REGION 2 SENSITIVE SPECIES EVALUATION FORM

Species: (Scientific Name/Common Name/National Code for Plants – USDA PLANTS) ***Urocyon cinereoargenteus*/ Common Gray Fox**
Subspecies in R2- U. c. ocythous Bangs (KS, NE, SD) and U. c. scottii Mearns (CO, WY)
Synonyms- *Canis cinereoargenteus, Vulpes cinereoargenteus*

Criteria	Rank	Rationale	Literature Citations
1 Distribution within R2	B	This species is ranked as apparently secure in CO and NE, demonstrably secure in SD, rare/local in KS, and imperiled in WY. This species is widely distributed along the foothills of the eastern slope and at lower elevations on the western slope in CO. It is not common at higher elevations in the mountains. It is becoming more common in WY especially in the eastern part of the state. It is mainly observed in eastern parts of SD, NE, and KS. Confidence in Rank High or Medium or Low	B. Luce, A. Cerovski, B. Oakleaf, J. Priday, and L. Van Fleet. 1999. Atlas of birds, Mammals, Reptiles and Amphibians in Wyoming. Wyoming Game and Fish Department, Lander, WY, USA. NatureServe: An online encyclopedia of life [web application]. 2001. Version 1.4. Arlington, Virginia, USA: Association for Biodiversity Information. Available: http://www.natureserve.org/.

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2 Distribution outside R2	C	This species is widely distributed in North America and its range is described as Nearctic and Neotropical. The grey fox occurs throughout most of the southern half of North America from southern Canada to northern Venezuela and Colombia. It does not occur in portions of the mountainous northwestern United States, the Great Plains and eastern Central America. Gray fox range has expanded in the last 50 years to areas formerly unoccupied and areas where gray fox had been extirpated including New England, Michigan, Minnesota, Iowa, Ontario, Manitoba, North Dakota, South Dakota, Nebraska, Kansas, Wyoming, Oklahoma, and Utah. It is ranked as secure globally and nationally. Confidence in Rank High or Medium or Low	Bernard, Stephen R.; Brown, Kenneth F. 1977. Distribution of mammals, reptiles, and amphibians by BLM physiographic regions and A.W. Kuchler's associations for the eleven western states. Tech. Note 301. Denver, CO: U.S. Department of the Interior, Bureau of Land Management. 169 p. Sullivan, Janet. 1996. Urocyon cinereoargenteus. In: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (2001, February). Fire Effects Information System, [Online]. Available: http://www.fs.fed.us/database/feis/ NatureServe: An online encyclopedia of life [web application]. 2001. Version 1.4. Arlington, Virginia, USA: Association for Biodiversity Information. Available: http://www.natureserve.org/.

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3 Dispersal Capability	C	This species is highly mobile and is found in a diversity of habitat types suggesting that they are highly adaptable and capable of dispersing across landscapes with few habitat related limitations. Confidence in Rank High or Medium or Low	Trapp, Gene R.; Hallberg, Donald L. 1975. Ecology of the gray fox (Urocyon cinereoargenteus): a review. In: Fox, M. W., ed. The wild canids: Their systematics, behavioral ecology and evolution. Behavioral Science Series. New York: Van Nostrand Reinhold Company: 164-178. Fritzell, Erik K.; Haroldson, Kurt J. 1982. Urocyon conereoargenteus. Mammalian Species. 189: 1-8. Fritzell, E. K. 1987. Gray fox and island fox. In: Novak, M.; Baker, J. A.; Obbard, M. E.; Malloch, B., eds. Wild furbearer management and conservation in North America. North Bay, ON: Ontario Trappers Association: 408-420. Sheldon, Jennifer W. 1992. Wild dogs: The natural history of the nondomestic Canidae. San Diego, CA: Academic Press, Inc. 248 p.

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4 Abundance in R2	C	This species is common in R2 and the current population is probably large enough that declines from demographic stochasticity or environmental variation are unlikely. There is very little data that indicates changes in abundance, but the recent expansion of range in R2 indicates there becoming increasingly common. Further research should investigate changes in this species abundance relative to other fox species as its range expands. Confidence in Rank High or Medium or Low	Bernard, Stephen R.; Brown, Kenneth F. 1977. Distribution of mammals, reptiles, and amphibians by BLM physiographic regions and A.W. Kuchler's associations for the eleven western states. Tech. Note 301. Denver, CO: U.S. Department of the Interior, Bureau of Land Management. 169 p. Sullivan, Janet. 1996. Urocyon cinereoargenteus. In: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (2001, February). Fire Effects Information System, [Online]. Available: http://www.fs.fed.us/database/feis/
5 Population Trend in R2	D	The recent range expansion of this species in R2 suggests that their population is increasing however there is no good data to support this interpretation in R2 at this time. Future research should attempt to monitor population trends especially in areas where their range is expanding. Confidence in Rank High or Medium or Low	Bernard, Stephen R.; Brown, Kenneth F. 1977. Distribution of mammals, reptiles, and amphibians by BLM physiographic regions and A.W. Kuchler's associations for the eleven western states. Tech. Note 301. Denver, CO: U.S. Department of the Interior, Bureau of Land Management. 169 p. Sullivan, Janet. 1996. Urocyon cinereoargenteus. In: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (2001, February). Fire Effects Information System, [Online]. Available: http://www.fs.fed.us/database/feis/

