
Appendix 4

Lek Status Definition Comparison

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Appendix 4. Lek Status Definition Comparison

Leks are traditional breeding display areas where male GRSG gather to attract and breed females (Connelly et al., 2011). Counts of males on leks are the primary method to monitor sage-grouse populations. Lek counts aid in estimating trend and potentially size of breeding populations and determine location of breeding habitats, informing conservation actions (Cook et al., 2022). Previous lek count guidelines (i.e., Autenrieth et al., 1982, updated by Connelly et al., 2003) have been adjusted by each state across the species' range, resulting in inconsistencies and unintentional biases that create challenges when calculating population trends across state lines (Cook et al., 2022). Given the importance of lek definitions and counts in guiding GRSG management across its range, the Western Association of Fish and Wildlife Agencies (WAFWA) has drafted new guidelines that provide consistent population trend analyses across political boundaries and management applications (Cook et al., 2022). Under all alternatives, including the Proposed RMP Amendment, the BLM is proposing to adopt the lek definitions developed by WAFWA to ensure consistency across the RMPs and with our State wildlife agency partners.

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Lek Definition Comparison – Nevada/California, Utah, Idaho, Oregon, Colorado, Wyoming, North Dakota, and South Dakota

Term	WAFWA Definition	NV/CA (2015 BLM plan unless otherwise noted)	UT (2015 BLM Plan unless otherwise noted)	ID (2015 BLM Plan unless otherwise noted)	OR (2015 BLM Plan unless otherwise noted)	CO (2015 BLM plan unless otherwise noted)	WY (2015 9-Plan BLM plan unless otherwise noted)	ND (2015 BLM plan only, no 2019 plan)	SD (2015 BLM plan only, no 2019 plan)
Lek	A lek is a traditional location where at least 2 male greater sage-grouse congregate during at least 2 springs within a 10-year period to perform their strutting display and opportunistically breed with females. Although males are territorial on leks and occupy an area, not a point, the representative location for the lek is the estimated or calculated center of the display activity. The ‘lek’ is the standard reporting and analysis unit for evaluating population status and long-term trends. Because males may alter their display locations within and between years (for numerous possible reasons), these multiple locations ‘within’ the lek have been referred to as “sub-leks”, “satellite leks”, “alternative leks”, or “temporary leks”. The location provided for the overall ‘lek’ should represent the dominant, largest, and/or most recent annual activity center. The lek identifier is the critical piece of data to remain consistent over time, the location can shift over time.	2015 plan: A traditional courtship display area attended by male sage-grouse in or adjacent to sagebrush dominated habitat. A lek is designated based on observations of two or more male sage-grouse engaged in courtship displays. Sub-dominant males may display on itinerant strutting areas during population peaks. Such areas usually fail to become established leks. Therefore, a site where less than five males are observed strutting should be confirmed active for two years before meeting the definition of a lek (Connelly et al. 2000; Connelly et al. 2003, 2004). Each state may have a slightly different definition of lek, active lek, inactive lek, occupied lek, and unoccupied leks. Regional planning will use the appropriate definition provided by the state of interest. 2019 Plan: . A traditional display area where two or more male Greater Sage-Grouse have attended in 2 or more of the previous 5 years. The area is typically in an open site in or next to sagebrush-dominated habitats (Connelly et al. 2003). Generally, lek sites are traditional, with the same lek sites used year after year (Scott 1942; Batterson and Morse 1948; Wiley 1978;	2015 plan: A traditional courtship display area attended by male sage-grouse in or adjacent to sagebrush dominated habitat. A lek is designated based on observations of two or more male sage-grouse engaged in courtship displays. Sub-dominant males may display on itinerant strutting areas during population peaks. Such areas usually fail to become established leks. Therefore, a site where less than five males are observed strutting should be confirmed active for two years before meeting the definition of a lek (Connelly et al. 2000, 2003, 2004). Each state may have a slightly different definition of lek, active lek, inactive lek, occupied lek, and unoccupied leks. Regional planning will use the appropriate definition provided by the state of interest. Leks can be different shapes, may move, and may change size year to year. When specific information is available for lek edges that information would be used for determining management buffers. 