DRAFT ENVIRONMENTAL ASSESSMENT
for
MONTANA GREATER SAGE-GROUSE AND DECLINING GRASSLAND SONGBIRDS PROGRAMMATIC CANDIDATE CONSERVATION AGREEMENT WITH ASSURANCES BETWEEN THE NATURE CONSERVANCY AND THE U.S. FISH AND WILDLIFE SERVICE

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Prepared by
U.S. Fish and Wildlife Service

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1.0 INTRODUCTION

This environmental assessment has been prepared to address the impacts of issuing an enhancement of survival permit (Permit) to The Nature Conservancy (TNC) under section 10(a)(1)(A) of the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C. 1531 *et seq*.). The issuance of the Permit, pursuant to the implementation of a Programmatic Candidate Conservation Agreement with Assurances (CCAA), authorizes the incidental take of greater sage-grouse (*Centrocercus urophasianus*), Sprague's pipit (*Anthus spragueii*), McCown's longspur (*Rhynchophanes mccownii*), chestnut-collared longspur (*Calcarius ornatus*), and Baird's sparrow (*Ammodramus bairdii*) that may occur during implementation of the CCAA should they be listed under the ESA. The Permit authorizing incidental take would become effective in the event of a decision to list any of these species (Covered Species) under the ESA.

A CCAA is a voluntary agreement between the Service and one or more non-Federal entities whereby non-Federal property owners agree to manage lands they enroll in the CCAA to remove or reduce threats to specific species at risk of being listed under the ESA. In return for managing their lands to the benefit of the Covered Species as provided in the CCAA, these property owners receive assurances that no additional Conservation Measures or ESA-related land, water, or resource use restrictions will be imposed on these lands should any of the Covered Species be listed under the ESA. The Service provides these assurances through an Enhancement of Survival permit (Permit), issued pursuant to section 10(a)(1)(A) of the ESA, and the regulations governing such permits, for a specific number of years. Under the Programmatic CCAA, if approved, the Permit would be issued to TNC and would extend assurances to non-Federal property owners who enroll and agree to manage their properties in a manner consistent with the Programmatic CCAA.

The Programmatic CCAA was developed cooperatively between the Service (Ecological Services and Partners for Fish and Wildlife (PFW) Programs) and TNC-Montana Field Office. PFW provides technical guidance and financial assistance to private property owners who voluntarily agree to improve habitats on their properties for the benefit of priority species. Technical assistance and review of the Programmatic CCAA was provided by the Natural Resources Conservation Service (NRCS) and Montana Fish, Wildlife, and Parks (MFWP).

This EA was prepared in accordance with the National Environmental Policy Act (NEPA; 42, U.S.C. §4321 *et. seq*.) and in compliance with all applicable regulations and laws passed subsequently, including Council on Environmental Quality regulations (40 CFR, Parts 1500-1508) and U.S. Department of Interior regulations (43 CFR Part 46). NEPA compliance is required for the Programmatic CCAA because issuance of a Section 10(a)(1)(A) permit under the ESA is a federal action. The area potentially impacted by the proposed action covers approximately 11,687,434 ha (28,880,279 ac) of privately owned lands within potential habitats for the Covered Species. Approximately, 8,705,704 ha (21,512,263 ac) of privately owned lands occur within potential sage-grouse habitat in Montana (MFWP 2015) and approximately 5,716,529 ha (14,125,850 ac) of privately owned lands occur within potential habitat for the covered declining grassland songbirds (Figure 1).

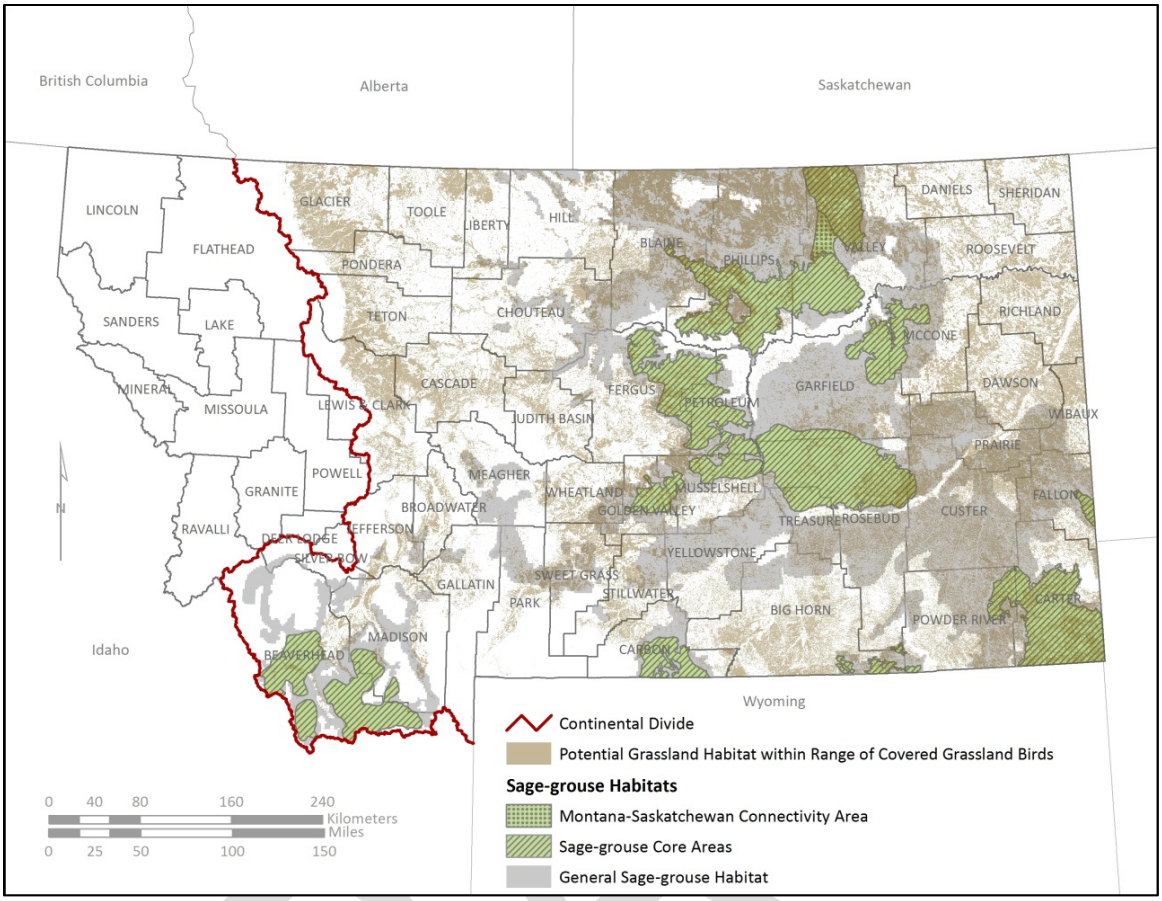

Figure 1. Potential sagebrush and grassland habitats for the Covered Species under the Montana Programmatic CCAA.

1.1 PURPOSE AND NEED FOR ACTION

The purpose of the federal action under consideration is the issuance of a Section 10(a)(1)(A) enhancement of survival permit to TNC related to implementation of a statewide Programmatic CCAA that would contribute to the improvement and long-term survival of sage-grouse and the four declining grassland songbirds covered under the CCAA.

The need for the action is to encourage non-Federal landowners in Montana to voluntarily enroll in the Programmatic CCAA to improve conservation of the Covered Species and their habitats. In return for participating in this Programmatic CCAA, the Service provides enrolled property owners with assurances that, as long as the property owner is properly implementing the Conservation Measures agreed to under this Programmatic CCAA, the Service will not require additional Conservation Measures or impose additional land, water, or resource use restrictions on the enrolled property should any of the Covered Species become listed under the ESA. The assurances are provided under the authority of Section 10(a)(1)(A) of the ESA through a permit that would authorize incidental take of the Covered Species associated with implementation of the CCAA should any of the Covered Species be listed under the ESA.

To further encourage landowner participation, the Programmatic CCAA simplifies the process for developing site-specific land management plans by providing a suite of appropriate Conservation Measures for each threat that may occur in the covered area, providing a streamlined process for enrollment.

1.2 CONSERVATION STATUS OF THE COVERED SPECIES

Greater Sage-grouse

Greater sage-grouse (hereafter sage-grouse) are native game birds closely tied to landscapes dominated by sagebrush (*Artemisia* spp.) in the western United States (U.S.) and Canada. The species originally occurred in 13 states (Arizona, California, Colorado, Idaho, Montana, Nebraska, Nevada, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming) and 3 Canadian provinces (Alberta, British Columbia, and Saskatchewan), but has been extirpated from Arizona, Nebraska, and British Columbia (Schroeder et al. 2004). Sage-grouse range contraction is due primarily to alteration or elimination of sagebrush (Aldridge et al. 2008). Rangewide, sage-grouse currently occupy approximately 56 percent of their pre-European distribution (Schroeder et al. 2004), and overall abundance has decreased by as much as 93 percent from presumed historical levels (Braun 2006).

On October 2, 2015, the Service published a finding stating that the sage-grouse did not warrant range-wide protection under the ESA (80 FR 59858). In this finding, the Service committed to review the status of sage-grouse in 2020 to evaluate the effectiveness of sage-grouse conservation plans and related measures.

Declining Grassland Songbirds

Maintenance of large, contiguous grasslands is critical to support the diverse habitat requirements of grassland songbirds. These large grassland landscapes are necessary to capture the patterns in grassland habitats and, subsequently, patterns in grassland songbird species distributions. Grassland songbirds, particularly species native to the mixed-grass prairie of the Northern Great Plains, have experienced rangewide population declines, and the four declining grassland songbirds covered under the CCAA have experienced long-term declining trends nationally (Sauer et al. 2017).

McCown's Longspur

McCown's longspur is listed as a Sensitive species by the Montana State Office of the BLM. MFWP (2015) listed McCown's longspur on its list of Species of Greatest Conservation Need (SGCN) as a species *potentially at risk because of limited and/or declining numbers, range, and/or habitat, even though it may be abundant in some areas*. The Service lists McCown's longspur in its Birds of Conservation Concern 2008 report (BCC; USFWS 2008), which identifies non-game migratory birds that, without additional conservation actions, are likely to become candidates for listing under the ESA.

Chestnut-collared Longspur

The chestnut-collared longspur is listed as a Sensitive species by the Montana State Office of the BLM. MFWP (2015) listed the chestnut-collared longspur on its list of Species of Greatest Conservation Need (SGCN) as a species *at risk because of very limited and/or potentially declining population numbers,*

range and/or habitat, making it vulnerable to global extinction or extirpation in the state. The Service lists chestnut-collared longspur in its BCC 2008 report (USFWS 2008).

Sprague's Pipit

In 2008, the Service received a petition to list Sprague's pipit as threatened or endangered throughout its range. After reviewing the species status, the Service published a finding on September 15, 2010 stating that listing Sprague's pipit was warranted but was precluded at that time due to other higher priority listing actions (75 FR 56028). On April 5, 2016, the Service published a 12-month finding stating that Sprague's pipit was not warranted (81 FR 19527).

Sprague's pipit is listed as a Sensitive species by the Montana State Office of the BLM. MFWP (2015) listed Sprague's pipit on its list of Species of Greatest Conservation Need (SGCN) as a species *potentially at risk because of limited and/or declining numbers, range, and/or habitat, even though it may be abundant in some areas*. The Service lists Sprague's pipit in its BCC 2008 report (USFWS 2008).

Baird's Sparrow

In 1997, the Service received a petition to list Baird's sparrow as threatened or endangered throughout its range. After reviewing the species status, the Service published a finding on May 21, 1999 stating that the petition did not present substantial information indicating that listing Baird's sparrow as threatened was warranted (64 FR 27747).

BAIRD'S SPARROW IS LISTED AS A SENSITIVE SPECIES BY THE MONTANA STATE OFFICE OF THE BLM. MFWP (2015) LISTED BAIRD'S SPARROW ON ITS LIST OF SPECIES OF GREATEST CONSERVATION NEED (SGCN) AS A SPECIES *POTENTIALLY AT RISK BECAUSE OF LIMITED AND/OR DECLINING NUMBERS, RANGE, AND/OR HABITAT, EVEN THOUGH IT MAY BE ABUNDANT IN SOME AREAS*. THE SERVICE LISTS BAIRD'S SPARROW IN ITS BCC 2008 REPORT (USFWS 2008).1.3 APPROVAL TO BE MADE BY THE RESPONSIBLE OFFICIAL

The Service, as the responsible official, must document in a Set of Findings that a draft CCAA meets the CCAA standard and all other policy requirements and Permit issuance criteria before it can approve a CCAA and issue the associated Section 10(a)(1)(A) permit. If an application fails to meet any of the issuance criteria, then the Service must deny Permit issuance. However, the potential for Permit denial under the Programmatic CCAA is minimized because the Service and TNC have collaborated in the preparation of the Programmatic CCAA.

