SPECIES: Scientific [common]	*Canis lupus* [Gray Wolf]
Forest:	Bridger-Teton National Forest
Forest Reviewer:	Randall Griebel, James Wilder
Date of Review:	08/22/2018; reviewed 4/24/2025
Forest concurrence (or recommendation if new) for inclusion of species on list of potential SCC: (Enter Yes or No)	NO

FOREST REVIEW RESULTS:

1. The Forest concurs or recommends the species for inclusion on the list of potential SCC:
   Yes____ No_X___

2. Rationale for not concurring is based on (check all that apply):
   Species is not native to the plan area _____
   Species is not known to occur in the plan area _____
   Species persistence in the plan area is not of substantial concern ___X____

FOREST REVIEW INFORMATION:

1. Is the Species Native to the Plan Area? Yes_X__ No___

   If no, provide explanation and stop assessment.

2. Is the Species Known to Occur within the Planning Area? Yes_X__ No___

   If no, stop assessment.

Table 1. All Known Occurrences, Years, and Frequency within the Planning Area

Year Observed	Number of Individuals	Location of Observations	Source of Information
1996-2015	233	Blackrock Ranger District	Wyoming Natural Diversity Database (July 2018)
2000-2015	529	Jackson Ranger District	
2004-2015	48	Grays River Ranger District	
1986, 2002-2013	1, 18	Kemmerer ranger District	
2002-2015	158	Big Piney Ranger District	
2003-2015	343	Pinedale Ranger District	

   a. Are all Species Occurrences Only Accidental or Transient?

      Yes___ No__X_

      If yes, document source for determination and stop assessment.

b. For species with known occurrences on the Forest since 1990, based on the number of observations and/or year of last observation, can the species be presumed to be established or becoming established in the plan area?

Yes__X_ No___

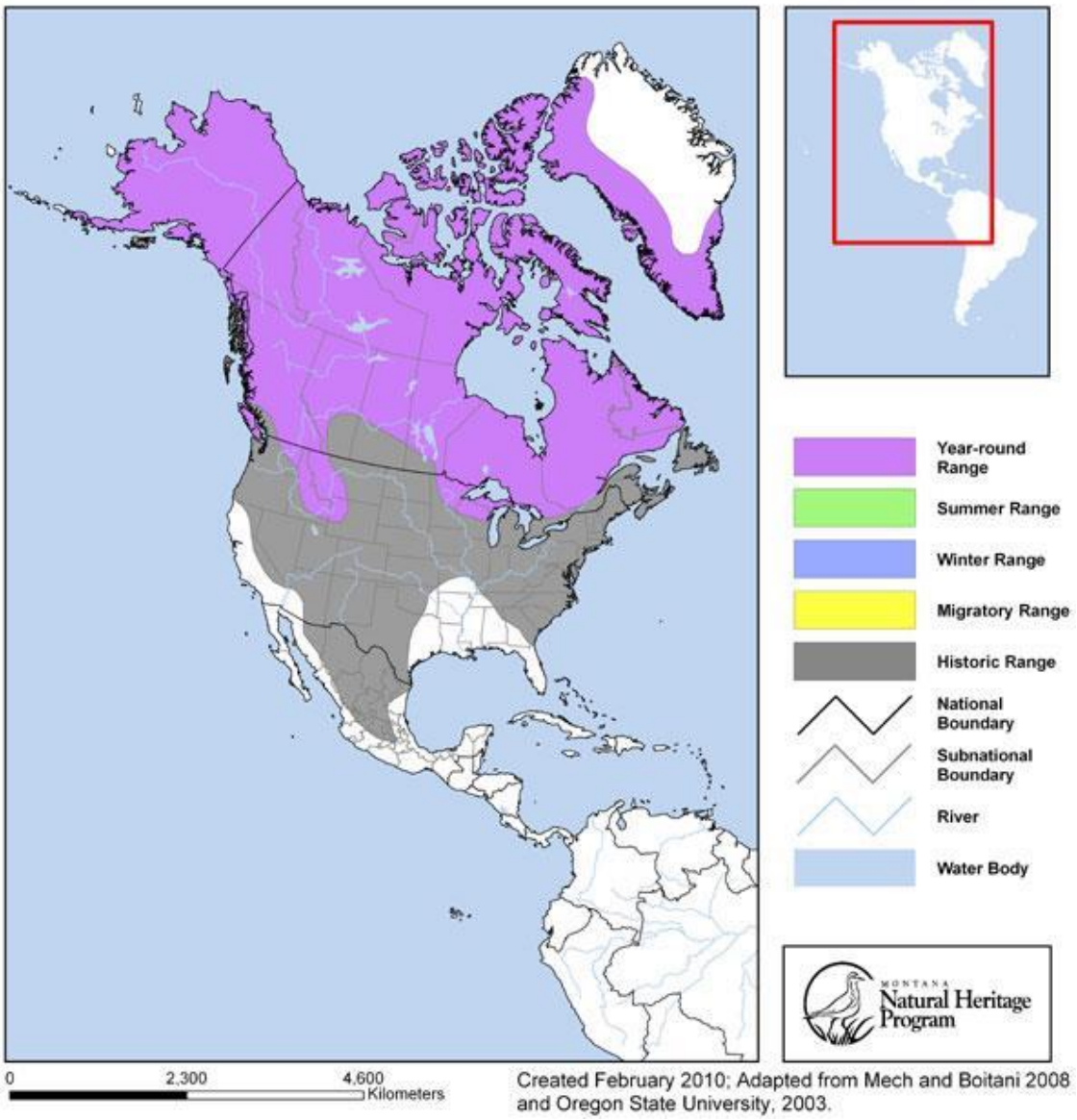
If no, provide explanation and stop assessment.