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Criteria	Rank	Rationale	Literature Citations
6 Habitat Trend in R2	B	There is an apparently stable amount of suitable habitat for this species in R2 and there is some evidence that there may be increasing amounts of suitable habitat for this species. It has steadily expanded its range to occupy new areas over the past 50 years, perhaps due to reduced trapping for the fur market, reduced competition from other conspecifics, or anthropogenic habitat changes favorable for this species requirements. Confidence in Rank High or Medium or Low	Sullivan, Janet. 1996. Urocyon cinereoargenteus. In: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (2001, February). Fire Effects Information System, [Online]. Available: http://www.fs.fed.us/database/feis/ B. Luce, A. Cerovski, B. Oakleaf, J. Priday, and L. Van Fleet. 1999. Atlas of birds, Mammals, Reptiles and Amphibians in Wyoming. Wyoming Game and Fish Department, Lander, WY, USA.

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7 Habitat Vulnerability or Modification	C	Gray foxes occur in a wide variety of forest types; they prefer woodlands and woodland-brush ecotones over open habitat. They commonly occur in eastern and southwestern deciduous forests, but are also found in mixed and coniferous forests of the northeastern and western states. In the western states gray fox habitats include rocky hillsides, mountainsides, and washes. Gray foxes tend to escape their enemies by finding cover rather than depending on speed (as do red foxes). Dense vegetation is important as diurnal resting and escape cover. They often also climb trees for use as resting and escape cover. This species is apparently adaptable to a wide variety of disturbed and pristine habitats so their habitat needs are commonly met in R2. Confidence in Rank High or Medium or Low	Fritzell, E. K. 1987. Gray fox and island fox. In: Novak, M.; Baker, J. A.; Obbard, M. E.; Malloch, B., eds. Wild furbearer management and conservation in North America. North Bay, ON: Ontario Trappers Association: 408-420. Sheldon, Jennifer W. 1992. Wild dogs: The natural history of the nondomestic Canidae. San Diego, CA: Academic Press, Inc. 248 p. Sullivan, Janet. 1996. Urocyon cinereoargenteus. In: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (2001, February). Fire Effects Information System, [Online]. Available: http://www.fs.fed.us/database/feis/

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Criteria	Rank	Rationale	Literature Citations
8 Life History and Demographics	C	There is some evidence that competition from other fox species e.g. red fox and swift fox may limit this species distribution in areas outside its primary range. Adult gray foxes have few predators, but are occasionally taken by golden eagle, coyote, and bobcat; bobcat, great horned owl, and possibly large hawks take pups. Canine distemper and rabies are some of the diseases that may affect this species. There is typically only one litter born each year and litter sizes range from 2-6. Most females breed during their first season. Mortality is characteristically very high among pups and annual mortality rates have been observed as great as 90% during their first winter. Some researchers have referred to this species as annuals, due to their high productivity and short lifespan. Confidence in Rank <u>High</u> or Medium or Low	Trapp, Gene R.; Hallberg, Donald L. 1975. Ecology of the gray fox (Urocyon cinereoargenteus): a review. In: Fox, M. W., ed. The wild canids: Their systematics, behavioral ecology and evolution. Behavioral Science Series. New York: Van Nostrand Reinhold Company: 164-178. Fritzell, Erik K.; Haroldson, Kurt J. 1982. Urocyon conereoargenteus. Mammalian Species. 189: 1-8. Fritzell, E. K. 1987. Gray fox and island fox. In: Novak, M.; Baker, J. A.; Obbard, M. E.; Malloch, B., eds. Wild furbearer management and conservation in North America. North Bay, ON: Ontario Trappers Association: 408-420. Sullivan, Janet. 1996. Urocyon cinereoargenteus. In: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (2001, February). Fire Effects Information System, [Online]. Available: http://www.fs.fed.us/database/feis/

Evaluator(s): Stan Anderson and Matt McGee	Date: 7-12-01

ATTACHMENT SS2

National Forests in the Rocky Mountain Region where species is KNOWN (K) or LIKELY (L)[1] to occur:

Colorado NF/NG	**Known**	**Likely**	**Kansas NF/NG**	**Known**	**Likely**	**Nebraska NF/NG**	**Known**	**Likely**	**South Dakota NF/NG**	**Known**	**Likely**	**Wyoming NF/NG**	**Known**	**Likely**
Arapaho-Roosevelt NF		*	Cimmaron NG		*	Samuel R.McKelvie NF			Black Hills NF	*		Shoshone NF		
White River NF		*				Halsey NF		*	Buffalo Gap NG		*	Bighorn NF	*	
Routt NF		*				Nebraska NF			Ft. Pierre NG		*	Black Hills NF	*	
Grand Mesa, Uncompahgre, Gunnison NF	*					Ogalala NG		*				Medicine Bow NF	*	
San Juan NF	*											Thunder Basin NG	*	
Rio Grande NF	*													
Pike-San Isabel NF														
Comanche NG	*													
Pawnee NG		*												

[1] Likely is defined as more likely to occur than not occur on the National Forest or Grassland. This generally can be thought of as having a 50% chance or greater of appearing on NFS lands.