The Service must consider the following criteria to determine whether to issue a Permit for a Programmatic CCAA:

1. *The take will be incidental to an otherwise lawful activity and will be in accordance with the terms of the Agreement.*

   The Service must determine that any take of the Covered Species authorized under the Permit will be incidental to otherwise lawful activities, covered under the CCAA, and not the purpose of such activities.

2. *The CCAA complies with the requirements of the CCAA policy.*

   The Service must determine that the CCAA and application meet the requirements contained in the implementing regulations, that the Conservation Measures and expected benefits to the Covered Species will meet the CCAA standard, and that the CCAA complies with all other requirements of the CCAA policy (81 FR 95164, December 27, 2016).

3. *The probable direct and indirect effects of any authorized take will not appreciably reduce the likelihood of survival and recovery in the wild of any species.*

   Through a biological or conference opinion under section 7 of the ESA, the Service must conclude that the direct and indirect effects of the incidental take authorized by the Permit and implementation of the CCAA would not appreciably reduce the likelihood of survival and recovery in the wild of the Covered Species or any other listed species or result in adverse modification of critical habitat.

4. *Implementation of the terms of the CCAA is consistent with applicable Federal, State, and Tribal laws and regulations.*

   The Service must determine that the CCAA is consistent with all applicable Federal, State, and Tribal laws and regulations. Such Federal laws include, but are not limited to, the ESA, NEPA, and National Historic Preservation Act. The applicant is responsible for obtaining any other authorizations necessary under State, Federal, or local laws or regulations to carry out the activities covered in the CCAA. The validity of the Section 10(a)(1)(A) permit will be conditioned upon the compliance of the permit holder with all applicable State, local, or other Federal law.

5. *Implementation of the terms of the CCAA will not be in conflict with any ongoing conservation programs for species covered by the Permit.*

   The Service must determine that implementation of the CCAA and issuance of the associated Section 10(a)(1)(A) permit will not be in conflict with any ongoing conservation programs for the Covered Species. This determination would be based on a review of existing and developing conservation programs by other Service programs, the States, other Federal agencies, Tribes, and local entities.

6. *The applicant has shown capability for and commitment to implementing all of the terms of the CCAA.*

   The Service must determine that the applicant is capable of carrying out the CCAA as specified. Signing the CCAA indicates the applicant's commitment to implement the agreed-upon requirements and Conservation Measures. Compliance with the CCAA is a condition of the Permit, and a failure to perform obligations under the CCAA may be grounds for suspension or revocation of the Permit.

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2.0 DESCRIPTION OF ALTERNATIVES

Three alternatives are evaluated in this EA: 1) a No Action Alternative, 2) a Landowner Specific Alternative, and 3) the Proposed Action Alternative. Under all alternatives, if any of the Covered Species become listed under the ESA, landowners who have not enrolled in the Montana Programmatic CCAA or an individual CCAA may need to prepare a habitat conservation plan (HCP) and apply for an incidental take permit with the Service to cover management activities that could result in potential take of any listed species.

2.1 NO ACTION ALTERNATIVE

The No Action Alternative represents a continuation of current management practices and provides the baseline for comparing the environmental effects of all other alternatives. Under the No Action Alternative, the Service would not enter into any CCAAs for sage-grouse and/or any of the four declining grassland songbirds in Montana nor issue any associated section 10(a)(1)(A) Enhancement of Survival permits. Efforts to reduce threats through providing regulatory assurances to landowners through section 10(a)(1)(A) of the ESA and its implementing regulations, policy, and guidance for CCAAs would not be available. Thus, none of the private lands in the covered area would be enrolled under a CCAA. However, existing protections and habitat benefit programs for the species on State, Federal, and some private lands would remain in effect and are described below.

The Governor of Montana signed Executive Order (EO) 10-2014 on September 9, 2014, which set forth the Montana Sage-grouse Conservation Strategy (Strategy) and established the Montana Sage-grouse Oversight Team (MSGOT) and the Montana Sage-grouse Habitat Conservation Program (Program). The Program facilitates the implementation of the Strategy for the conservation, regulatory protection, and management of sage-grouse. MSGOT oversees the administration of the Program. The Strategy and the role of the Program and MSGOT were further defined in EO 12-2015, signed on September 8, 2015, which provides regulatory authority for activities requiring State permits or authorizations on State and private lands within sage-grouse core and general habitats and the connectivity area, and requires that State agencies adhere to the requirements and stipulations set forth in the Strategy. The Program is administered by the Montana Department of Natural Resources and Conservation (DNRC).

The 64th State Legislature of Montana enacted Senate Bill 261, the Montana Greater Sage-grouse Stewardship Act, which established the Sage-grouse Stewardship Fund to maintain, enhance, restore, expand, or benefit sage-grouse habitat and populations. The Stewardship Fund is a source of competitive funding to facilitate free-market mechanisms for voluntary, incentive-based conservation in sage-grouse habitats on private lands. MSGOT administers the Stewardship Fund.

In November 2015, DNRC, as directed by Montana EO 12-2015, brought the following actions before the Montana State Board of Land Commissioners for approval: 1) prohibition of conversion of native rangeland (with some exceptions for areas of 8 ha [20 ac] or less in size) in sage-grouse core and general habitats and the connectivity area; 2) prohibition of sagebrush eradication in sage-grouse core and general habitats and the connectivity area; and 3) development of sage-grouse habitat evaluation criteria and a corrective action plan for livestock grazing leases in sage-grouse core habitat and the connectivity area. The Montana State Board of Land Commissioners approved these actions on State

Trust lands, totaling 370,531 ha (915,603 ac) of core habitat and connectivity area and 696,059 ha (1.72 million ac) of general habitat.

Additionally, MFWP has collaborated with private landowners in Montana to enroll nearly 80,000 ha (200,000 ac) in conservation leases, in which landowners agree not to convert or otherwise eliminate sagebrush and other native vegetation on the enrolled acres for 30 years (C. Wightman, personal communication, December 14, 2016.).

The four declining grassland songbirds covered under the CCAA are also protected by the Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703-712); however, upland game birds, including the sage-grouse, are not protected under the MBTA. Several Federal agencies have other legal authorities and requirements for managing sage-grouse and the declining grassland songbirds and their habitats, as discussed below.

In September 2015, the BLM and the USDA Forest Service (USFS) released Records of Decision for Resource Management Plans (RMP) and RMP Amendments (RMPA) for the Rocky Mountain and Great Basin Regions (USDI BLM 2015a, b) and land use plan (LMP) amendments for the Great Basin planning region (USFS 2015), which covers Montana. These RMPs/RMPAs and LMP amendments provide regulatory mechanisms to address threats to sage-grouse and sage-grouse habitats on lands administered by the BLM and USFS. In Montana, the USFS LMP amendment covers the Beaverhead-Deerlodge National Forest in southwestern Montana. The BLM's RMPs/RMPAs cover six planning areas: Billings, Pompey's Pillar National Monument, HiLine District, Miles City, Lewistown, and Southwest Montana. The HiLine District RMP also applies management actions to grassland bird priority areas identified in north Phillips County and north Valley County that coincide with sage-grouse core areas. The sage-grouse is listed as a sensitive species by both the BLM and USFS rangewide. The BLM has also designated the four declining grassland songbirds as sensitive species on BLM lands. Species designated as sensitive require special management consideration during land use planning and activity implementation.

The BLM has identified Sagebrush Focal Areas (SFA) across the range of sage-grouse that correspond to sage-grouse strongholds identified by the Service, representing habitat vital to the persistence of sage-grouse (Memorandum FWS/AES/058711, October 27th, 2014). The BLM applies the highest levels of protections to SFAs in their recent RMPs/RMPAs, and management efforts are prioritized in these areas. Montana's SFA is located primarily in the South Phillips and South Valley core area, with smaller acreages in the Fergus core area, and measures nearly 356,000 ha (878,000 acres). Additionally, several other areas of special designation by the BLM (e.g., Wilderness Study Areas, Areas of Critical Environmental Concern) maintain intact habitats within these landscapes, supporting populations of the Covered Species.

In Montana, the NRCS's Sage Grouse Initiative (SGI; (http://www.sagegrouseinitiative.com/) has assisted private landowners with implementation of conservation measures to address several threats including enrolling sage-grouse and grassland habitat into conservation easements to protect habitat from conversion to cropland, marking fences to reduce collision risk, removing conifers, and implementing grazing systems (USDA NRCS 2015a). These efforts will continue through 2018 with the release of SGI 2.0 (USDA NRCS 2015b).

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Other federal programs such as the "Sodsaver" provision in the 2014 Farm Bill (U.S. Agricultural Act of 2014; H.R. 2642) reduced federal subsidies to producers who convert native grasslands to croplands, reducing the risk of agricultural conversion of native grasslands in Montana.

In 2003, TNC established a 60,000 acre grassbank in south Phillips County that allows local ranchers to graze at a discounted cost in exchange for implementing Conservation Measures on their own properties, including a commitment to not convert rangeland to cropland. This requirement expands the conservation benefit of this grassbank to an additional 263,000 acres of private grazing land.

2.2 LANDOWNER SPECIFIC ALTERNATIVE

Under the Landowner Specific Alternative, all existing protections and regulatory mechanisms described under the No Action Alternative would continue. The Service would not enter into a Programmatic CCAA with The Nature Conservancy, and the single Enhancement of Survival permit covering all enrolled landowners would not be issued. Instead, the Service would enter into individual CCAAs with landowners and issue individual Enhancement of Survival permits on a case by case basis to each landowner interested in conserving sage-grouse and/or the four declining grassland songbirds. An enrolled landowner agreeing to implement selected Conservation Measures associated with covered activities on the enrolled property would receive assurances that no additional Conservation Measures or land, water, or resource use restrictions would be imposed should any of the Covered Species become listed under the ESA, as under the Proposed Action Alternative. However, the increased time and expense associated with crafting individual CCAAs without the guidance provided in a Programmatic CCAA may decrease the likelihood that landowners would choose to participate. No mechanism for maintaining statewide consistency between individual CCAAs exists under this alternative. Timely authorization by the Service of individual CCAAs for sage-grouse and the four declining grassland songbirds could be impeded due to staffing and other workload priorities.

2.3 PROPOSED ACTION ALTERNATIVE

The Proposed Action Alternative is the preferred alternative. Under this alternative, all existing protections described under the No Action Alternative would continue. Additionally, the Programmatic CCAA would provide a streamlined process for non-Federal landowners to voluntarily enroll in the CCAA and commit to implement specific Conservation Measures through a Certificate of Inclusion (CI). Enrolled landowners with approved CIs would receive coverage under the Enhancement of Survival permit issued to The Nature Conservancy (TNC) pursuant to the Programmatic CCAA.

The Programmatic CCAA is designed to streamline the enrollment process by: 1) following the template provided in the Programmatic CCAA to guide the CI development process, including selection of site-specific Conservation Measures; 2) providing assistance to landowners in drafting CIs, implementing selected Conservation Measures, and conducting compliance and effectiveness monitoring; 3) prioritizing applications according to potential Covered Species conservation benefit and other factors; and 4) implementing outreach by TNC to landowners within the covered area to educate/inform landowners of the availability of the Programmatic CCAA and the associated enrollment process.

Individual site-specific land management plans would be developed under the guiding framework of the Programmatic CCAA. By signing the CI, the landowner agrees to implement the agreed upon Conservation Measures associated with the current or future covered activities on the enrolled land. These Conservation Measures are designed to reduce or remove threats to the sage-grouse and four declining grassland songbirds covered under the CCAA and to restore, enhance, or preserve their habitat. The landowner would also agree to allow access to monitor compliance with and effectiveness of the implemented Conservation Measures. In return, the Service would agree not to impose further commitments of resources or additional restrictions regarding the Covered Species on the enrolled landowner during the term of the permit, if any of the Covered Species become listed under the ESA. The enrolled landowner would receive coverage under the Enhancement of Survival permit that would be issued to TNC, which would provide incidental take coverage for those activities listed in the enrollees' CI, should any of the Covered Species become listed under the ESA. This approach is consistent with the Candidate Conservation Agreement with Assurances Final Policy (81 FR 95164; December 27, 2016). Implementation of this alternative is fully described in the Programmatic CCAA.

The Programmatic CCAA would be in effect for 20 years following its approval and signing by the Service and TNC. CIs for enrolled property owners, including any commitments related to funding under Service programs, would be in effect for 20 years following approval and execution of the CI by TNC and the Service, or until expiration of the Programmatic CCAA, whichever is earlier. The Enhancement of Survival permit authorizing incidental take of the Covered Species and providing the assurances described in the Programmatic CCAA would be effective from the date of listing, should that occur, until the expiration date of the Programmatic CCAA or the CI, whichever is earlier. The duration stated for the Programmatic CCAA and the Enhancement of Survival permit is primarily determined based on a timeframe that is sufficient to realize the benefits to sage-grouse, declining grassland songbirds, and their habitats. The stated duration for CIs also provides a reasonable and efficient timeframe before enrolled property owners, TNC, the Service, and Cooperators would need to revisit the process for renewal, as appropriate. As long as the Programmatic CCAA remains in effect, TNC and the Service may renew CIs, based on the reevaluation of each CI's ability to continue to meet the CCAA standard; and agreement of the Cooperators, including the property owner enrolled in the Programmatic CCAA through the CI. An enrolled property owner may also elect to terminate a CI, as described in Section 12. *Termination of the CCAA* of the Programmatic CCAA.