c. For species with known occurrences on the Forest predating 1990, does the weight of evidence suggest the species still occurs in the plan area?

Yes__X_ No___

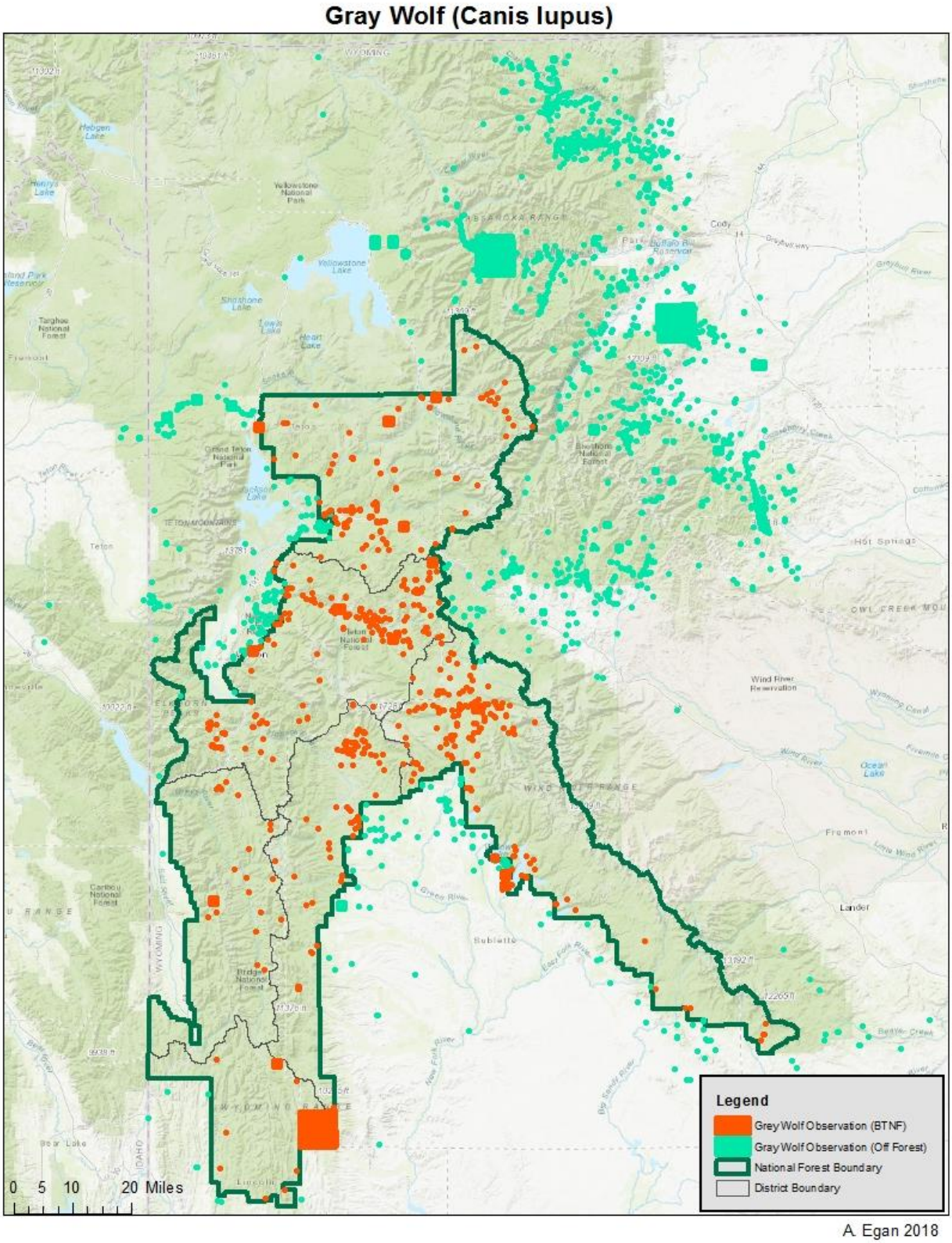
If no, provide explanation and stop assessment.