2019Plan: An arena where male Greater Sage-Grouse display for the purpose of gaining breeding territories and attracting females. These arenas are usually open areas with short	2015 plan: A traditional courtship display area attended by male GRSG in or next to sagebrush-dominated habitat. A lek is designated based on observations of two or more male GRSG engaged in courtship displays. Each state may have a slightly different definition of lek, active lek, inactive lek, occupied lek, and unoccupied leks. Regional planning will use the appropriate definition provided by the state of interest. 2019 plan: An area where male Greater Sage-Grouse display for the purpose of gaining breeding territories and attracting females. These arenas are usually open areas with short vegetation within sagebrush habitats, usually on broad ridges, benches, or valley floors where visibility and hearing acuity are excellent. (Note – 2019 plan does not include other definitions)	2015 Plan: An area where male sage-grouse display during the breeding season to attract females (also referred to as strutting-ground). Each state may have a slightly different definition of lek, active lek, inactive lek, occupied lek, and unoccupied leks. 2019 Plan: An arena where male sage-grouse display for the purpose of gaining breeding territories and attracting females. These arenas are usually open areas with short vegetation within sagebrush habitats, benches, or valley floors where visibility and hearing acuity are excellent.	2015 plan: An arena where male sage-grouse display for the purpose of gaining breeding territories and attracting females. These arenas are usually open areas with short vegetation within sagebrush habitats, benches, or valley floors where visibility and hearing acuity are excellent. Also called “strutting ground” (CPW 2008a). 2019 plan: Same as above, though omitted “Also called “strutting ground” (CPW 2008a).” (Note – 2019 plan does not include other definitions)	2015 plan: A courtship display area attended by male Greater Sage-Grouse in or adjacent to sagebrush dominated habitat. A lek is designated by two or more male sage-grouse engaged in courtship displays. For management purposes, leks with less than five males observed strutting should be confirmed active for two years to meet the definition of a lek (Connelly et al 2000, Connelly et al. 2003, 2004). 2019 Plan: An arena where male Greater Sage-Grouse display for the purpose of gaining breeding territories and attracting females. These arenas are usually open areas with short vegetation within sagebrush habitats, benches, or valley floors where visibility and hearing acuity are excellent.	A traditional courtship display area attended by male Greater Sage-Grouse in or adjacent to sagebrush dominated habitat. A lek is designated based on observations of two or more male Greater Sage-Grouse engaged in courtship displays. Sub-dominant males may display on itinerant strutting areas during population peaks. Such areas usually fail to become established leks. Therefore, a site where less than five males are observed strutting should be confirmed active for two years before meeting the definition of a lek (Connelly et al 2000, Connelly et al. 2003, 2004). Each state may have a slightly different definition of lek, active lek, inactive lek, occupied lek, and unoccupied leks. Regional planning will use the appropriate definition provided by the state of interest.	For this RMP analysis, leks are areas used by sage-grouse during the mating season where males display to attract receptive females. Lek locations are typically used with great fidelity for decades or longer, though they may move some over time. These sites are characterized by low vegetation with sparse shrubs often surrounded by big sagebrush communities. Leks are considered to be the center of sage-grouse activities. Existence of a greater sage-grouse lek is supported by data collection. Supporting data defined as: a) minimum of 2 years with 2 or more males lekking on site (preferred); or b) 1 year with 2 or more males lekking on site followed with evidence of lekking (vegetation trampling, feathers, and droppings) during subsequent year. For the purpose of this RMP analysis, BLM follows South Dakota Game, Fish, & Parks in recognizing leks as active or inactive.