Regulatory incentives and streamlining processes under the Proposed Action Alternative are expected to maximize the number of participating landowners and extent of conservation for Covered Species. Implementation of this alternative is fully described in the Programmatic CCAA. The Conservation Measures that could be selected by participating landowners to reduce or eliminate potential threats to the Covered Species related to ranching and agricultural activities are also presented in the Programmatic CCAA.

To ensure that the site-specific land management plan is effective and the Conservation Measures are adequate, the enrolled landowner must undertake or allow the following measures to continue (taken from Section 6.3.3. *Responsibilities of the Parties: Participating Property Owners* of the Programmatic CCAA):

1. In collaboration with the Service and TNC, develop a Service-approved site-specific land management plan detailing how the current practices, Conservation Measures, and monitoring will be implemented on the enrolled property within 18 months of approval of the CI.
2. Comply with the terms and conditions of the CI.
3. Allow TNC, the Service, or their agents to access the enrolled properties at mutually agreed upon times to complete agreed upon activities necessary to implement the CI or for monitoring or other activities authorized by the Programmatic CCAA. Notice will be provided at least two weeks in advance of a visit by TNC, the Service, or their agents. Nothing in this section precludes the Service from carrying out its duties as required and authorized by law, including law enforcement investigations.
4. Continue current management practices that conserve the Covered Species and their habitats as identified in the enrollment process and the CI.
5. Implement all agreed upon Conservation Measures included in the CI and described in detail in the site-specific land management plan within the agreed upon timeframes.
6. Comply with all conditions associated with Changed Circumstances, Unforeseen Circumstances, and Adaptive Management, as described in the Programmatic CCAA, including but not limited to implementation of the Changed Circumstance Conservation Measures (CCCMs) provided for in Section 3.3 of the Programmatic CCAA.
7. Avoid impacts to populations and individuals of the Covered Species present on the enrolled lands to the maximum extent practicable.
8. Record dates, locations, and numbers of the Covered Species observed on the enrolled lands to be included in their annual report.
9. Record new observations of noxious weeds found incidentally.
10. Report observed mortalities of the Covered Species to the Service and TNC within 48 hours.
11. Cooperate and assist with annual and long-term monitoring activities and other reporting requirements identified in the Programmatic CCAA, the CI, and the site-specific land management plan.

Each CI would include the following Conservation Measure in addition to those selected to address site-specific threats. This required measure is the foundation in each CI for preventing or reducing habitat fragmentation, the primary threat to sage-grouse and the four declining grassland songbirds:

> *Maintain contiguous habitat by not undertaking new activities that would result in fragmentation (e.g., do not subdivide, develop, or convert habitat on the property).*

Other key threats within the control of the enrolled landowner that have been identified on a property must also be addressed through the selection of one or more appropriate Conservation Measures listed in the Programmatic CCAA. The process for identifying threats and corresponding Conservation Measures includes landowners working with TNC on identified properties, recognizing that each property is unique and site-dependent. The following are potential key threats to sage-grouse and declining grassland songbirds that can be associated with ranch management and agricultural activities. The extent to which these threats are under complete control of the landowner may vary across properties.

- Habitat loss and fragmentation (e.g., agricultural conversion, sagebrush removal, exurban development);

- Livestock grazing management inconsistent with the needs of the Covered Species;
- Non-native, invasive plant species (including noxious weeds);
- Haying/mowing and seed harvest;
- Range management structures;
- Conifer encroachment;
- Tree rows and windbreaks;
- Infrastructure;
- Fences;
- Insecticides;
- Roads; and
- Recreation.

Although the Conservation Measures identified in the Programmatic CCAA for a given threat apply to ranching and agricultural lands across the Programmatic CCAA's covered area, site-specific conditions may warrant adjustments to applicable measures. Such adjustments to Conservation Measures would occur in consultation with participating property owners and TNC, and with the agreement of the Service. The CI for the enrolled property would note any adjustments in Conservation Measures and include supporting rationale.

3.0 AFFECTED ENVIRONMENT

This section describes in general terms the resources that could be affected if the Service approves the Programmatic CCAA.

3.1 COVERED AREA

The covered area encompasses approximately 11,687,434 ha (28,880,279 ac) of privately owned lands within potential habitats for the Covered Species. Approximately 8,705,704 ha (21,512,263 ac) of privately owned lands occur within potential sage-grouse habitat in Montana (MFWP 2016) and approximately 5,716,529 ha (14,125,850 ac) of privately owned lands occur within potential habitat for the covered declining grassland songbirds (MTNHP 2013; 2015). The following sections summarize: 1) the vegetation and wildlife found in the covered area supporting sage-grouse habitat; and 2) the vegetation and wildlife found in the covered area supporting grassland habitat for four species of declining grassland songbirds.

3.2 SAGEBRUSH HABITAT

This section summarizes the vegetation and wildlife found in the covered area containing sagebrush habitat, including special status species.

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3.2.1 Sage-grouse

Information in this section is summarized from literature sources, including but not limited to: Connelly et al. (2004); Montana Sage Grouse Work Group (2005); Woodward (2006); Wisinski (2007); Knick and Connelly (2011); Foster et al. (2013); USFWS (2013); and USFWS (2014).

Sage-grouse are considered obligate users of sagebrush (*Artemisia* spp). Suitable sage-grouse habitat is comprised of semiarid shrub-steppe plant communities dominated by sagebrush with a diverse native grass and forb (flowering herbaceous plants) understory. Late brood-rearing (mid-July through September) habitats may also include riparian sites. The composition of shrubs, grasses, and forbs varies by season, sagebrush subspecies, habitat condition at any given location, soil type, moisture regime, and ecological site potential.

In portions of Montana, substantial amounts of sagebrush habitat have been disturbed or fragmented, through conversion to agriculture or by mechanical or chemical control (Montana Sage Grouse Work Group 2005), infrastructure, and renewable and nonrenewable energy development, although recent Federal and State plans have reduced the potential of these threats to impact sage-grouse populations (80 FR 59858, October 2, 2015). Montana currently supports approximately 18 percent of the range wide sage-grouse population.

In other parts of the state, sage-grouse habitat is relatively intact, due to marginal soils that have historically discouraged conversion to cropland (Cooper et al. 2001). Many of these rangelands are privately owned, and are managed primarily for livestock production. Although Montana's sage-grouse distribution has contracted from historical estimates, Montana's sage-grouse distribution plays an important role in connectivity among other sage-grouse populations in Canada, the Dakotas, Idaho, and Wyoming. Current threats to sage-grouse habitat in Montana that are related to ranching and agricultural management which are addressed in the CCAA include: habitat loss and fragmentation; livestock grazing management inconsistent with the needs of the Covered Species; non-native, invasive plant species (including noxious weeds); haying/mowing and seed harvest; range management structures; conifer encroachment; tree rows and windbreaks; infrastructure; fences; insecticides; roads; and recreation.

Sage-grouse use habitat according to their seasonal needs, including breeding habitat (leks) in early spring, nesting habitat in late spring, early brood-rearing habitat from June to mid-July, late brood-rearing habitat from mid-July through September, and winter habitat. Each of these habitats is described briefly below.

3.2.1.1 Breeding Habitat (Leks) in Early Spring

Leks are generally located in relatively flat or gently sloping areas with low, sparse vegetation within large expanses of suitable nesting, roosting, and brood-rearing sagebrush habitats. Lek sites provide good visibility and acoustical qualities that allow the sounds of the male breeding displays to carry. Leks can vary greatly in terms of both size and number of males; however, leks typically occur in the same location each year (Connelly et al. 2011). Shifts in lek location can occur in response to persistent disturbance, female mate selection, or severe winters. Additionally, in years of comparatively high sage-

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grouse abundance, males can form satellite leks. In Montana, males establish territories on leks in mid- to late March, but timing varies annually depending upon weather conditions (e.g., snowmelt).

3.2.1.2 Nesting Habitat in Late Spring

In Montana, data from radio-marked female sage-grouse indicate that the distance between nests and the lek on which breeding occurred is highly variable, ranging from 1.6 km (1 mi) to greater than 5 km (3.1 mi) depending on the region of Montana (Foster et al. 2014, Tack 2009, Sika 2006, Moynahan 2004). Sage-grouse nests are placed on the ground and are composed of small twigs lined with leaves and feathers plucked from the breast of the female. Nests are typically placed under a sagebrush shrub. The most suitable nesting habitat includes a mosaic of sagebrush with horizontal and vertical structural diversity. A healthy understory of native grasses and forbs provides: 1) cover for concealment of the nest and female from predators, 2) herbaceous forage for pre-laying and nesting females, and 3) insects as prey for chicks and females (Hagen 2011a).

Average sagebrush canopy cover at nest sites across the range of sage-grouse in Montana varies from 7 percent to 22 percent, depending upon the ecological site and dominant species of sagebrush present (Foster et al. 2014, Tack 2009, Lane 2005). Average sagebrush height at nest sites in Montana varies from 26 cm (10.2 in) to 52 cm (20.5 in), depending upon the region and dominant species of sagebrush present (Foster et al. 2014, Lane 2005). The amount of residual herbaceous cover from the previous growing season provides critical nest concealment, as the nesting season begins before the onset of growth in most plants. The cover and height of residual and live herbaceous vegetation are dependent upon the ecological site potential and vegetation community at the site.

3.2.1.3 Early Brood Rearing Habitat from June to mid-July

Early brood-rearing habitat requirements are very similar to nesting habitat requirements, as hens brood chicks for the first 2 to 3 weeks in the nest vicinity (Holloran and Anderson 2005). During the first three weeks of life, insects such as ants, beetles, and grasshoppers are a major diet component, with forbs becoming increasingly important as the chicks age (Schroeder et al. 1999). Brood-rearing habitats having a wide diversity of plant species support a diversity of insects used by sage-grouse chicks (Hagen 2011b).

3.2.1.4 Late Brood-Rearing Habitat from mid-July to mid-September

As summer progresses, sage-grouse hens move their broods to more mesic habitats with increased forbs, including agricultural lands and areas near water developments (Holloran and Anderson 2005). Hens without broods and adult males may also use more mesic habitats during late summer.

These areas may be lower elevation native or irrigated meadows, or sage-grouse may also move to higher elevations, seeking habitats where succulent forbs are still available in sagebrush habitats or sites such as moist grassy areas or upland meadows. In more arid areas, wetland and riparian areas become important to late summer brood survival, since they are the primary sites that produce the forbs and insects necessary for juvenile birds. However, sage-grouse continue to rely on adjacent sagebrush for protection from weather and predators, and for roosting and loafing.

3.2.1.5 Fall Habitat from mid-September to First Major Snow

In some instances, sage-grouse move from late brood-rearing habitat to transitional fall habitat before moving onto winter range. As precipitation increases and temperatures decrease, sage-grouse move into mixed sagebrush-grassland habitats in moist upland and mid-slope draws where fall green-up of cool-season grasses and some forbs may occur.

3.2.1.6 Winter Habitat

On winter range, the sage-grouse diet shifts to exclusively sagebrush leaves. Sage-grouse winter habitat varies depending upon snowfall depth, topography, and sagebrush height and density (Schroeder et al. 1999), and winter habitat can be a limiting factor for sage-grouse (Moynahan et al. 2006). In general, sage-grouse winter habitat is generally flat within contiguous stands of big sagebrush (Eng and Schladweiler 1972, Smith 2013, Foster et al. 2014); however, sage-grouse will use sagebrush habitats on exposed ridgetops during severe winters (Smith 2013). Suitable winter habitat requires sagebrush to be accessible above snow.

Seasonal movements vary considerably among Montana's sage-grouse populations. Sage-grouse in north-central (south of the Milk River) and central Montana are generally considered non-migratory (Moynahan 2004, Sika 2006). The southeastern Montana population shows variability in the proportion of females that make substantial (>10 km [6.2 mi]) movements between seasonal habitats (Foster et al. 2014). In southwestern Montana, some birds are resident while others make substantial winter movements to Idaho (Roscoe 2002, Wisinski 2007). Most sage-grouse that breed in silver sagebrush habitats north of the Milk River migrate south to areas of Wyoming big sagebrush (Tack 2009); the longest known annual round-trip migration of 240 km (149 mi) between summer range north of the Milk River to winter range south of the Milk River has been documented for this population (Smith 2013). Sage-grouse migrate relatively slowly along a network of routes, frequently stopping at sites in sagebrush habitat (Smith 2013).