d. **Map 1**, Gray wolf range map of North America.

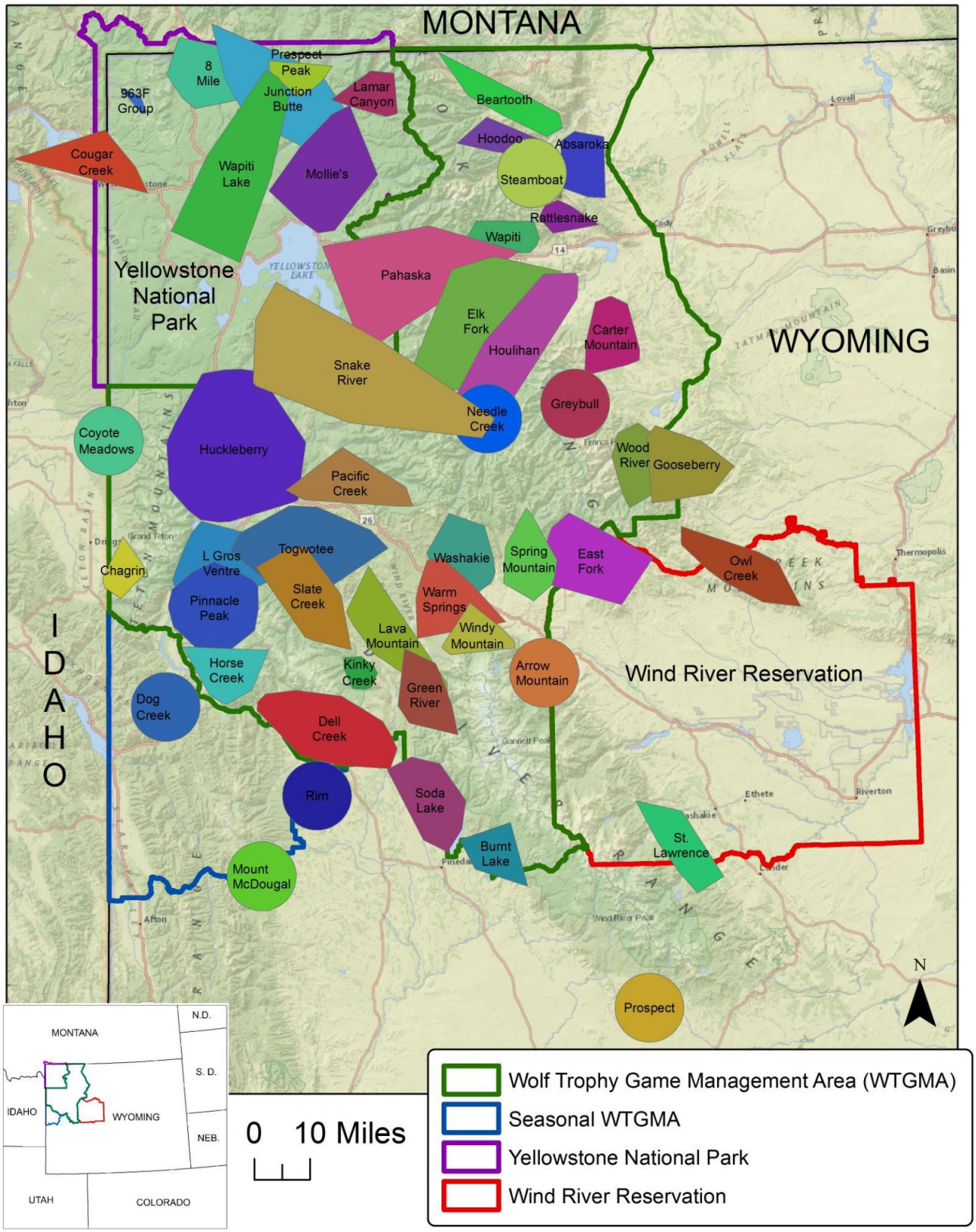


Gray Wolf (*Canis lupus*). Montana Field Guide. Montana Natural Heritage Program and Montana Fish, Wildlife and Parks. Retrieved on August 9, 2018, from http://FieldGuide.mt.gov/speciesDetail.aspx?elcode=AMAJA01030

e. **Map 2**, Map of Gray wolf occurrences on the Bridger-Teton National Forest (Wyoming Natural Diversity Database [January 2018]).