Term	WAFWA Definition	NV/CA (2015 BLM plan unless otherwise noted)	UT (2015 BLM Plan unless otherwise noted)	ID (2015 BLM Plan unless otherwise noted)	OR (2015 BLM Plan unless otherwise noted)	CO (2015 BLM plan unless otherwise noted)	WY (2015 9-Plan BLM plan unless otherwise noted)	ND (2015 BLM plan only, no 2019 plan)	SD (2015 BLM plan only, no 2019 plan)
Lek (cont.)	(See above.)	Autenrieth 1981). Taller sagebrush on the outskirts of the leks is necessary as a food source, escape cover, nesting cover for females, and loafing cover during the day (Patterson 1952; Gill 1965; Klebenow 1985).	vegetation within sagebrush habitats, usually on broad ridges, benches, or valley floors where visibility and hearing acuity are excellent.	(See above.)	(See above.)	(See above.)	(See above.)	(See above.)	(See above.)
Active	A lek that has 2 or more males counted during two or more years within the last 10 years.	2015: Any lek that has been attended by 2 or more males at least twice in the last 5 years 2019: 2 or more male observed at least twice in the last 5 years.	Any lek that has been attended by male sage-grouse during the strutting season	Any lek that has been attended by more than one male GRSg during the breeding season.	A lek attended by 1 male sage-grouse or more during the breeding season. Acceptable documentation of sage-grouse presence includes observation of birds using the site or recent signs of lek attendance (e.g. fresh droppings, feathers). New leks found during ground counts or surveys are given an annual status of active.	An open area that has been attended by more than two male sage-grouse more than two of the previous five years (Connelly et al. 2000a). This definition is derived mainly from observations of leks in large, stable populations and may not be appropriate for small populations with reduced numbers of males attending leks in fragmented sagebrush communities. Therefore, for smaller populations (e.g., Meeker – White River) that are isolated or disjunct from larger, more stable populations, an active lek is defined as an open area where one or more sage-grouse have been observed on more than one occasion engaging in courtship or breeding behavior. An area used by displaying males in the last five years is considered an active lek (CPW 2008a).	Any lek that has been attended by male Greater Sage-Grouse during the strutting season.	Any lek that has been attended by male Greater Sage- Grouse during the strutting season.	No similar definition.
Occupied	No similar definition.	A lek that has been active during at least one strutting season within the prior 10 years.	A lek that has been active during at least one strutting season within the prior 10 years.	A lek that has been active during at least one breeding season within the prior 5 years.	A regularly visited lek that has had 1 male or more counted in one or more of the last 7 years. Designate and protect surrounding area as Category I habitat.	A lek that has been active during at least one strutting season within the prior 10 years.	A lek that has been active during at least one strutting season within the prior 10 years.	A lek that has been active during at least one strutting season within the prior 10 years.	No similar definition.

Term	WAFWA Definition	NV/CA (2015 BLM plan unless otherwise noted)	UT (2015 BLM Plan unless otherwise noted)	ID (2015 BLM Plan unless otherwise noted)	OR (2015 BLM Plan unless otherwise noted)	CO (2015 BLM plan unless otherwise noted)	WY (2015 9-Plan BLM plan unless otherwise noted)	ND (2015 BLM plan only, no 2019 plan)	SD (2015 BLM plan only, no 2019 plan)
Inactive	A lek at which all observations within the last 10 years have been less than 2 males and that has had at least 2 males recorded during a lek count between 11 to 20 years ago.	2015 Plan: Any lek where sufficient data suggests that there 0 or 1 male during every visit (minimum 2 visits) in the last 5 years. 2019 Plan: 0 or 1 male observed during every visit (minimum two visits) in the last 5 years.	Any lek where sufficient data suggests that there was no strutting activity throughout a strutting season. Absence of strutting sage-grouse during a single visit is insufficient documentation to establish that a lek is inactive. This designation requires documentation of either: 1) an absence of sage-grouses on the lek during at least 2 ground surveys separated by at least seven days. These surveys must be conducted under ideal conditions (April 1-May 7 (or other appropriate date based on local conditions), no precipitation, light or no wind, half-hour before sunrise to one hour after sunrise) or 2) a ground check of the exact known lek site late in the strutting season (after April 15) that fails to find any sign (tracks, droppings, feathers) of strutting activity. Data collected by aerial surveys should not be used to designate inactive status as the aerial survey may actually disrupt activities.	