Sagebrush on winter range must be exposed at least 25–30 cm (10–12 in) above snow level to provide both food and cover for wintering sage-grouse. Sage-grouse may burrow into snow for thermoregulation and predator avoidance. If snow covers sagebrush above the critical limit, sage-grouse may move to areas where sagebrush is exposed.

3.2.2 Other Wildlife – Sagebrush Ecosystems

Although the focus of the Programmatic CCAA is sage-grouse and four declining grassland songbird species, many other wildlife species also inhabit sagebrush ecosystems in Montana and could be affected if the Programmatic CCAA is approved and implemented. Sagebrush provides habitat for about three amphibians, six reptiles, 28 mammals and 35 birds that occur at least seasonally in the state (MTNHP 2016a).

The MTNHP has identified 13 species that are of conservation concern or potential concern (species that are on the edge of their distribution in Montana, species whose ecology in Montana is poorly understood, and/or species with low or declining populations) that depend on sagebrush communities at least seasonally (Table 1).

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Table 1. Sagebrush ecosystem species of concern in Montana

Common Name	Scientific Name	State Rank*	Global Rank*
Invertebrate			
Mormon Metalmark	*Apodemia mormo*	S3S5	G5
Mammals			
Black-tailed Jack Rabbit	*Lepus californicus*	SU	G5
Great Basin Pocket Mouse	*Perognathus parvus*	S3	G5
Merriam's Shrew	*Sorex merriami*	S3	G5
Preble's Shrew	*Sorex preblei*	S3	G4
Pygmy Rabbit	*Brachylagus idahoensis*	S3	G4
White-tailed Prairie Dog	*Cynomys leucurus*	S1	G4
Birds			
Brewer's Sparrow	*Spizella breweri*	S3B	G5
Ferruginous Hawk	*Buteo regalis*	S3B	G4
Golden Eagle	*Aquila chrysaetos*	S3	G5
Greater Sage-Grouse	*Centrocercus urophasianus*	S2	G3G4
Sagebrush Sparrow	*Artemisiospiza nevadensis*	S3B	G5
Sage Thrasher	*Oreoscoptes montanus*	S3B	G5

Source: MTNHP 2016a

*Rank		Definition
G1	**S1**	At high risk because of **extremely limited** and/or **rapidly declining** population numbers, range and/or habitat, making it highly vulnerable to global extinction or extirpation in the state.
G2	**S2**	At risk because of **very limited** and/or **potentially declining** population numbers, range and/or habitat, making it vulnerable to global extinction or extirpation in the state.
G3	**S3**	Potentially at risk because of **limited** and/or **declining** numbers, range and/or habitat, even though it may be abundant in some areas.
G4	**S4**	Apparently secure, though it may be quite rare in parts of its range, and/or suspected to be declining.
G5	**S5**	Common, widespread, and abundant (although it may be rare in parts of its range). Not vulnerable in most of its range.
GX	**SX**	Presumed Extinct or Extirpated - Species is believed to be extinct throughout its range or extirpated in Montana. Not located despite intensive searches of historical sites and other appropriate habitat, and small likelihood that it will

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ever be rediscovered.

GH SH Historical, known only from records usually 40 or more years old; may be rediscovered.

GNR SNR Not Ranked as of yet.

GU SU Unrankable - Species currently unrankable due to lack of information or due to substantially conflicting information about status or trends.

GNA SNA A conservation status rank is not applicable because the species or ecosystem is not a suitable target for conservation activities as a result of being: 1) not confidently present in the state; 2) exotic or introduced; 3) a long distance migrant with accidental or irregular stopovers; or 4) a hybrid without conservation value.

Combination or Range Ranks

G#G# or **S#S#** Indicates a range of uncertainty about the status of the species *(e.g., G1G3 = Global Rank ranges between G1 and G3).*

S#, S# Indicates that populations in different geographic portions of the species' range in Montana have a different conservation status *(e.g., S1 west of the Continental Divide and S4 east of the Continental Divide).*

3.3 GRASSLAND HABITAT

This section summarizes the vegetation and wildlife found in the covered area supporting grassland habitat, including special status species.

3.3.1 Declining Grassland Songbirds

Maintenance of large, contiguous grasslands is critical to support the diverse habitat requirements of grassland songbirds. These large grassland landscapes are necessary to capture the patterns in grassland habitats and, subsequently, patterns in grassland songbird species distributions. Grassland songbirds, particularly species native to the mixed-grass prairie of the Northern Great Plains, have experienced rangewide population declines, and the four declining grassland songbirds covered under this Programmatic CCAA have experienced long-term declining trends nationally (Sauer et al. 2017).

Due to the dynamic nature of both weather and disturbance patterns in grasslands of the Northern Great Plains, the ability of grassland songbirds to adapt to these often unpredictable conditions requires large, expansive grasslands. This dynamic environment has shaped the life history and habitat requirements of grassland songbirds.

3.3.1.1 McCown's Longspur

McCown's longspur breeds in grasslands dominated by short grasses due either to low soil moisture or heavy grazing of mixed-grass prairie (Kantrud and Kologiski 1982). McCown's longspurs forage on the ground, eating primarily seeds of grasses and forbs throughout the breeding season. Lesser amounts of insects are also taken, including ants, grasshoppers, and beetles. Young longspurs are fed grasshoppers, moths, and other arthropods (With 2010).

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In Montana, McCown's longspur arrives on the breeding grounds in mid- to late April (DuBois 1937). During the breeding season, males establish and maintain territories through a distinct aerial display in which the songbirds fly upward and sing while floating down. Songs are also occasionally given while perched on low shrubs or rocks. Pairs are largely monogamous, maintaining a discrete territory throughout the breeding season (With 2010).

Females select the nest site. Nests are often located beside an object such as a grass clump, cactus, or cow dung. Nests are placed in a hollow depression created by the female, and the rim of the nest is flush with the ground. Nesting material is collected from the nesting territory. The nest is constructed of grass stems and blades and lined with finer grasses, hair, wool, and feathers. Clutch size is typically 3-4 eggs. Incubation lasts 12 days. Although only females incubate, males remain nearby. Both adults feed and brood nestlings until they leave the nest at about 10 days old. Recently fledged young associate with adults for about 3 weeks after nest departure. Second broods may be initiated as soon as 3 weeks after the first brood has fledged (With 2010).

McCown's longspur is restricted to prairies dominated by sparse vegetative cover and shortgrasses. Populations are discontinuous, corresponding to the fragmented distribution of these habitats across the Great Plains. In north-central Montana, McCown's longspurs exhibited a patchy distribution within the larger grassland landscape, corresponding with the availability of locally suitable sparse grass habitats (Lipsey 2015). Across its range, breeding populations are most numerous in southwestern Saskatchewan, north-central Montana, and Wyoming (Sedgwick 2004). Optimal breeding habitat in Montana occurs primarily in north-central Montana (MTNHP 2011), although McCown's longspur occurs throughout eastern and southwest Montana in suitable shortgrass habitats.

3.3.1.2 Chestnut-collared Longspur

The Chestnut-collared longspur breeds in mixed-grass or shortgrass prairie. This species prefers native grassland with level to rolling topography. Chestnut-collared longspurs prefer areas with taller midgrasses than those preferred by McCown's longspur. Grasslands with dense litter are avoided as are areas dominated by non-native pasture grasses (e.g., Kentucky bluegrass; Bleho et al. 2015).

Adults on the breeding grounds eat primarily insects, especially grasshoppers, and seeds of grasses and forbs. This species generally forages on the ground but will glean insects and seeds off of vegetation and fly-catch for insects low to the ground. Young are fed insects, particularly grasshoppers and insect larvae (Bleho et al. 2015).

In Montana, male chestnut-collared longspurs arrive on the breeding grounds in early to mid-April with females arriving 1-2 weeks later (Lloyd and Martin 2005). Males establish and maintain breeding territories by performing aerial song displays in which they fly upward and descend while singing with tails spread. Breeding pairs are monogamous, and breeding territories do not overlap (Bleho et al. 2015). The breeding season in Montana ranges from April 30-August 10 (Jones et al. 2010).

Nests are located in areas of sparse vegetation and placed in a hollow depression excavated by the female. The nest is often placed next to a clump of grass or cow dung, and the rim of the nest is generally flush with the ground. Most nesting material is collected within 20 m (66 ft) of the nest site. The nest is constructed of grasses and lined with hair, feathers, or rootlets. Clutch size is typically 4 eggs,

although clutches of 3 or 5 eggs are not uncommon. Incubation averages 11 days. Only females incubate. Both adults feed and brood nestlings until they leave the nest at about 10 days old. Recently fledged young remain with adults for about 2 weeks after nest departure. Second broods may be initiated as soon as 6 days after the first brood has fledged (Bleho et al. 2015).

The chestnut-collared longspur is restricted to mixed-grass prairies. Populations are discontinuous, corresponding to the fragmented distribution of these habitats in the Great Plains. Chestnut-collared longspurs exhibit a patchy distribution within the larger grassland landscape, corresponding with the availability of locally suitable sparse grass habitats (Lipsey 2015). Breeding populations are most numerous in southern Alberta, north-central Montana, central North Dakota and north-central South Dakota (Sedgwick 2004a). Optimal breeding habitat for chestnut-collared longspur occurs primarily in north-central Montana (MTNHP 2011), although the species occurs throughout eastern Montana in suitable habitats.

3.3.1.3 Sprague's Pipit

Sprague's pipit is a grassland specialist endemic to the mixed-grass prairie of the northern Great Plains. This species relies on large areas of contiguous grasslands and is more closely associated with native grasslands than non-native grasslands (Davis et al. 2014).

Adults feed primarily upon arthropods throughout the breeding season, as well as during migration and on the wintering grounds (Davis et al. 2014). Some seeds may be taken in late winter (Jones 2010). Sprague's pipits forage on the ground, gleaning insects from the ground and from vegetation. Young are fed arthropods (Davis et al. 2014).

In Montana, Sprague's pipits arrive on the breeding grounds in late April to early May. Males maintain breeding territories through a unique aerial display in which they sing from heights of 50-100 m (164-328 ft). Breeding pairs are monogamous (Davis et al. 2014). The breeding season ranges from May 7-August 25 (Jones et al. 2010).

Nests are located in areas of relatively dense vegetation and placed in a hollow depression excavated by the female, in a natural depression, or in a cattle hoof print. The nest is constructed of grasses woven into a cup, and taller grasses near the nest are interwoven with loose grasses to form a dome over the next cup (Davis et al. 2014). Clutch size is typically 4-5 eggs. Incubation lasts 12-15 days. Incubation and brooding of young nestlings is done primarily by the female. Both adults feed nestlings until they leave the nest at about 13 days old (Jones et al. 2010). Recently fledged young remain within 100 m (328 ft) of the nest. Fledglings are fed by both parents. Initiation of second broods after successfully fledging young or after initial nest failure is apparently uncommon in Sprague's pipit (Jones et al. 2010).

Sprague's pipit breeding populations are restricted to the mixed-grass prairie of the northern Great Plains. Highest pipit densities occur in southeastern Alberta, southwestern and south-central Saskatchewan, and in north-central Montana. Approximately 63 percent of the U.S. breeding population of Sprague's pipit occurs in Montana (Lipsey et al. 2015). In Montana, optimal breeding habitat for Sprague's pipit occurs in north-central Montana (MTNHP 2012), although the species occurs throughout eastern Montana in suitable habitats.

3.3.1.4 Baird's Sparrow

Baird's sparrow requires large, intact grassland landscapes with dense vegetative cover. Abundance of this species tends to decline with increasing livestock grazing intensity (Lipsey 2015).

Adults feed upon arthropods during the breeding season as well as a variety of seeds throughout the year. Nestlings are fed invertebrates (Green et al. 2002).

In north-central Montana, male Baird's sparrows typically arrive on the breeding grounds in late April or early to mid-May; females arrive about 3-7 days after males. Breeding pairs are apparently monogamous (Green et al. 2002). In Montana, the breeding season occurs from May 14-August 10 (Jones et al. 2010).

Nests are located in areas of relatively dense vegetation and placed in a hollow depression excavated by the adult, in a natural depression, or in a cattle hoof print. The outer lining of the nest is constructed of grasses and forb stems and leaves and lined with fine grasses and rootlets (Green et al. 2002). Clutch size is typically 4-5 eggs. Incubation lasts on average 11 days (Jones et al. 2010). Incubation and brooding of young nestlings is done by the female. Both adults feed nestlings until they leave the nest at about 10 days old (Jones et al. 2010). Second broods are initiated after young have fledged from the previous nest (Green et al. 2002).

Baird's sparrows breed in suitable grassland habitats in southern Alberta, Saskatchewan, and southwestern Manitoba south into eastern Montana, North Dakota, and northwestern South Dakota. In Montana, optimal breeding habitat for Baird's sparrow is in north-central and northeastern Montana (MTNHP 2011). In north-central Montana, Baird's sparrow distributions were dispersed relatively uniformly throughout grasslands of dense cover, corresponding to periods of high precipitation in the region (Lipsey 2015).

