be randomly selected and then sampled at least once every permit term, with protocols to include plant cover, soil cover, basal vegetation gaps, density by life form, and species richness (Herrick et al. 2009). These data may be used to derive level 2/3 ecological integrity vegetation scores as outlined by Schroeder et al. (2011). WDFW's use of this methodology will be continued for the foreseeable future, but it is still experimental and may be adjusted as appropriate with coordination with agency staff. Ecological integrity as currently reported by WDFW is scored on the basis of average cover values of biological soil crust, native perennial grasses, all native vegetation, fire sensitive shrubs, native increasers, and invasive species, and will be reported as a result of paired-sample t-tests where $\alpha = 0.05$.

Results of Previous Management

Ecosystem Standards. See attached HB1309 evaluation. Current resource conditions generally meet the intent of applicable ecosystem standards for state-owned agricultural and grazing land.

Utilization. Herbaceous utilization has generally been light except in the immediate vicinity of Bear Spring. One stream reach accessible from the road showed considerable livestock use in fall 2020 in the form of trailing on benches above the stream and woody forage utilization, but noticeably less use was observed in 2021. Conditions at the spring near the eastern edge of the permit area are currently good. Ongoing maintenance will continue to be performed by the permittee. A randomly located stream reach accessible to livestock yielded Multiple Indicator Monitoring (MIM) (Burton et al. 2011) data of 8+” herbaceous stubble height, 17% woody forage utilization, and 7% bank alteration. These values indicate light use.

Ecological Integrity. Long-term monitoring data are summarized in Table 1.

Table 1. Values for mean cover and paired t-test results for monitoring transects (alpha = 0.05) as recorded in 2017 and 2018 and again in 2021. B = uncovered soil, BSC = biological soil crust, N = native vegetation, NPG = native perennial grasses as a proportion of all grasses, FSS = fire-sensitive shrubs, I = invasive, and EI = composite ecological integrity score. Bonferroni corrections have not been made in an effort to ensure that possibly meaningful results are not disregarded.

	B	BSC	N	NPG	FSS	I	EI
Mean 2021	0.05	0.12	0.68	0.70	0.05	0.10	3.69
Mean 2022	0.03	0.16	0.87	0.46	0.06	0.22	3.54
t stat	1.27	1.30	3.94	7.18	0.54	2.45	1.99
<i>p</i>	0.25	0.23	0.01	<0.01	0.61	0.04	0.09

Three significant changes from 2021 to 2022 are displayed above: more native cover, more invasive cover, and less proportionate native bunchgrass cover. It is likely that all three changes resulted not from any changes in grazing management – utilization on the permit area is in many areas very light to undetectable – but from the exceptionally wet and productive growing season of 2022, which followed the unusually dry growing season of 2021. Native cover and invasive species cover alike responded to favorable precipitation and increased markedly. Native bunchgrass cover is not a directly observed quantity but is instead derived dividing native bunchgrass cover by total grass cover, which includes bulbous bluegrass. Bulbous bluegrass is invasive and unfortunately widespread, and it experienced high growth throughout eastern Washington in 2022.

Photos. See Figure 1 on the following page.