Any lek where sufficient data suggests that there was no strutting activity throughout a breeding season. Absence of male GRSG during a single visit is insufficient documentation to establish that a lek is inactive. This designation requires documentation of one of the following scenarios: <ul style="list-style-type: none">• An absence of GRSG on the lek during at least two ground surveys separated by at least seven days. These surveys must be conducted under acceptable conditions (clear to partly cloudy and winds less than 10 knots per hour) and in the absence of obvious disturbance (April 1-May 7 or other appropriate date based on local conditions)• A ground check of the exact known lek site late in the breeding season that fails to find any sign (tracks, droppings, feathers) of strutting activity. Data collected by aerial surveys should not be used to designate inactive status as the aerial survey may actually disrupt activities.	A lek with sufficient survey data to suggest that there was no male attendance throughout a breeding season. Absence of male grouse during a single visit is insufficient documentation to establish that a lek is inactive. This designation requires documentation of either: 1) an absence of birds on the lek during at least two ground surveys separated by at least seven days. These surveys must be conducted under acceptable weather conditions (clear to partly cloudy and winds less than 15 kilometers per hour [less than 10 miles per hour]) and in the absence of obvious disturbance or, 2) a ground check of the exact known lek site late in the strutting season that fails to find any sign (fresh droppings/feathers) of attendance. Data collected by aerial surveys alone may not be used to designate inactive status.	Any lek where sufficient data suggests that there was no strutting activity throughout a strutting season. Absence of strutting grouse during a single visit is insufficient documentation to establish that a lek is inactive. This designation requires documentation of either: 1) an absence of sage-grouses on the lek during at least 2 ground surveys separated by at least seven days. These surveys must be conducted under ideal conditions (April 1-May 7, or other appropriate date based on local conditions, no precipitation, light or no wind, half-hour before sunrise to one hour after sunrise) or 2) a ground check of the exact known lek site late in the strutting season (after April 15) that fails to find any sign (tracks, droppings, feathers) of strutting activity. Data collected by aerial surveys should not be used to designate inactive status as the aerial survey may actually disrupt activities.	Any lek where sufficient data suggests that there was no strutting activity throughout a strutting season. Absence of strutting grouse during a single visit is insufficient documentation to establish that a lek is inactive. This designation requires documentation of either: 1) an absence of sage-grouses on the lek during at least two ground surveys separated by at least seven days. These surveys must be conducted under ideal conditions (April 1-May 7 (or other appropriate date based on local conditions), no precipitation, light or no wind, half-hour before sunrise to one hour after sunrise) or 2) a ground check of the exact known lek site late in the strutting season (after April 15) that fails to find any sign (tracks, droppings, feathers) of strutting activity. Data collected by aerial surveys should not be used to designate inactive status as the aerial survey may actually disrupt activities.	Any lek where sufficient data suggests that there was no strutting activity throughout a strutting season. Absence of strutting grouse during a single visit is insufficient documentation to establish that a lek is inactive. This designation requires documentation of either: 1) an absence of Greater Sage-Grouses on the lek during at least two ground surveys separated by at least seven days. These surveys must be conducted under ideal conditions (April 1-May 7 (or other appropriate date based on local conditions), no precipitation, light or no wind, half- hour before sunrise to one hour after sunrise) or 2) a ground check of the exact known lek site late in the strutting season (after April 15) that fails to find any sign (tracks, droppings, feathers) of strutting activity. Data collected by aerial surveys should not be used to designate inactive status as the aerial survey may actually disrupt activities.	No similar definition.
Unoccupied lek	No similar definition.	A lek that has either been “destroyed” or “abandoned.”	A lek that has had no males counted in greater than 10 years.	An unoccupied lek is one that has not been active for 5 consecutive years. To be designated unoccupied, a lek must be inactive (see above criteria) for 5 consecutive breeding seasons.	A lek that has been counted annually and has had no birds for 8 or more consecutive years. Mitigation category based on habitat type and condition.	A lek that has either been “destroyed” or “abandoned.”	A lek that has either been “destroyed” or “abandoned.”	A lek that has either been “destroyed” or “abandoned.”	No similar definition.