3.3.2 Other Wildlife – Grassland Ecosystems

Although the focus of the Programmatic CCAA is sage-grouse and the four declining grassland songbird species, many other wildlife species also inhabit grassland ecosystems in Montana and could be affected if the Programmatic CCAA is approved and implemented. Grasslands provide habitat for about five amphibians, five reptiles, 28 mammals and 44 birds that occur at least seasonally in the state (MTNHP 2016a).

The MTNHP has identified 30 bird, mammal, and invertebrate species that are of conservation concern or potential concern that depend on mixed-grass and shortgrass grassland communities at least seasonally (Table 2).

Table 2. Grassland ecosystem species of concern or potential concern in Montana

Common Name	Scientific Name	State Rank*	Global Rank*
Invertebrates			

Table 2. Grassland ecosystem species of concern or potential concern in Montana

Common Name	Scientific Name	State Rank*	Global Rank*
Indra Swallowtail	*Papilio indra*	S2S3	G5
Mormon Metalmark	*Apodemia mormo*	S3S5	G5
Ottoe Skipper	*Hesperia ottoe*	S2S3	G3G4
Red-disked Alpine	*Erebia discoidalis*	S3S5	G5
Tawny Crescent	*Phyciodes batesii*	S2S3	G4
Mammals			
Bison	*Bos bison*	S2	G4
Black-footed Ferret	*Mustela nigripes*	S1	G1
Black-tailed Jack Rabbit	*Lepus californicus*	SU	G5
Black-tailed Prairie Dog	*Cynomys ludovicianus*	S3	G4
Hayden's Shrew	*Sorex haydeni*	S3S4	G4
Idaho Pocket Gopher	*Thomomys idahoensis*	S2S4	G4
Merriam's Shrew	*Sorex merriami*	S3	G5
Swift Fox	*Vulpes velox*	S3	G3
Uinta Ground Squirrel	*Urocitellus armatus*	S3S4	G5
White-tailed Prairie Dog	*Cynomys leucurus*	S1	G4
Wyoming Ground Squirrel	*Urocitellus elegans*	S3S4	G5
Birds			
Baird's Sparrow	*Ammodramus bairdii*	S3B	G4
Burrowing Owl	*Athene cunicularia*	S3B	G4
Chestnut-collared Longspur	*Calcarius ornatus*	S2B	G4
Common Poorwill	*Phalaenoptilus nuttallii*	S4B	G5
Dickcissel	*Spiza americana*	S4B	G5
Ferruginous Hawk	*Buteo regalis*	S3B	G4
Golden Eagle	*Aquila chrysaetos*	S3	G5
Grasshopper Sparrow	*Ammodramus savannarum*	S4B	G5

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Table 2. Grassland ecosystem species of concern or potential concern in Montana

Common Name	Scientific Name	State Rank*	Global Rank*
Long-billed Curlew	*Numenius americanus*	S3B	G5
McCown's Longspur	*Rhynchophanes mccownii*	S3B	G4
Mountain Plover	*Charadrius montanus*	S2B	G3
Short-eared Owl	*Asio flammeus*	S4	G5
Sprague's Pipit	*Anthus spragueii*	S3B	G4
Swainson's Hawk	*Buteo swainsoni*	S4B	G5
Upland Sandpiper	*Bartramia longicauda*	S4B	G5

Source: MTNHP 2016a

*Rank		Definition
G1	**S1**	At high risk because of **extremely limited** and/or **rapidly declining** population numbers, range and/or habitat, making it highly vulnerable to global extinction or extirpation in the state.
G2	**S2**	At risk because of **very limited** and/or **potentially declining** population numbers, range and/or habitat, making it vulnerable to global extinction or extirpation in the state.
G3	**S3**	Potentially at risk because of **limited** and/or **declining** numbers, range and/or habitat, even though it may be abundant in some areas.
G4	**S4**	Apparently secure, though it may be quite rare in parts of its range, and/or suspected to be declining.
G5	**S5**	Common, widespread, and abundant (although it may be rare in parts of its range). Not vulnerable in most of its range.
GX	**SX**	Presumed Extinct or Extirpated - Species is believed to be extinct throughout its range or extirpated in Montana. Not located despite intensive searches of historical sites and other appropriate habitat, and small likelihood that it will ever be rediscovered.
GH	**SH**	Historical, known only from records usually 40 or more years old; may be rediscovered.
GNR	**SNR**	Not Ranked as of yet.
GU	**SU**	Unrankable - Species currently unrankable due to lack of information or due to substantially conflicting information about status or trends.
GNA	**SNA**	A conservation status rank is not applicable because the species or ecosystem is not a suitable target for conservation activities as a result of being: 1) not confidently present in the state; 2) exotic or introduced; 3) a long distance migrant with accidental or irregular stopovers; or 4) a hybrid without conservation value.

Combination or Range Ranks

G#G# Indicates a range of uncertainty about the status of the species *(e.g., G1G3 = Global Rank ranges between G1 and G3).*
or

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S#S#

S#, S# Indicates that populations in different geographic portions of the species' range in Montana have a different conservation status *(e.g., S1 west of the Continental Divide and S4 east of the Continental Divide).*

3.3.3 Threatened, Endangered and Candidate Species – Sagebrush and Grassland Ecosytems

Twelve animals and three plants listed as threatened or endangered under the ESA occur in Montana. Threatened animal species are grizzly bear (*Ursus arctos horribilis*), piping plover (*Charadrius melodus*; with designated critical habitat), bull trout (*Salvelinus confluentus*; with designated critical habitat), Canada lynx (*Lynx canadensis*; with designated critical habitat), yellow-billed cuckoo (*Coccyzus americanus*), red knot (*Calidris canutus rufa*) and northern long-eared bat (*Myotis septentrionalis*). Endangered animal species are black-footed ferret (*Mustela nigripes*; present in Montana as released non-essential experimental populations or as a released population under a Safe Harbor Agreement), whooping crane (*Grus americana*), least tern (*Sterna antillarum*), pallid sturgeon (*Scaphirhynchus albus*) and white sturgeon (Kootenai River population) (*Acipenser transmontanus*). The three listed threatened plant species in Montana are water howelia (*Howellia aquatilis*), Ute Ladies'-tresses (*Spiranthes diluvialis*), and Spalding's Campion (or "catchfly") (*Silene spaldingii*).

There is only one species proposed for listing in Montana, the wolverine (*Gulo gulo luscus*), and there are two candidate species, the meltwater lednian stonely (*Lednia tumana*) and whitebark pine (*Pinus albicaulis*).

None of the listed, proposed or candidate species in Montana are sagebrush obligates. Some listed species may be found incidentally in or near sagebrush habitats, such as the black-footed ferret.

Only one of the listed, proposed, or candidate species might be considered a grassland obligate. The black-footed ferret is dependent on prairie dog colonies, andblack-tailed prairie dog colonies are considered grassland obligates. Under this definition, the ferret would be considered a grassland obligate.

3.4 WATER RESOURCES

This section summarizes the water resources found in the covered area. The Montana Department of Environmental Quality (MDEQ) has grouped the state's waters into four administrative basins. The covered area encompasses portions of three of these basins: Upper Missouri, Lower Missouri, and Yellowstone.

In Montana, perennial streams total 58,171 stream miles. The Upper Missouri River Basin comprises 26 percent of these miles, the Lower Missouri River Basin contains 16 percent, and the Yellowstone River Basin encompasses 15 percent. In addition, there are about 307,000 miles of small, intermittent, or ephemeral streams in Montana (MDEQ 2016).

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3.4.1 Water Quality

The MDEQ's Water Quality Division (WQD), is responsible for summarizing water quality conditions by river basin. Each waterbody is placed in only one unique assessment category. The MDEQ WQD prepared its most recent summary of state water quality conditions in 2016 (MDEQ 2016).

Table 3 summarizes the stream miles of each water quality category in the covered area.

Table 3. Summary of the Water Quality Category of Streams within the Covered Area

Water Quality Category[1]	Stream Miles
1	1,897.5
2	789.2
3	2,008
4A	2,363.9
4C	2,023.7
5	11,402.8
5,5N	1,079.9

Source: MDEQ 2016

[1] Category Description:
1 - All applicable beneficial uses have been assessed and all uses are determined to be fully supported.
2,2A - Available data and/or information indicate that some, but not all of the beneficial uses are supported.
3 - Insufficient or no data available to determine whether or not any designated use is attained.
4A - All TMDLs required to rectify all identified threats or impairments have been completed and approved.
4B - Other pollution control requirements [see 40 CFR 130.7(b) (1)(iii)] are in place, are expected to address all waterbody-pollutant combinations, and attain all water quality standards in a reasonable period of time. These control requirements act in lieu of a TMDL, thus no actual TMDLs are required.
4C - Identified threats or impairments result from pollution categories such as dewatering or habitat modification thus a TMDL is not required.
5 - One or more applicable beneficial uses are impaired or threatened and a TMDL is required.
5,2B or 5,5N - Available data and/or information indicate that a water quality standard is not met due to an apparent natural source in the absence of any identified man-made sources.

The MDEQ WQD tracks waters in the State that are designated as either impaired or threatened, and under Section 303(d) of the Clean Water Act, and requires a Total Maximum Daily Load (TMDL) study for any waters so designated. The waters requiring a TMDL are reported by river basin (Table 4). In Montana, the most common threats to beneficial water uses are excessive sediment, nutrients, or metals, all of which alter physical and chemical properties of a waterbody.

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Table 4. Covered Area River Basins with Sagebrush and/or Grassland Habitat and Number of Waters Requiring TMDLs

Covered Area River Basin (major river basin)	Number of Waters Requiring TMDLs
Lower Missouri	29
Upper Missouri	13
Yellowstone	19

Source: MDEQ 2016

3.4.2 Wetlands

Wetlands and riparian areas (streamside vegetation zones) cover only 1-4 percent of Montana but support 50 percent of plants and 38 percent of amphibians, reptiles, birds, and mammals of special concern (MDEQ 2016). Wetlands provide important habitat for migrating and breeding waterfowl, shorebirds, water-birds, songbirds, mammals, amphibians and reptiles; improve water quality by trapping sediments and toxins; recharge aquifers; store water; and reduce the severity of floods. Restoration and careful management of wet meadow systems and other wetlands can increase sustainable production of forage for livestock and increase late-season stream flows (MFWP 2015).

As previously discussed, wetlands may be particularly important to sage-grouse during late brood-rearing. Donnelly et al. (2016) modelled the availability of this habitat for brood rearing, particularly late brood-rearing when water is most limiting in sagebrush habitats, and found that 70 percent of this important habitat type is located on private lands in Oregon. Donnelly et al. (2016) also analyzed the relationship of leks and wetland habitats, and found that the highest density leks was situated near potential brood rearing habitats.

Mapping of Montana's wetlands and riparian areas has been completed for approximately two-thirds of the state. To date, approximately 2.5 million acres of wetlands and 670,000 acres of riparian areas have been mapped. Table 5 lists wetland and riparian acreages mapped in the covered area.

Table 5. Wetland and Riparian Acreages in Covered Area – Sagebrush and Grassland Habitats (non-federal lands)

Wetland or Riparian Classification	Private Ownership (acres)
Lake	145,546
Freshwater Pond (Aquatic Bed)	80,153
Freshwater Pond (Unconsolidated Bottom)	3,396
Freshwater Pond (Unconsolidated Shore)	28,397.81
Freshwater Emergent Wetland	649,943

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Freshwater Forested Wetland	4,413
Freshwater Scrub-Shrub Wetland	96,853
Riparian Emergent	113,621
Riparian Forested	234,328
Riparian Scrub-Shrub	94,989
Total	**1,451,640**

Source: MTNHP 2016b

3.5 LAND USE AND OWNERSHIP – SAGEBRUSH AND GRASSLAND ECOSYSTEMS

The information in this section is summarized from the Programmatic CCAA. Approximately 8,705,704 ha (21,512,263 acres) of non-Federal lands occur within the potential range of the sage-grouse in Montana and are covered under the Programmatic CCAA. The total amount of potential sage-grouse habitat in Montana is estimated to be 13,244,462 ha (32,727,779 acres); 66 percent is privately owned, 20 percent is public land administered by the BLM, 7. percent is State Trust lands, 4 percent is tribal-owned, and the remaining 4 percent is split among U.S. Forest Service, U.S. Fish and Wildlife Service, other State, and local governments (MFWP 2015).

Approximately 5,716,529 ha (14,125,850 acres) of non-Federal lands occur within the potential range of the four declining grassland songbirds in Montana and are covered under the Programmatic CCAA. The total amount of potential habitat in Montana within the breeding range of the four declining grassland songbirds is estimated to be 9,077,246 ha (22,430,364 acres); approximately 63 percent is privately owned, with the remaining 37 percent on public land, 53 percent of which is managed by the BLM.