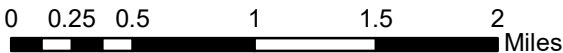
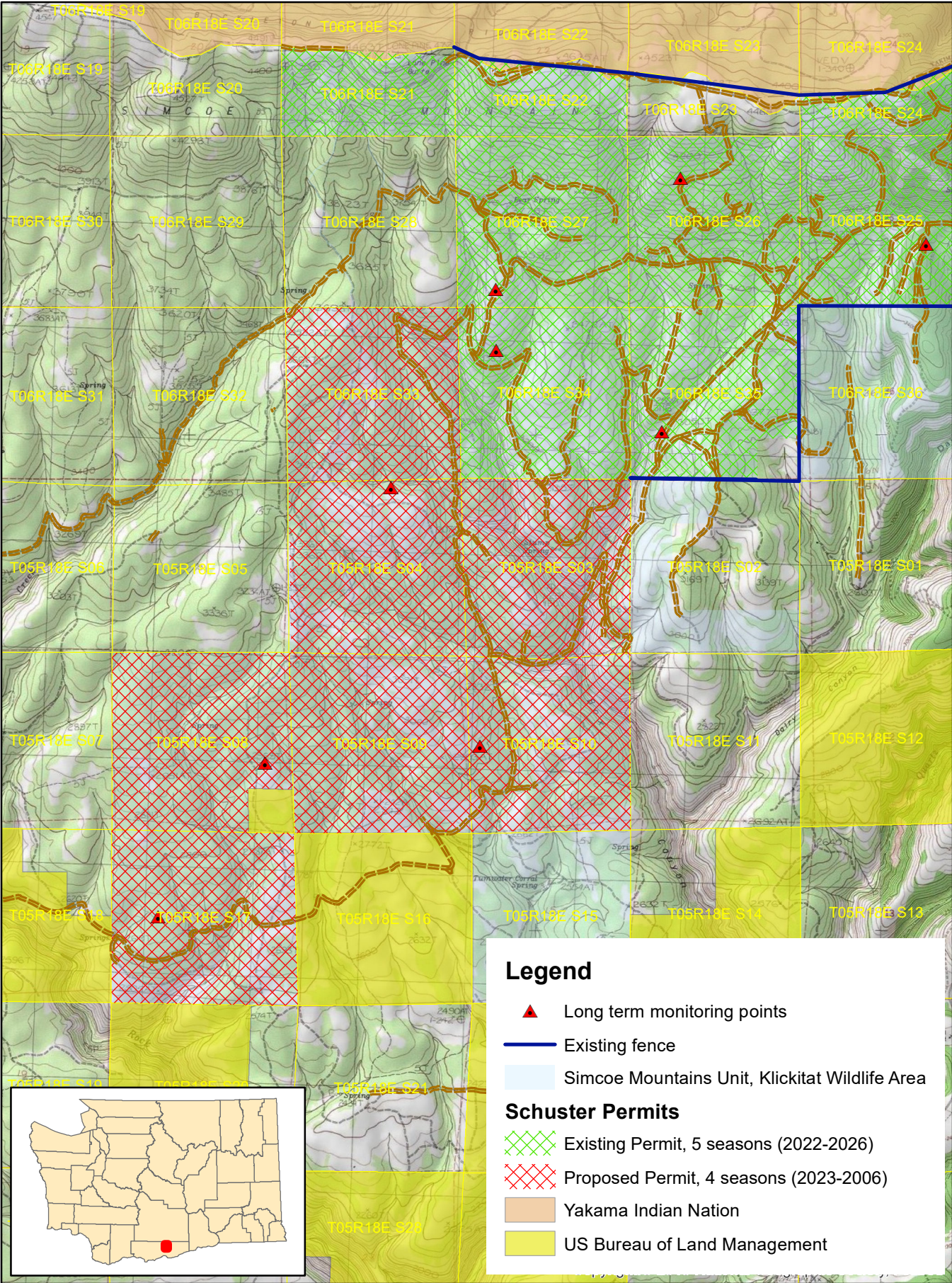
Figure 1. Photo point pairs as seen in 2021 (left column) and 2022 (right column).

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Exhibit A: Grazing Permit Map



PART A. INITIAL RESOURCES ASSESSMENT				
Wildlife Area: Klickitat			Date: Sept. 20, 2022	
Permittee/Lessee: Schuster			Lease ID:	
MAJOR RESOURCE TYPES PRESENT (check all that apply for the lease area)				
1. STREAM				
Type 1		(for definition see HB 1309 Ecosystem Standards, p. 64)		
Type 2		(for definition see HB 1309 Ecosystem Standards, p. 64)		
Type 3		(for definition see HB 1309 Ecosystem Standards, p. 64)		
Type 4	X	(for definition see HB 1309 Ecosystem Standards, p. 64)		
Type 5		(does not include streams without well-defined channel)		
2. RIPARIAN ZONE				
Vegetation layers included:		Herbaceous layer:	X	Shrub layer: X
		Tree overstory:	X	
Condition: (i.e., extent of influence on vegetation development by man or animals)				
Undisturbed:*	X	Moderately Disturbed:		Severely Disturbed:
3. RANGELAND and GRAZEABLE WOODLANDS				
Shrub steppe:	X	Steppe:	X	
Grazeable woodland:	X	Pasture:		
Meadow:				
4. CROPLANDS				
Irrigated:		Dryland:		
Additional Comments:				
*Certain areas exhibit moderate disturbance but most riparian areas are undisturbed.				
The Wildlife Area Manager visited the permit area on Sept. 20, 2022, and found that				
the environmental conditions were stable. This assessment of the condition of the resources				
matches the assessment done in 2020 during a site visit with the District Team.				

PART B. HB1309 ECOSYSTEM STANDARDS CHECKLIST

Notes:	CURRENT RESOURCE CONDITION				RECENT OR PROPOSED MANAGEMENT IMPACTS			
	Is the intent of the related law or ecosystem standard being achieved?				Is the desired ecological condition of the resource being achieved?			
RELATED LAWS AND ECOSYSTEM STANDARDS	YES	NO	UNK.	N/A	YES	NO	UNK.	N/A
RESOURCE TYPE: STREAM								
A2) Water temperature regulations are met.			X				X	
A3) Culvert and instream structure regulations are met.	X				X			
A4) Water diversion device screening regulations are met.				X				X
B7) Water discharges are safely disposed of through stable outlets of adequate capacity.				X				X
B8) Surface water runoff, water discharge, and irrigation return flows meet or exceed state water quality standards.			X				X	
B16) Stream channel meander patterns simulate natural geometry.	X				X			
C23) Fine sediment comprises no more than 11% of spawning gravel.				X			X	
C24) Pools comprise at least half of the summer low flow stream surface area of streams with gradient of 3% or less.				X			X	
C25) Stream channel width-to-depth ratio is 12:1 or less to the extent possible.	X				X			
Total:	3	0	2	4	3	0	2	4
RESOURCE TYPE: RIPARIAN ZONE								
A1) Land managers/users comply with state and local weed control laws.	X				X			
B10) Small disturbances caused by natural actions (e.g., wind, fire) are left untreated.	X				X			
B11) Native plant species, or beneficial non-native plant species not classed as noxious weeds, dominate uplands and riparian areas.	X				X			