Term	WAFWA Definition	NV/CA (2015 BLM plan unless otherwise noted)	UT (2015 BLM Plan unless otherwise noted)	ID (2015 BLM Plan unless otherwise noted)	OR (2015 BLM Plan unless otherwise noted)	CO (2015 BLM plan unless otherwise noted)	WY (2015 9-Plan BLM plan unless otherwise noted)	ND (2015 BLM plan only, no 2019 plan)	SD (2015 BLM plan only, no 2019 plan)
Historical	A lek at which all observations within the last 20 years have been less than 2 males, but previously met the definition of a lek. (Previously “Historic”, Coates et al. 2021)	2015 Plan: Any lek that has been attended by 0 or 1 male during every visit (minimum 5 visits) in the last 30 years. 2019 Plan: 0 or 1 male observed during every visit (minimum five visits) in the last 30 years.	No similar definition.	No similar definition.	A lek that has been unoccupied prior to 1980 and remains so. Mitigation category based on habitat type and condition (1980 serves as the baseline for evaluating population objectives under ODFW’s Sage-grouse Conservation Strategy, thus leks unoccupied prior to 1980 are not included in the baseline for population abundance and distribution.)	No similar definition.	(Former term for “unoccupied lek”.) There are two types of unoccupied leks, “destroyed” or “abandoned.” Management protection will not be afforded to unoccupied leks.	No similar definition.	No similar definition.
Pending Active	A lek with one observation of at least 2 males in the last 10 years and at least one observation of at least 2 males more than 10 years ago. This status captures leks insufficiently monitored to classify as Active, Inactive, or Historical but contains a more recent observation than Pending Historical. (Previously “Pending New”, Coates et al. 2021)	2015 Plan: Any lek that has been attended by 2 or more males only once in the last 5 years. 2018 Plan: 2 or more males observed only once in the last 5 years.	No similar definition.	No similar definition.	(called “Occupied-pending”) A lek not counted regularly in the last 7 years, but birds were present at last visit. Designate and protect surrounding area as Category I habitat. These leks should be resurveyed at a minimum of two additional years to confirm activity	No similar definition.	No similar definition.	No similar definition.	No similar definition.
Pending Historical	A lek with insufficient observations in the last 10 years to classify as Active, Inactive, Historical, or Pending Active. This requires one observation of at least 2 males recorded 11 to 20 years ago and at least one observation of at least 2 males more than 20 years ago. (Previously “Pending Old”, Coates et al. 2021)	No similar definition.	No similar definition.	No similar definition.	(Called “Pending Lek”) A lek not counted regularly in the last seven years, but birds were present one or more years of that period.	No similar definition.	No similar definition.	No similar definition.	No similar definition.