Much of the remaining privately owned sagebrush and grassland vegetation communities in Montana are relatively intact, owing to marginal soils that have historically discouraged conversion of these areas to cropland (Cooper et al. 2001). These privately owned rangelands are managed primarily for livestock production.

3.6 SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE – SAGEBRUSH AND GRASSLAND ECOSYSTEMS

The covered area for both sagebrush and grassland habitats is considered to be rural. Montana is the 44th most populous state with a total population of 1,032,949, according to 2015 census estimates. Between 2010 and 2015, the population of Montana increased 4.4 percent (U.S. Census 2016), but most of this increase occurred in the state's larger cities. The majority of the statewide population (89.4 percent) is white, with 6.3 percent American Indian and Alaska Native, 2.9 percent Hispanic or Latino, 0.6 Asian, 0.4 percent Black or African American, and 0.1 percent Native Hawaiian and Other Pacific Islander.

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The median household income in 2010-2014 was $46,766, with 14.6 percent of Montana's population living below the poverty level (U.S. Census 2016). The unemployment rate in Montana in August 2016 was 4.3 percent, down from a high in April 2010 of 7.4 percent and a low in February 2007 of 2.9 percent (U.S. BLS 2016).

U.S. Executive Order 12898 directs Federal agencies to "make…achieving environmental justice part of its mission" and to identify and address "disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations." According to U.S. Census data, in counties located within the covered area in 2014, the average percentage of minorities was approximately 10.3 percent and the average percentage of people below the poverty level was approximately 14.5 percent (US Census 2016).

3.7 CULTURAL AND HISTORIC RESOURCES – SAGEBRUSH AND GRASSLAND ECOSYSTEMS

The decision by the Service regarding approval of the Programmatic CCAA is considered an "undertaking" covered by the Advisory Council on Historic Preservation. Therefore, the Service must comply with Section 106 of the National Historic Preservation Act (NHPA) (36 CFR 800). The undertaking is the implementation of Conservation Measures that would be implemented once the Programmatic CCAA is approved. Section 106 requires the Service to assess and determine the potential effects of Conservation Measures on historic properties that could result from the proposed undertaking and to develop measures that would avoid, minimize, or compensate for any adverse effects. The earliest inhabitants of the covered area in Montana were Native Americans, who occupied the area for thousands of years utilizing many of the natural resources of the area. Euro American trappers and explorers arrived in Montana in the early 1800s, followed by traders, miners, soldiers, cattlemen, farmers and other settlers. Cultural and historic sites in the covered area typically represent Native American sites and homesteading, ranching or farming properties.

3.8 RECREATION – SAGEBRUSH AND GRASSLAND ECOSYSTEMS

Recreation on private lands is not a primary land use in most of the covered area. However, hunting sage-grouse and other wildlife, and other recreational activities such as off-road vehicle use, camping, fishing, and wildlife viewing (including of sage-grouse leks) may occur on private lands with landowner permission. MFWP administers and regulates sage-grouse hunting. In 2016, the hunt for sage-grouse extended from September 1 – 30. The daily bag limit was two birds with a possession limit of four.

4.0 ENVIRONMENTAL CONSEQUENCES OF THE ALTERNATIVE ACTIONS

Environmental consequences of the alternatives to the Covered Species (sage-grouse and the four declining grassland songbirds) and their habitats would be similar. Consequently the Covered Species and their habitats are considered jointly in this analysis. The Programmatic CCAA identifies the following threats associated with ranching and agricultural activities affecting the Covered Species:

- Habitat loss and fragmentation (e.g., agricultural conversion, sagebrush removal, exurban development);

- Livestock grazing inconsistent with the needs of the Covered Species;
- Non-native, invasive plant species including noxious weeds;
- Haying/mowing and/or seed harvest;
- Range management structures;
- Conifer encroachment;
- Tree rows and windbreaks;
- Infrastructure;
- Fences;
- Insecticides;
- Roads;
- Recreation.

4.1 COVERED SPECIES

4.1.1 No Action Alternative

Under the No Action Alternative, existing ranching and agricultural activities in the covered area would continue and none of the covered area would be enrolled in the Programmatic CCAA for the Covered Species.

As described in Section 2.1, existing protections and habitat benefit programs for the Covered Species on State, Federal, and some private lands would continue under this alternative. Few of these protective mechanisms apply to ranching and agricultural activities on private lands, although voluntary, incentive-based conservation on such private lands would continue. Specific threats to the Covered Species and their habitats related to ranching and agricultural activities on private lands under this alternative would not be addressed to the extent anticipated were such lands enrolled in the Programmatic CCAA. Additionally, it is unlikely that the full menu of Conservation Measures identified in the CCAA would be implemented under the No Action Alternative, resulting in less relative long-term conservation benefit to populations of the Covered Species.

Populations of the Covered Species are expected to persist under the No Action alternative, as much of the privately owned sagebrush and grassland habitats in the covered area remain relatively intact and are managed primarily for livestock production. However, threats related to ranching and agricultural activities and the Conservation Measures to address these threats would not be implemented at a meaningful scale.

If any of the Covered Species were to be listed under the ESA, then provisions of the ESA would apply to their management. As discussed in Section 4.3, “take” of listed species under the ESA, including via significant habitat modification or degradation that results in the direct killing or injury of such species, is prohibited by the ESA without authorization. The ESA allows for such potential take authorization, under certain terms and conditions, if such take is incidental to, and not the purpose of, carrying out an otherwise lawful activity. Under the No Action Alternative, there would be no Permit issued to TNC under section 10(a)(1)(A) of the ESA, pursuant to the implementation of a Programmatic CCAA, authorizing the potential incidental take of Covered Species on enrolled private lands. If Covered Species were listed under the ESA, private landowners would have to obtain an individual Section 10

permit under the ESA, and file a Habitat Conservation Plan, in order to receive incidental take authorization.

4.1.2 Landowner Specific Alternative

Under the Landowner Specific Alternative, the Service would enter into individual CCAAs with individual property owners. As a result, a Programmatic CCAA would not provide a streamlined, consistent process for landowner enrollment and implementation of Conservation Measures for the Covered Species. . The species covered under an individual CCAA and the Conservation Measures to be implemented would be dependent upon the species and habitats occurring on each enrolled property. Crafting individual CCAAs would be more costly and time consuming for both landowners and the Service because individual ESA and NEPA compliance documents would need to be prepared for each CCAA. This additional time and expense may decrease the likelihood that landowners would choose to participate, reducing the potential conservation benefit that could be achieved in comparison to the Proposed Action alternative. Additionally, the location of properties enrolled in individual CCAAs may not necessarily coincide with areas identified as highest conservation priority in the Programmatic CCAA.

The Landowner Specific alternative would provide greater conservation benefit to the Covered Species than the No Action alternative; however, the level of conservation benefit would occur in proportion to the level of landowner enrollment in individual CCAAs. The number of acres enrolled under this alternative is expected to be less than enrolled under the Proposed Action alternative. As a result, fewer beneficial effects would be anticipated under the Landowner Specific Alternative compared to the Proposed Action Alternative. Populations of the Covered Species are expected to persist under the No Action Alternative, as much of the privately owned sagebrush and grassland habitats in the covered area are relatively intact and are managed primarily for livestock production. However, threats related to ranching and agricultural activities and the Conservation Measures to address these threats would not be implemented as comprehensively as under the Proposed Action alternative.

If any of the Covered Species were to be listed under the ESA, then provisions of the ESA would apply to their management. As discussed in Section 4.3, the Programmatic CCAA (the Proposed Action Alternative) assumes that some incidental take would occur on enrolled lands, but concludes that this take would be comparatively low because successful implementation of Conservation Measures would reduce the likelihood of incidental take. Further, negative effects of such take would be outweighed by the beneficial effects of implementing the Programmatic CCAA; such effects would be similarly offset under the Landowner Specific Alternative. In comparison to the Proposed Action Alternative, incidental take coverage under the Landowner Specific Alternative would be specific to each individual CCAA and Enhancement of Survival Permit, while under the Proposed Action Alternative all enrolled landowners would receive incidental take coverage under a single Permit issued to TNC.

4.1.3 Proposed Action Alternative

Under the Proposed Action alternative, we anticipate the highest level of landowner participation and the greatest number of acres enrolled through the Programmatic CCAA. The streamlined process for enrollment and implementation of comprehensive Conservation Measures associated with this alternative is expected to provide substantial conservation benefit to the Covered Species, including:

- Reducing habitat loss and fragmentation;
- Developing livestock grazing management plans to maintain or improve native vegetation cover;
- Minimizing the introduction or spread of invasive and/or noxious plant species;
- Implementing measures to avoid direct mortality to the Covered Species due to haying/mowing or seed harvest;
- Reducing the risk of mortality of the Covered Species and/or declining habitat quality associated with range management structures;
- Removing conifers that have encroached into sage-grouse habitat;
- Removing existing and/or not planting woody vegetation such as tree rows and windbreaks in suitable habitat for the Covered Species;
- Avoiding habitat fragmentation, and reducing the potential for mortalities to the Covered Species associated with planned or existing infrastructure such as wind towers, communication towers, abandoned buildings and unused power poles;
- Removing or modifying existing fences and avoiding construction of new fences to reduce the risk of fence collisions, reduce the availability of perching sites for avian predators, and avoid habitat fragmentation for the Covered Species;
- Maintaining insects as seasonally important food items for the Covered Species by using the Reduced Agent-Area Treatment approach and other measures to avoid and minimize the effects of pesticide use;
- Reducing habitat fragmentation and/or diminished habitat quality associated with roads by avoiding new road construction, closing/removing/restricting use of existing roads, and avoiding upgrades to existing roads in suitable habitat for the Covered Species; and
- Reducing disturbance or harassment of the Covered Species from recreation during important times of the year.

The magnitude of conservation benefits to the Covered Species across their distribution in Montana is expected to be greater under the Proposed Action Alternative because implementation of the Conservation Measures under the Programmatic CCAA would employ one comprehensive strategy to address threats, compared to administration of multiple individual CCAAs. Further, more acres in the covered area are likely to be enrolled under the Programmatic CCAA, and the streamlined enrollment process allows for more effective and efficient implementation of Conservation Measures. Additionally, the Programmatic CCAA would focus landowner enrollment in areas of conservation priority, providing additional conservation benefit under this alternative. The Programmatic CCAA would simplify the process for developing site-specific land management plans by providing a suite of appropriate Conservation Measures for each threat that may occur on the covered lands. The Nature Conservancy would assist landowners in selecting appropriate Conservation Measures for each property. As more property owners enroll in the Programmatic CCAA, the benefits to the Covered Species would be expected to occur at a landscape scale.

Portions of the covered area that would not be enrolled under the Programmatic CCAA would be subject to the same threats described for the No Action Alternative, with the potential corresponding negative effects to the Covered Species and their habitats. Landowners that do not participate in the Programmatic CCAA may still participate in other ongoing conservation activities to benefit the Covered

Species on their properties, as described in Section 2.1. The potential for impacts to occur as a result of the activities related to ranching and agricultural activities in the covered area will continue under this alternative; however, the implementation of Conservation Measures across a larger number of acres will minimize the impacts of these activities on the Covered Species and their habitats.

If any of the Covered Species were to be listed under the ESA, provisions of the ESA would apply to their management. As discussed in Section 4.3, the Programmatic CCAA assumes that some incidental take would occur on enrolled lands, but concludes that this take would be comparatively low because successful implementation of Conservation Measures would reduce the likelihood of incidental take. Further, negative effects of such take would be outweighed by the beneficial effects of implementing the Programmatic CCAA. Under the Proposed Action Alternative, all enrolled landowners would receive incidental take coverage under the Enhancement of Survival Permit issued to TNC, which would be more efficient and less costly for landowners and the Service than the process under either the No Action Alternative or the Landowner Specific Alternative.

4.2 OTHER WILDLIFE

As discussed in Section 3.2.2, sagebrush provides habitat for about three amphibians, six reptiles, 28 mammals and 35 birds that occur at least seasonally in the state (MTNHP 2016a), including 13 species of conservation concern or potential concern. Grasslands provide habitat for about five amphibians, five reptiles, 28 mammals and 44 birds that occur at least seasonally in the state (MTNHP 2016a), and 30 bird, mammal, and invertebrate species that are of conservation concern or potential concern that depend on mixed-grass and shortgrass grassland communities at least seasonally.

4.2.1 No Action Alternative

Under the No Action Alternative, existing ranching and agricultural activities in the covered area would continue. Under this alternative, none of the covered area would be enrolled in the Programmatic CCAA. Consequently, Conservation Measures associated with the CCAA would not be implemented on these lands.

Current land uses would continue, existing threats related to ranching and agricultural activities in sagebrush and grassland habitats would not be addressed, and wildlife management would occur through existing regulatory mechanisms and voluntary programs (Section 2.1). Consequently, it is anticipated that existing threats would continue for other wildlife species that utilize sagebrush habitat, including sensitive species, sagebrush and/or grassland obligate species, and species of concern or potential concern. Many of these species would continue to be negatively affected by the threats listed in Section 4.1.1.