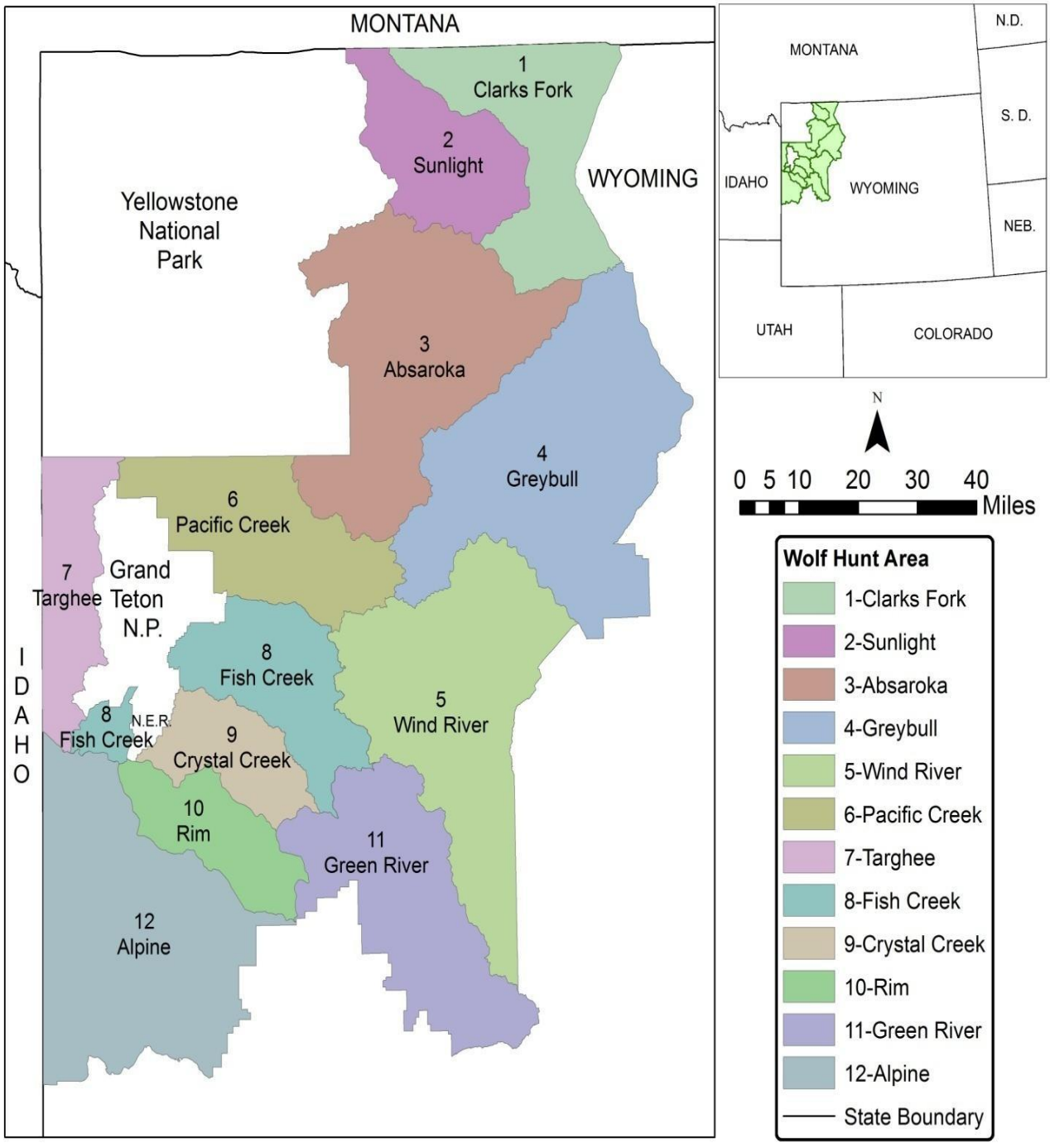


f. **Map 3**, Home ranges of confirmed wolf packs in Wyoming in 2017.



Wyoming Game and Fish Department, U.S. Fish and Wildlife Service, National Park Service, USDA-APHIS-Wildlife Services, and Eastern Shoshone and Northern Arapahoe Tribal Fish and Game Department. 2018. Wyoming Gray Wolf Monitoring and Management 2017 Annual Report. K.J. Mills and Z. Gregory, eds. Wyoming Game and Fish Department, 5400 Bishop Blvd. Cheyenne, WY 82006.

g. **Map 4**, Wolf hunt areas for the 2017 wolf hunting seasons in the Wolf Trophy Game Management Area (WTGMA) (hunt areas 1-11) and Seasonal WTMGA (hunt area 12) in northwest Wyoming.



Wyoming Game and Fish Department, U.S. Fish and Wildlife Service, National Park Service, USDA-APHIS-Wildlife Services, and Eastern Shoshone and Northern Arapahoe Tribal Fish and Game Department. 2018. Wyoming Gray Wolf Monitoring and Management 2017 Annual Report. K.J. Mills and Z. Gregory, eds. Wyoming Game and Fish Department, 5400 Bishop Blvd. Cheyenne, WY 82006.

3. Is There Substantial Concern for the Species' Capability to persist Over the Long-term in the Plan Area Based on Best Available Scientific Information?

Table 2. Status summary based on existing conservation assessments

Entity	Status/Rank (include definition if Other)
NatureServe Global Status	**G5— Secure** *Common; widespread and abundant.*
NatureServe State Status	**S1— Critically Imperiled** *At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors.*
WGFD	**No Special Status**
WYNDD	**Species of Concern** *Species vulnerable to extirpation at the global or state level due to:* *a. their rarity (e.g., restricted distribution, small population size, low population density)* *b. inherent vulnerability (e.g., specialized habitat requirements, restrictive life history)* *c. threats (e.g., significant loss of habitat, sensitivity to disturbances)* (Wyoming Natural Diversity Database - Species of Concern)
USDA Forest Service	**No Special Status**
UDI FWS	**No Special Status; Delisted** *Delisted from Endangered or Threatened status*
WY BLM	**No Special Status**
IUCN	**NE – Least Concern** *A taxon is Least Concern when it has been evaluated against the criteria and does not qualify for Critically Endangered, Endangered, Vulnerable or Near Threatened. Widespread and abundant taxa are included in this category.* (IUCN – Red List Categories and Criteria)

Table 3. Status summary based on best available scientific information.