PART B (cont.). HB1309 ECOSYSTEM STANDARDS CHECKLIST

Notes:	CURRENT RESOURCE CONDITION				RECENT OR PROPOSED MANAGEMENT IMPACTS			
	Is the intent of the related law or ecosystem standard being achieved?				Is the desired ecological condition of the resource being achieved?			
RELATED LAWS AND ECOSYSTEM STANDARDS	YES	NO	UNK.	N/A	YES	NO	UNK.	N/A
RESOURCE TYPE: RIPARIAN ZONE								
B12) Limited habitats (e.g., oak woodlands, prairies, wetlands) and structural features (e.g., cliffs, caves, snags) are preserved and/or increased.	X				X			
B13) Streambank erosion dynamics approximate natural/geologic rates.	X				X			
B14A) Riparian Management Zone - Undeveloped Land: vegetation vigor, composition, and other attributes within 30 meters (100 ft.) of Type 1-4 waters, or within 15 meters (50 ft.) of Type 5 waters meet fish and identified wildlife needs.	X				X			
B14B) Riparian Management Zone - Developed Land (e.g., cropland): on lands adjacent to water bodies, management practices provide soil and streambank stability, shade, filtration, and watershed function.				X				X
B15) Plant community status/condition (i.e., structural complexity, plant cover, and species diversity) within the riparian zone approximates site potential.	X				X			
Total:	7	0	0	1	7	0	0	1
RESOURCE TYPE: RANGELAND AND GRAZEABLE WOODLANDS								
A1) Land managers/users comply with state and local weed control laws.	X				X			
B5) Soil additions (i.e., human-applied pesticides, fertilizers, etc.) do not move into surface or groundwater.	X				X			
B8) Surface water runoff, water discharge, and irrigation return flows meet or exceed state water quality standards.			X				X	
B9) Plant communities are adequately connected to allow for movement of wildlife with minimum exposure to predators or weather.	X				X			

PART B (cont.). HB1309 ECOSYSTEM STANDARDS CHECKLIST

Notes:	CURRENT RESOURCE CONDITION				RECENT OR PROPOSED MANAGEMENT IMPACTS			
	Is the intent of the related law or ecosystem standard being achieved?				Is the desired ecological condition of the resource being achieved?			
RELATED LAWS AND ECOSYSTEM STANDARDS	YES	NO	UNK.	N/A	YES	NO	UNK.	N/A
RESOURCE TYPE: RANGELAND AND GRAZEABLE WOODLAND								
B10) Small disturbances caused by natural actions (e.g., wind, fire) are left untreated.	X				X			
B11) Native plant species, or beneficial non-native plant species not classed as noxious weeds, dominate uplands and riparian areas.	X				X			
B12) Limited habitats (e.g., oak woodlands, prairies, wetlands) and structural features (e.g., cliffs, caves, snags) are preserved and/or increased.	X				X			
B20) Soil erosion beyond natural geological rates is not discernible.	X				X			
B21) Upland plant community status/condition (i.e., structural complexity, plant cover, and species diversity) approximates site potential.	X				X			
Total:	8	0	1	0	8	0	1	0
RESOURCE TYPE: CROPLAND								
A1) Land managers/users comply with state and local weed control laws.								
B5) Soil additions (i.e., human-applied pesticides, fertilizers, etc.) do not move into surface or groundwater.								
B6) Mass soil movement (e.g., mudslide, slump, debris torrent) does not occur.								
B7) Water discharges are safely disposed of through stable outlets of adequate capacity.								
B8) Surface water runoff, water discharge, and irrigation return flows meet or exceed state water quality standards.								
B9) Plant communities are adequately connected to allow for movement of wildlife with minimum exposure to predators or wildlife.								

PART B (cont.). HB1309 ECOSYSTEM STANDARDS CHECKLIST

Notes:	CURRENT RESOURCE CONDITION				RECENT OR PROPOSED MANAGEMENT IMPACTS			
	Is the intent of the related law or ecosystem standard being achieved?				Is the desired ecological condition of the resource being achieved?			
RESOURCE TYPE: CROPLAND	YES	NO	UNK.	N/A	YES	NO	UNK.	N/A
B17) The composite erosion rate is "T" or below for the rotation.								
B18) Active gully erosion does not occur.								
B19) Amount of irrigation water used does not exceed the amount required for the intended crop and land use.								
B22) Water-use efficiency is optimized to improve streamflows for the benefit of fish and wildlife.								
Total:								
COMMENTS:								
B11: Certain areas close to water sources are starting to be colonized by nonnative grass species (i.e. ventenata and bulbous bluegrass) in localized areas.								
B15: The plant community where Box Canyon Road crosses the perennial stream at the north line of Section 33 shows some reduced diversity, abundance, and cover.								
(attach additional sheets if necessary)								
Wildlife Area Manager: <i>Susan Van Zouren</i> Date: <i>Sept-20, 2022</i>								