Term	WAFWA Definition	NV/CA (2015 BLM plan unless otherwise noted)	UT (2015 BLM Plan unless otherwise noted)	ID (2015 BLM Plan unless otherwise noted)	OR (2015 BLM Plan unless otherwise noted)	CO (2015 BLM plan unless otherwise noted)	WY (2015 9-Plan BLM plan unless otherwise noted)	ND (2015 BLM plan only, no 2019 plan)	SD (2015 BLM plan only, no 2019 plan)
Lek Complex	Considered an “outmoded” definition. 1. A grouping of leks that likely have frequent movement of individuals between leks. 2. A single lek recorded in multiple locations in multiple years in relatively close proximity. Sub-lek is a lek whose location generally ≤ ¼ mile from other sub-leks is an activity center for a specific year or series of years. A lek can be represent multiple sub-leks, or may contain only one sub-lek.	2015 Plan: A lek or group of leks within 2.5 kilometers (1.5 miles) of each other between which male GRSG may interchange from one day to the next. Fidelity to leks has been well documented. Visits to multiple leks are most common among yearlings and less frequent for adult males, suggesting an age-related period of establishment (Connelly et al. 2004). 2019 Plan: (called “Lek Cluster”) A group of leks in the same vicinity, among which Greater Sage-Grouse may interchange over time, and representing a group of closely related individuals.	A lek or group of leks within 2.5 kilometers (1.5 miles) of each other between which male sage-grouse may interchange from one day to the next. Fidelity to leks has been well documented. Visits to multiple leks are most common among yearlings and less frequent for adult males, suggesting an age-related period of establishment (Connelly et al. 2004).	A lek or group of leks within 2.5 kilometers (1.5 miles) of each other between which male GRSG may interchange from one day to the next. Fidelity to leks has been well documented. Visits to multiple leks are most common among yearlings and less frequent for adult males, suggesting an age-related period of establishment (Connelly et al. 2004).	A collection of lek sites typically with small numbers of males which are associated with a larger lek site in the vicinity (less than or equal to 1 mile). A count of a lek complex generally includes systematically acquiring and recording information about all displaying males in a series of leks where no 2 lek sites are more than 1 mile apart.	A lek or group of leks within 2.5 km (1.5 mi) of each other between which male sage-grouse may interchange from one day to the next. Fidelity to leks has been well documented. Visits to multiple leks are most common among yearlings and less frequent for adult males, suggesting an age-related period of establishment (Connelly et al. 2004).	A lek or group of leks within 2.5 km (1.5 mi) of each other between which male sage-grouse may interchange from one day to the next. Fidelity to leks has been well documented. Visits to multiple leks are most common among yearlings and less frequent for adult males, suggesting an age-related period of establishment (Connelly et al. 2004).	A lek or group of leks within 2.5 kilometers (km) (1.5 miles) of each other between which male Greater Sage-Grouse may interchange from one day to the next. Fidelity to leks has been well documented. Visits to multiple leks are most common among yearlings and less frequent for adult males, suggesting an age-related period of establishment (Connelly et al. 2004).	No similar definition.
Destroyed lek	No similar definition.	A formerly active lek site and surrounding sagebrush habitat that has been destroyed and is no longer suitable for GRSG breeding	A formerly active lek site and surrounding sagebrush habitat that has been destroyed and is no longer suitable for sage-grouse breeding.	No similar definition	No similar definition.	A formerly active lek site and surrounding sagebrush habitat that has been destroyed and is no longer suitable for sage-grouse breeding.	A formerly active lek site and surrounding sagebrush habitat that has been destroyed and is no longer suitable for sage-grouse breeding.	A formerly active lek site and surrounding sagebrush habitat that has been destroyed and is no longer suitable for Greater Sage-Grouse breeding.	No similar definition.
Abandoned lek	No similar definition. Historical lek would be most similar.	A lek in otherwise suitable habitat that has not been active during a period of 10 consecutive years. To be designated abandoned, a lek must be “inactive” (see above criteria) in at least four non-consecutive strutting seasons spanning the 10 years. The site of an “abandoned” lek should be surveyed at least once every 10 years to determine whether it has been re-occupied by sage-grouse.	A lek in otherwise suitable habitat that has not been active during a period of 10 consecutive years. To be designated abandoned, a lek must be “inactive” (see above criteria) in at least four non-consecutive strutting seasons spanning the 10 years. The site of an “abandoned” lek should be surveyed at least once every 10 years to determine whether it has been re-occupied by sage-grouse.	No similar definition.	No similar definition.	A lek in otherwise suitable habitat that has not been active during a period of 10 consecutive years. To be designated abandoned, a lek must be “inactive” (see above criteria) in at least four non-consecutive strutting seasons spanning the 10 years. The site of an “abandoned” lek should be surveyed at least once every 10 years to determine whether it has been re-occupied by sage-grouse.	A lek in otherwise suitable habitat that has not been active during a period of 10 consecutive years. To be designated abandoned, a lek must be “inactive” in at least four non-consecutive strutting seasons spanning the 10 years. The site of an “abandoned” lek should be surveyed at least once every 10 years to determine whether it has been re-occupied by sage-grouse.	A lek in otherwise suitable habitat that has not been active during a period of 10 consecutive years. To be designated abandoned, a lek must be “inactive” (see above criteria) in at least four non-consecutive strutting seasons spanning the 10 years. The site of an “abandoned” lek should be surveyed at least once every 10 years to determine whether it has been re-occupied by Greater Sage-Grouse.	No similar definition.