As discussed in Section 3.2.1, sagebrush habitat in Montana is relatively intact, due in part to marginal soils that have historically discouraged conversion to cropland (Cooper et al. 2001). Under the No Action Alternative, other populations of sensitive species, sagebrush obligate species, and species of concern or potential concern would likely continue to persist in these areas. However, specific threats to sagebrush habitat related to ranching and agricultural activities on private lands under this alternative

would not be addressed to the extent anticipated were such lands enrolled in the Programmatic CCAA, resulting in less relative long-term conservation benefit to sagebrush habitat and associated species.

As discussed in Section 3.1, there are approximately 5,716,529 ha (14,125,850 ac) of privately owned lands within potential habitat for declining grassland songbirds. Given this large number, other populations of species of concern or potential concern associated with native grasslands would likely continue to persist under the No Action Alternative, but could be negatively impacted by continued threats associated with ranching and agricultural activities if none of these areas are enrolled in CCAAs.

4.2.2 Landowner Specific Alternative

The benefits from Conservation Measures listed in Section 4.1.2 would also apply to other wildlife species. However, landowner participation would likely be less than under the Proposed Action Alternative due to the additional time and expense necessary to implement individual CCAAs without guidance from the Programmatic CCAA. Consequently, effects would be intermediate between the No Action Alternative and the Proposed Action Alternative.

4.2.3 Proposed Action Alternative

Approval of the Programmatic CCAA and implementation of the appropriate Conservation Measures listed in Section 4.1.3 would benefit other wildlife species by improving habitat and/or ameliorating conditions that can adversely impact these species. The magnitude of benefits to other wildlife species across their distribution in Montana would be expected to be more substantial under the Proposed Action Alternative than the No Action or Landowner Specific Alternatives because implementation of the Conservation Measures under the Programmatic CCAA would employ one comprehensive strategy to address threats. Further, more of the covered area is likely to be enrolled in CCAAs, enrollment would occur within a shorter timeframe (e.g., conservation would be implemented sooner), and CCAAs would be more likely to be focused in areas of conservation priority, providing additional conservation benefit under this alternative. Although enrollees would need to sign Certificates of Inclusion to include Conservation Measures specific to their enrolled properties, the programmatic CCAA would simplify the process for developing site-specific land management plans by providing a suite of appropriate Conservation Measures for each threat that may occur on the covered lands. The Nature Conservancy would assist landowners in selecting appropriate Conservation Measures for each property. As more property owners enroll in the Programmatic CCAA, the benefits to the Covered Species would be expected to occur at a landscape scale.

4.3 THREATENED AND ENDANGERED SPECIES

"Take" of listed species under the ESA, including via significant habitat modification or degradation that results in the direct killing or injury of such species, is prohibited by the ESA without authorization. The ESA allows for such potential take authorization, under certain terms and conditions, if such take is incidental to, and is not the purpose of, carrying out an otherwise lawful activity.

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4.3.1 No Action Alternative

Under the No Action Alternative, current land uses would continue, and management of threatened and endangered species would be conducted through requirements of the ESA and other existing regulatory mechanisms. There would be no Enhancement of Survival permit authorizing incidental take on private lands. If any of the Covered Species were listed under the ESA, private landowners would have to apply for and obtain an individual Section 10 permit under the ESA, and file a Habitat Conservation Plan, in order to receive incidental take authorization. Where applicable, effects to candidate, proposed, and listed species on private lands would continue to be analyzed case by case, with limited opportunity to manage their conservation at a landscape scale.

4.3.2 Landowner Specific Alternative

Conservation Measures that would be developed under individual CCAAs would be specifically intended to benefit sage-grouse and/or declining grassland songbirds. As discussed in Section 3.3.3, none of the currently listed, proposed, or candidate species in Montana are sagebrush obligates. Only one of Montana's listed, proposed or candidate species (the endangered black-footed ferret) might be considered a grassland obligate, since it is dependent on black-tailed prairie dogs, which typically occur in grassland habitats. Additionally, the endangered whooping crane and interior least tern, and threatened red knot and piping plover, are at times associated with wetland habitats occurring within grassland habitats in eastern Montana. Therefore these species could indirectly benefit from the Landowner Specific Alternative, depending on the Conservation Measures attached to an individual CCAA.

Less landowner participation would be anticipated under the Landowner Specific Alternative than under the Proposed Action Alternative, due to the additional time and expense necessary to implement individual CCAAs without guidance from the Programmatic CCAA. Additionally, conservation would be less focused geographically than would occur under the Proposed Action Alternative. Consequently, the conservation benefits of this alternative to listed, proposed, or candidate species, including the Covered Species (should they be listed under the ESA) and other species that may benefit indirectly, would be intermediate between the No Action Alternative and the Proposed Action Alternative.

In comparison to the Proposed Action Alternative, incidental take coverage for Covered Species (should they be listed under the ESA) under the Landowner Specific Alternative would be specific to each individual CCAA and Enhancement of Survival Permit, while under the Proposed Action Alternative all enrolled landowners would receive incidental take coverage under the single permit issued to TNC.

4.3.3 Proposed Action Alternative

Conservation Measures described in the Programmatic CCAA, and those likely to be included in individual Certificates of Inclusion and site-specific land management plans under the Proposed Action Alternative, would be similar to the Conservation Measures potentially implemented under the Landowner Specific Alternative. Currently listed species that may benefit indirectly from implementation of this alternative would be similar to those described above under the Landowner Specific Alternative. Since more landowners would be expected to enroll under the Proposed Action

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Alternative, the beneficial effects to threatened and endangered species from implementing the Programmatic CCAA would be greater and potentially occur at a landscape scale.

Under the Proposed Action Alternative, all enrolled landowners would receive incidental take coverage for Covered Species (should they be listed under the ESA) under the Enhancement of Survival Permit issued to TNC, which would be more efficient and less costly for landowners and the Service than the process under either the No Action Alternative or the Landowner Specific Alternative.

4.4 WATER RESOURCES

4.4.1 No Action Alternative

As discussed in Section 3.4.1, the most common threats to beneficial water uses in Montana are excessive sediment, nutrients, or metals, all of which alter physical and chemical properties of a waterbody. Because Conservation Measures associated with a CCAA for sage-grouse and/or the four declining grassland songbirds would not be implemented, no beneficial effects to water resources would occur under the No Action Alternative. Current ranch management and agricultural practices would continue, and management of water resources would be at the discretion of individual landowners and through existing regulatory mechanisms.

4.4.2 Landowner Specific Alternative

Water resources would benefit from reduced erosion due to the following Conservation Measures likely to be included in individual CCAAs:

- Reducing habitat loss and fragmentation, particularly to wetlands and riparian areas;
- Developing livestock grazing management plans in wetlands and riparian areas to ensure stream channel stability, protect wetland and riparian vegetation, and to restore any drained wetlands or degraded streams and riparian areas;
- Minimizing the introduction or spread of invasive and/or noxious plant species in wetlands and riparian areas; and
- Developing stock water facilities as needed to reduce impacts to wetland and riparian areas, and installing and maintaining wildlife escape structures on new and existing troughs and tanks.

Because less landowner participation is expected than under the Proposed Action Alternative, the beneficial impacts of the Landowner Specific Alternative would be intermediate between the No Action Alternative and the Proposed Action Alternative.

4.4.3 Proposed Action Alternative

Conservation Measures described for the Programmatic CCAA, and those likely to be included in individual CCAAs under the Proposed Action Alternative, would be similar to the Conservation Measures potentially implemented under the Landowner Specific Alternative. However, more landowners would be expected to enroll under the Proposed Action Alternative, which would therefore increase the beneficial effects to water resources at a landscape scale.

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4.5 LAND USE AND OWNERSHIP

4.5.1 No Action Alternative

The No Action Alternative would continue the existing management scenario in the covered area. Under this alternative, none of the covered area would be enrolled in CCAAs for the Covered Species. Consequently, Conservation Measures associated with CCAAs would not be implemented on these lands. Private lands not enrolled in CCAAs would be subject to the threats to the Covered Species listed in Section 4.1.1, including habitat loss or fragmentation due to subdivision/exurban development. However, landscape scale changes in land ownership or in land use as a result of this alternative are not expected due to the rural nature and low human population of most of the covered area.

As described in Section 2.1, existing protections and habitat benefit programs for the Covered Species on some private lands would remain in effect under this alternative. Few of these protective mechanisms apply to ranching and agricultural activities on private lands, although voluntary, incentive based conservation in sage-grouse habitats on such private lands would continue. However the lack of regulatory assurances if sage-grouse or any of the four declining songbirds are listed under ESA, may be a disincentive to continue land uses that help maintain sagebrush and grassland habitats.

4.5.2 Landowner Specific Alternative

The Landowner Specific Alternative would not be expected to result in landscape scale changes in land ownership or land use because regulatory assurances conferred to enrollees in individual CCAAs would provide incentive to maintain ranching operations, and would lessen the likelihood of lands being converted, sold and/or subdivided for exurban development. Conservation Measures listed in Section 4.1.2, particularly the development of individual land management plans, would result in more efficient and effective ranching and agricultural activities. However, as discussed in Section 4.1.2, landowner participation in CCAAs would likely be less than under the Proposed Action Alternative.

4.5.3 Proposed Action Alternative

Conservation Measures described for the Programmatic CCAA, and those likely to be included in individual Certificates of Inclusion and site-specific management plans under the Proposed Action Alternative, would be similar to the Conservation Measures potentially implemented under the Landowner Specific Alternative. As discussed in Section 4.1.3, however, more landowners would be expected to enroll under the Proposed Action Alternative than the Landowner Specific Alternative. Therefore the Proposed Action Alternative would be expected to maintain the existing landscape scale patterns of land use and land ownership.

4.6 SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE

As discussed in Section 3.6, U.S. Executive Order 12898 directs Federal agencies to “make…achieving environmental justice part of its mission” and to identify and address “disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations.” In counties located within the covered area in 2014, the average percentage

of minorities was approximately 10.3 percent and the average percentage of people below the poverty level was approximately 14.5 percent (U.S. Census 2016).

4.6.1 No Action Alternative

Under the No Action Alternative, private landowners would not benefit from the regulatory assurances provided by a CCAA and may have to modify their land use practices to avoid and minimize the potential for take of the Covered Species or their habitats should the sage-grouse or any of the four declining grassland songbirds be listed under the ESA.

Private landowners could continue to enroll in other conservation programs described in Section 2.1 that would benefit sage-grouse and the four declining grassland songbirds. We do not anticipate that any low income or minority populations would be displaced or negatively affected by the No Action Alternative.

4.6.2 Landowner Specific Alternative

Landowners participating in individual CCAAs would benefit from regulatory certainty that would increase the security of their ranching operations. Short-term costs to landowners enrolling in individual CCAAs would be offset by long-term cost benefits. The Service and other agencies would provide technical assistance (which could provide a minor economic benefit) to aid landowners in implementing Conservation Measures including:

- Assistance in developing or revising grazing management or conservation plans;
- Assistance with monitoring;
- Completing individual CCAA enrollment documentation;
- Providing mediation, facilitation, or other dispute resolution processes; and
- Locating and applying for financial assistance for implementation of Conservation Measures.

Implementation of some Conservation Measures could involve a monetary investment for individual landowners, but participation in these Conservation Measures would be voluntary. It is presumed that the landowner would evaluate the costs and benefits associated with a Conservation Measure prior to undertaking the measure, and therefore any financial investment by the landowner would not be a burden. In addition, outside funding sources may be available to assist with implementation of some Conservation Measures.

Participation by private landowners in CCAAs and implementation of Conservation Measures as part of existing ranching activities (e.g., grazing practices, and invasive species control) on private lands would not be expected to cause adverse human health or other environmental effects. Therefore implementation of a CCAA for sage-grouse and/or the four declining grassland songbirds would not be anticipated to have adverse impacts to minority or low-income populations. However, less landowner participation is likely to occur than under the Proposed Action Alternative. Therefore impacts of the Landowner Specific Alternative would be intermediate between the No Action Alternative and the Proposed Action Alternative.

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4.6.3 Proposed Action Alternative

Conservation Measures described in the Programmatic CCAA, and those likely to be included in individual Certificates of Inclusion and site-specific management plans under the Proposed Action Alternative, would be similar to the Conservation Measures potentially implemented under the Landowner Specific Alternative. However, more landowners would be expected to enroll under the Proposed Action Alternative, which would result in long-term, minor socioeconomic benefits. Participation by private landowners in CCAAs and implementation of Conservation Measures as part of existing ranching activities on private lands would not be expected to cause adverse human health or other environmental effects. Therefore implementation of a Programmatic CCAA for sage-grouse and/or the four declining grassland songbirds would not be anticipated to have adverse impacts to minority or low-income populations.