Species (Scientific and Common Name): ***Canis lupus*** **[Gray Wolf]**	
Criteria	**Rationale**
Distribution on Bridger-Teton National Forest	Formerly found throughout North America and south through much of Mexico, the Gray wolf is now found only in a few areas in the Rocky Mountains (including reintroduction sites in Wyoming and Idaho), areas of the northwestern Great Lakes region, and Cascade Mountains of northern Washington (Map 1) (NatureServe 2018). Wolves historically occupied the Yellowstone area, although in low densities in the 1800's. By the mid 80's, wolves had been recorded in areas outside the immediate Yellowstone area, including the Bridger-Teton and Shoshone National Forests. Following wolf reintroduction efforts in the Yellowstone area in the mid-90's, wolf distribution has increased steadily throughout its current range. Currently, wolves are well distributed throughout the BTNF and Yellowstone area, and have been documented on all six ranger districts on the Forest (Map 2, Table 1). As of 2017, multiple wolf packs overlap the BTNF, with populations widely distributed (Map 3). Parts of the Wind River Mountain range and southern Grays River and Kemmerer Ranger Districts on the BTNF have a noticeably lower distribution of wolves, likely due to a decrease in available big-game food source.
Abundance on the Bridger-Teton National Forest	The wolf was subjected to early exploitation in the 1870's and later control (1914-1926), which was triggered by a population increase in the Yellowstone area in 1912 (USFWS 1987). By the 1970's it was thought that approximately 10 wolves where present in the Yellowstone area. However, sustained pack activity had not yet been documented in the Yellowstone area and vicinity (USFWS 1987). Following successful wolf reintroductions in the 90's within the Yellowstone area, the amount of breeding pairs and number of wolf packs has increased. The abundance of wolves in the Yellowstone area, including on the BTNF, has increased considerably.
Population Trend on the Bridger-Teton National Forest	In response to listing of the gray wolf under the Endangered Species Act (ESA) in 1973, the Northern Rocky Mountain Wolf Recovery Plan was developed in 1987, outlining the species steps toward recovery. Substantial declines in wolf populations was occurring due to wolf control efforts in response to livestock and big-game depredation (USFWS 1987). The primary goal for the plan was to remove the Gray wolf from the endangered species list by maintaining a minimum of 10 breeding pairs in each of the three recovery areas for three consecutive years. The Greater Yellowstone Area, including the Bridger-Teton National Forest, was one of the three recovery areas identified. At that time (1987), Wyoming had classified the wolf as a "predator". However, protection under the ESA outweighed states laws (USFWS 1987). In 1995, wolf reintroductions (41 individuals), as a nonessential experimental population due to the geographic isolation of the area, were initiated in the Yellowstone ecosystem (WGFD 2018; USFWS 1987; NatureServe 2018). Under this "experimental" designation, these individuals could be treated as threatened rather than endangered in regards to

Species (Scientific and Common Name): ***Canis lupus* [Gray Wolf]**	
Criteria	**Rationale**
	specific take regulations. The population reached the required delisting criteria by late 2002, and has exceeded the recovery criteria every year since (WGFD 2018). At the end of 2017, the gray wolf population in Wyoming remained above minimum delisting criteria; making 2017 the 16th consecutive year Wyoming has exceeded the numerical, distributional, and temporal delisting criteria established by U.S. Fish and Wildlife Service (WGFD 2018). A final rule published in the Federal Register on May 1, 2017 amends the list by removing Gray wolves in Wyoming, returning the management of wolves that reside outside the national parks, the Wind River Reservation, and the National Elk Refuge, back to the state (WGFD 2018; NatureServe 2018). Over the short term, the Northern Rocky Mountain population increased steadily from 1979 to 2004 (USFWS 2006 *in* Nature Serve 2018). Wolf recovery in the Greater Yellowstone Ecosystem and in central Idaho has progressed faster than predicted (Bangs et al. 1998 *in* Nature Serve 2018). Following the delisting of the Gray wolf in 2017, the Wyoming Game and Fish Department instituted a wolf hunting season as a management tool with the biological objective to reduce the wolf population by approximately 24% in the Wolf Trophy Game Management Area (Map 4), consisting of 12 hunt areas (WGFD 2018). Outside the designated wolf management area, wolves continue to be harvested legally where they are designated as a predatory animal. By 2017, there were more than 238 individuals, 40 packs, and 20 breeding pairs in areas outside the Yellowstone ecosystem, including parts of the BTNF (WGFD 2018).The end of year wolf population for Wyoming decreased 16% from 2016 to 2017 and remained above the minimum delisting criterion of at least 100 wolves (WGFD 2018). While the number of wolf packs decreased slightly from 2016 to 2017, the number of breeding pairs increased.
Habitat Trend on the Bridger-Teton National Forest	Wolves utilize a wide-range of habitats, including alpine, desert, conifer and mixed forest, grassland/herbaceous vegetation, shrublands, and woodland (NatureServe 2018). The species appears to have no particular habitat preference. Although, a minimum of 10,000-13,000 sq. km (with low road density) is likely necessary to support a viable population (USFWS 1990 *in* NatureServe 2018). Common habitat characteristics include the presence of abundant big-game prey, suitable rendezvous and denning habitat, and minimal conflict with humans (USFWS 1987). Offspring are born in an underground burrow that has been abandoned by another mammal or created by the wolves; their diet consists of 90% ungulate species. The amount of wolf habitat on the BTNF is currently stable, particularity due to the wide-range in habitat utilized by wolves. While some management activities may reduce the quality and/or quantity of forest, grassland, or shrubland habitat on the Forest, the extent to which Forest activities would impact wolf habitat or populations is negligible. The