4.7 CULTURAL AND HISTORIC RESOURCES

4.7.1 No Action Alternative

Under the No Action Alternative, Conservation Measures associated with the Landowner Specific Alternative or the Proposed Action Alternative would not be implemented, and there would be no changes to impacts to cultural and historic resources. There would be slightly less potential to identify as yet undiscovered historic properties and implement protections for them under this alternative in comparison to other alternatives because in the absence of a CCAA there would not be a federal action to trigger a National Historic Preservation Act compliance review.

4.7.2 Landowner Specific Alternative

As discussed in Section 3.7, as part of the CCAA application process the Service must determine if implementation of any Conservation Measure would directly or indirectly change the character or use of historic properties included in or eligible for inclusion in the National Register of Historic Places, and make a reasonable effort to identify undiscovered historic properties. The Service will be consulting with the State Historic Preservation Officer (SHPO), affected Tribes, and other interested parties concerning cultural and historic resources, and consider their comments during project planning for all activities that may cause ground disturbance or impact historic buildings or structures. Because of these established procedures and policies, impacts to cultural or historic properties as a result of this alternative would generally not be anticipated. However, if the Service determines that impacts might occur from additional measures in an application for an individual CCAA, steps would be taken to avoid or minimize those impacts.

As discussed in Section 2.2, fewer landowners would be expected to participate under the Landowner Specific Alternative than under the Proposed Action Alternative. Therefore, impacts of the Landowner Specific Alternative would be intermediate between the No Action Alternative and the Proposed Action Alternative.

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4.7.3 Proposed Action Alternative

As part of the CCAA application process, the Service must determine if implementation of any Conservation Measure would directly or indirectly change the character or use of historic properties included in or eligible for inclusion in the National Register of Historic Places, and make a reasonable effort to identify undiscovered historic properties. Conservation Measures described in the Programmatic CCAA, and those likely to be included in individual Certificates of Inclusion and site-specific management plans under the Proposed Action Alternative would be similar to the Conservation Measures potentially implemented under the Landowner Specific Alternative. Because more landowners would be expected to enroll under the Proposed Action Alternative, this alternative could potentially identify and/or affect more cultural and historic resources than the other alternatives. The Service will be consulting with the SHPO, affected Tribes, and other interested parties concerning cultural and historic resources, and consider their comments during project planning for all activities that may cause ground disturbance or impact historic buildings or structures. Because of these established procedures and policies, impacts to cultural or historic properties as a result of this alternative would generally not be anticipated. If the Service determines that impacts might occur, steps would be taken to avoid or minimize those impacts.

4.8 RECREATION

As discussed in Section 3.8, recreation on private lands is not a primary land use in most of the covered area. However, hunting sage-grouse and other wildlife, and other recreational activities such as off-road vehicle use, camping, fishing, and wildlife viewing may occur on private lands with landowner permission.

4.8.1 No Action Alternative

Under the No Action Alternative there would be no changes in recreational use of private lands associated with the implementation of CCAAs for the sage-grouse and/or the four declining grassland songbirds. Assuming that the human population in the covered area of Montana continues to increase over time, recreation use could increase, but this increase would likely occur primarily on public lands because recreation on private lands would continue to be through landowner permission only.

4.8.2 Landowner Specific Alternative

Under this alternative, individual CCAAs could include seasonal access restrictions to minimize negative impacts to sage-grouse and the four declining grassland songbirds during breeding/brood-rearing (i.e., early spring to summer). These restrictions may limit recreational opportunities (e.g. OHV use, camping) on private lands during these times. However, effects to recreational opportunities under this alternative would be expected to be minor because seasonal restrictions under the CCAAs would only pertain to private property, where access for recreational activities is already subject to private landowner permission.

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4.8.3 Proposed Action Alternative

The same effects to recreation would be expected to occur under the Proposed Action Alternative as the Landowner Specific Alternative, except that more properties would likely be enrolled under the Proposed Action Alternative. Effects to recreational opportunities under this alternative would likely increase under this alternative in comparison to the Landowner Specific Alternative. However, such impacts are still expected to be minor because seasonal restrictions under the Certificates of Inclusion would only pertain to private property, where access for recreational activities is already subject to private landowner permission.

5.0 CUMULATIVE EFFECTS

Cumulative impacts can result from individually minor, but collectively significant activities taking place over a period of time (40 CFR 1508.7). The Service must determine whether the impacts of the project alternatives, when taken together with other ongoing activities, would result in a significant environmental impact.

Past, present, and anticipated future activities that could negatively affect the Covered Species and their habitats in the covered area have been identified. Threats to the sage-grouse and its habitats are summarized in the Montana Sage-grouse Management Plan (Montana Sage-grouse Work Group 2005), the Conservation Objectives Team (COT) Final Report (USFWS 2013), and the Montana Greater Sage-grouse Conservation Strategy (MT EO 12-2015). Threats to the covered declining grassland songbirds and their habitats have been summarized in several documents for Sprague's pipit (Jones 2010, 75 FR 56028 56050, USFWS 2014), and in technical conservation assessments for Baird's sparrow (Wiggins 2006), chestnut-collared longspur (Sedgwick 2004a), and McCown's longspur (Sedgwick 2004b). Threats relevant to ranching and agricultural activities in Montana are detailed in the Programmatic CCAA, as summarized in section 4.0, and include:

- Habitat loss and fragmentation (e.g., agricultural conversion, sagebrush removal, exurban development);
- Livestock grazing inconsistent with the needs of the Covered Species;
- Increases in non-native, invasive plant species including noxious weeds;
- Haying/mowing and/or seed harvest;
- Range management structures;
- Conifer encroachment;
- Tree rows and windbreaks;
- Infrastructure such as wind towers, communication towers, power lines, or existing structures such as abandoned or unused buildings, power poles, and rock piles;
- Fences;
- Insecticide use;
- Roads;
- Recreation.

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As discussed in Section 2.1, there are several existing regulatory mechanisms and/or voluntary incentive-based conservation programs in the Covered Area that will continue regardless of alternative, including:

- Montana Executive Order 12-2015 and the related Montana Sage-Grouse Conservation Program, which address conservation and regulatory protection of sage-grouse;
- BLM Resource Management Plans (RMPs) and amendments, which provide regulatory mechanisms to address threats to sage-grouse and sage-grouse habitats. The HiLine District RMP also applies management protection to BLM-identified grassland bird priority areas;
- Montana Fish, Wildlife and Parks has collaborated with private landowners to enroll lands in conservation leases, which prohibit conversion of native vegetation used as habitat by the Covered Species;
- Various Farm Bill programs that fund restoration and protection efforts in sage-grouse habitats and reduce the risk of agricultural conversion of native grasslands; and
- A grassbank established by TNC that allows ranchers to graze at a discounted cost in exchange for committing to not convert native rangeland to cropland..

5.1 NO ACTION ALTERNATIVE

Under the No Action Alternative, the existing management scenario in the covered area would continue. Under this alternative, none of the covered area would be enrolled in CCAAs for the Covered Species; however, some lands may be enrolled in other conservation programs. Ongoing activities and disturbances within the covered area such as livestock grazing inconsistent with the needs of the Covered Species, agricultural conversion, and non-native, invasive plant species, would continue to have adverse impacts on these same resources on private lands through increased loss, deterioration, and fragmentation of sagebrush and grassland habitats. Ongoing effects attributed to ranching and agricultural activities on private lands that are associated with surface disturbance and development activities in the covered area would continue to contribute to existing, ongoing, and future cumulative effects to the Covered Species, as discussed above. Some of these activities would continue to be subject to existing regulatory mechanisms where applicable, or potential voluntary conservation programs, where elected.

5.2 LANDOWNER SPECIFIC ALTERNATIVE

The Landowner Specific Alternative and the Proposed Action Alternative would both decrease the contributions of ongoing cumulative threats and associated effects in the covered area compared with existing baseline conditions and practices that would continue under the No Action Alternative. However, the magnitude of cumulative threats and the reduction of associated effects under the Landowner Specific Alternative is expected to be less than the amelioration that would occur under the Proposed Action Alternative, because more lands would likely be enrolled and enrollment would be prioritized according to a statewide targeted grassland and sagebrush habitat conservation strategy for the Covered Species under the Proposed Action Alternative.

The Landowner Specific Alternative would not approve or implement the Programmatic CCAA, but would provide for individual CCAAs and associated Section 10(a)(1)(A) permits. Conservation benefits

would be similar to many of those discussed under the Proposed Action Alternative below, although they would occur at a smaller scale. As discussed in Section 4 of this EA, the environmental consequences to any resources potentially affected by the Proposed Action Alternative or the Landowner Specific Alternative would generally be beneficial or neutral; negative effects would be minor. Although threat and adverse effect reduction would be greatest under the Proposed Action Alternative, both action alternatives would reduce the magnitude of threats and associated adverse effects related to ranching and agricultural activities in the covered area in comparison to current conditions. Therefore, substantive adverse cumulative effects from incremental impacts of the Landowner Specific Alternative, when added to other past, present, or reasonably foreseeable future activities in the covered area, are generally not anticipated.

5.3 PROPOSED ACTION ALTERNATIVE

The Proposed Action Alternative and the Landowner Specific Alternative would both decrease the contributions of ongoing cumulative threats and associated effects in the covered area compared with existing baseline conditions and practices that would continue under the No Action Alternative. However, the magnitude of cumulative threats and the reduction of associated effects under the Proposed Action Alternative is expected to be greater than the amelioration that would occur under the Landowner Specific Alternative, because more lands would likely be enrolled and enrollment would be prioritized according to a statewide targeted grassland and sagebrush habitat conservation strategy for the Covered Species under the Proposed Action Alternative.

The Proposed Action Alternative is the approval and implementation of the Programmatic CCAA, which would streamline the process for landowners to voluntarily implement specific Conservation Measures and be issued a Certificate of Inclusion to be covered under the Section 10(a)(1)(A) permit issued to TNC.

Conservation benefits of the Proposed Action related to ranching and agricultural activities are expected to benefit the Covered Species through maintenance, enhancement, and restoration of their habitats, and reductions of threats related to habitat fragmentation, direct mortality, and disturbance. The expected conservation benefits include:

- Reduced likelihood that lands will be subdivided, developed, or converted by providing regulatory assurances to property owners who enroll in the Programmatic CCAA that incentivizes continuation of ranching and agricultural operations on enrolled properties;
- Conservation Measures that attempt to avoid or minimize direct physical threats to the Covered Species;
- Conservation Measures that address threats to habitats for the Covered Species such as reducing impacts associated with livestock grazing systems that are inconsistent with the needs of the Covered Species; removing fencing and other range management structures; improving habitat conditions for grassland birds in tame grass pastures; reducing expansion of conifers into sagebrush habitats; removing tree plantings that reduce habitat quantity and quality for the Covered Species; controlling non-native, invasive plant species; prohibiting construction of new infrastructure such as wind or communication towers, removing abandoned infrastructure, and employing avoidance and minimization practices to reduce the impacts of power lines on the Covered Species; limiting use of insecticides in sensitive areas; minimizing the impacts of roads

in otherwise suitable habitats; and minimizing the impacts of recreational activities on the Covered Species.

The Proposed Action Alternative would be larger in scale, less costly, and more efficient than the Landowner Specific Alternative. As discussed in Section 4 of this EA, the environmental consequences to any resources potentially affected by the Proposed Action Alternative or the Landowner Specific Alternative would generally be beneficial or neutral; negative effects would be minor. Although threat and adverse effect reduction would be greatest under the Proposed Action Alternative, both action alternatives would reduce the magnitude of threats and associated adverse effects related to ranching and agricultural activities in the covered area in comparison to current conditions. Therefore, substantive adverse cumulative effects from incremental impacts of the Proposed Action Alternative, when added to other past, present, or reasonably foreseeable future activities in the covered area, are generally not anticipated.

5.4 CLIMATE CHANGE

This analysis of cumulative effects includes consideration of ongoing and projected changes in climate. The terms “climate” and “climate change” are defined by the Intergovernmental Panel on Climate Change (IPCC). “Climate” refers to the mean and variability of different types of weather conditions over time, with 30 years being a typical period for such measurements, although shorter or longer periods also may be used (IPCC 2007). The term “climate change” refers to a change in the mean or variability of one or more measures of climate, such as temperature or precipitation, that persists for an extended period, typically decades or longer, whether due to natural variability, human activity, or both (IPCC 2007). Various types of changes in climate can have direct or indirect effects on species. These effects may be positive, neutral, or negative, and they may change over time, depending on the species and other relevant considerations, such as the effects of interactions of climate with other variables (IPCC 2007). Some of the threats to sage-grouse and the four declining grassland songbirds identified in the Programmatic CCAA (e.g., invasive plants species, livestock management inconsistent with the needs of the Covered Species, and loss of riparian habitat) may be exacerbated by climate change. The Conservation Measures that may be implemented under the Landowner Specific and Proposed Action alternatives to address these potential threats would be anticipated to ameliorate these adverse effects, and none of the alternatives identified in this EA are anticipated to influence the effects of climate change within the covered area.

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