Species (Scientific and Common Name): ***Canis lupus* [Gray Wolf]**	
Criteria	**Rationale**
	BTNF will continue to support big-game populations for wolves and human disturbance from road development and recreational activities is not anticipated.
Threats to the Species and its Habitat on the Bridger-Teton National Forest	<u>Human Caused Mortality</u> Human induced mortality is a key component in wolf survival and 89% of wolf mortality in Wyoming is human caused (WGFD 2018; USFWS 1987). Causes of wolf mortality in 2017 included 61 from control, 44 from trophy game hunting (including 1 illegal harvest), 33 as public take of predatory animals, and 11 from other human causes. Very few wolf mortality cases where documented as natural or unknown. Wolves may be harvested as a trophy game species in Wyoming. In 2017, 24% of the wolf population, divided among 12 hunt areas, was eligible for hunting during the open season. Outside the Wolf Trophy Game Management area, the gray wolf is considered a predatory species and can be legally harvested with no management restrictions. <u>Disease</u> Sarcoptic mange is a highly contagious skin disease caused by mites (*Sarcoptes scabiei*) and is commonly found in wolf populations throughout the world (WGFD 2018). Mange was first detected in Wyoming in 2002, although it continues to be an uncommon occurrence in the state with no cases documented in 2017. Two wolves captured in February 2018 from separate packs in the Jackson area showed signs of mange, although not confirmed (WGFD 2018). The Wyoming Game and Fish Department continues to monitor wolves that die or are captured. Canine distemper virus (distemper) and canine parvovirus (parvovirus) are highly contagious diseases that infect domestic dogs, coyotes, foxes, raccoons, skunks, and wolves (WGFD 2018). Wolf mortality caused by distemper or parvovirus during 2017 has not been documented. However, 6 of 30 (20%) wolves tested in 2017 for distemper tested positive for exposure to the virus. Parvovirus exposure has not been tested for but is expected to occur at a high rate among wolves in Wyoming (>80% of wolves exposed) based on historic prevalence rates (WGFD 2018). Monitoring for parvovirus and distemper will continue during wolf capture operations and mortality causes are documented.
Summary and recommendations: The gray wolf is widely distributed throughout the Bridger-Teton National Forest, with the number of wolf packs increasing throughout the Yellowstone area. Following their reintroduction in the mid 90's, wolf populations (including breeding pairs), have been steadily increasing throughout the Yellowstone area and vicinity. This required the need for wolf population control and management by the state, and thereby, reinstituting a harvest season for the species. The intentional take and harvest of wolves is reflected in the short-term annual decrease in wolf populations, aside from the long-term increase. Wolf habitat, consisting of a wide range in vegetation communities with little habitat	

Species (Scientific and Common Name): ***Canis lupus*** **[Gray Wolf]**	
Criteria	**Rationale**
constraints, is stable on the BTNF, and big-game (the main food source for wolves) remains in abundance across the Forest. Human-caused mortality, the leading cause for wolf deaths in Wyoming, is infrequently influenced by activities associated with the BTNF and management of wolf populations is in the jurisdiction of the state. With the above factors considered, the viability of wolf populations on the Bridger-Teton National forest is not a concern at this time. Therefore, the gray wolf is not recommended as a Species of Conservation Concern for the Bridger-Teton National Forest. Evaluator(s): Ashley Egan, Randall Griebel Date: August 14, 2018	

Literature Citations

NatureServe. 2018. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available http://explorer.natureserve.org. (Accessed: August 13, 2018).

U.S. Fish and Wildlife Service. 1987. Northern Rocky Mountain Wolf Recovery Plan. U.S. Fish and Wildlife Service, Denver, Colorado. 119pp.

Wyoming Game and Fish Department, U.S. Fish and Wildlife Service, National Park Service, USDA-APHIS-Wildlife Services, and Eastern Shoshone and Northern Arapahoe Tribal Fish and Game Department. 2018. Wyoming Gray Wolf Monitoring and Management 2017 Annual Report. K.J. Mills and Z. Gregory, eds. Wyoming Game and Fish Department, 5400 Bishop Blvd. Cheyenne, WY 82006.