Lek Status Definition Comparison – MT and WY 2015 Plans

Term	WAFWA Definition	Billings	Lewistown	HiLine	Miles City	Buffalo	Bighorn Basin	Lander
Lek	A lek is a traditional location where at least 2 male greater sage-grouse congregate during at least 2 springs within a 10-year period to perform their strutting display and opportunistically breed with females. Although males are territorial on leks and occupy an area, not a point, the representative location for the lek is the estimated or calculated center of the display activity. The ‘lek’ is the standard reporting and analysis unit for evaluating population status and long-term trends. Because males may alter their display locations within and between years (for numerous possible reasons), these multiple locations ‘within’ the lek have been referred to as “sub-leks”, “satellite leks”, “alternative leks”, or “temporary leks”. The location provided for the overall ‘lek’ should represent the dominant, largest, and/or most recent annual activity center. The lek identifier is the critical piece of data to remain consistent over time, the location can shift over time.	An assembly area where birds, especially sage-grouse, carry on display and courtship behavior. Also referred to as a “strutting ground”.	A traditional courtship display area attended by male sage-grouse in or next to sagebrush dominated habitat. A lek is designated based on observations of two or more male sage-grouse engaged in courtship displays. Subdominant males may display on itinerant strutting areas during population peaks. Such areas usually fail to become established leks; therefore, a site where less than five males are observed strutting should be confirmed active for two years before meeting the definition of a lek (Connelly et al 20008; Connelly et al. 20039, Connelly, et al. 200410). Each state may have a slightly different definition of lek, active lek, inactive lek, occupied lek, and unoccupied leks. Regional planning will use the appropriate definition provided by the state of interest.	Data supports existence of lek. Supporting data defined as: (a) minimum of 2 years with 2 or more males lekking on site (preferred); or (b) 1 year with 2 or more males lekking on site followed with evidence of lekking (vegetation trampling, feathers, and droppings) during subsequent year.	A traditional breeding area for sage-grouse and sharp-tailed grouse in which males assemble to establish dominance, display, and breed. Also called dancing grounds or strutting grounds. Confirmed sage-grouse lek: • a minimum of 2 years with 2 or more males lekking on site (preferred), or • 1 year with two or more males lekking on site, followed with evidence of lekking (vegetation trampling, feathers, and droppings) during the subsequent year.	A traditional courtship display area attended by male Greater Sage-Grouse in or adjacent to sagebrush dominated habitat. A lek is designated based on observations of two or more male Greater Sage-Grouse engaged in courtship displays. Before adding the suspected lek to the database, it must be confirmed by an additional observation made during the appropriate time of day, during the strutting season. Sign of strutting activity (tracks, droppings, feathers) can also be used to confirm a suspected lek. Sub-dominant males may display on itinerant (temporary) strutting areas during population peaks. Such areas usually fail to become established leks. Therefore, a site where small numbers of males (less than 5) are observed strutting should be confirmed active for two years before adding the site to the lek database.	A traditional courtship display area attended by male sage-grouse in or adjacent to sagebrush dominated habitat. A lek is designated based on observations of two or more male sage-grouse engaged in courtship displays. Before adding the suspected lek to the database, it must be confirmed by an additional observation made during the appropriate time of day, during the strutting season. Sign of strutting activity (tracks, droppings, feathers) can also be used to confirm a suspected lek. Sub-dominant males may display on itinerant (temporary) strutting areas during population peaks. Such areas usually fail to become established leks. Therefore, a site where small numbers of males (<5) are observed strutting should be confirmed active for two years before adding the site to the lek database	No similar definition. (only “occupied Lek” below)
Active	A lek that has more than 2 males counted during two or more lek counts within the last 10 years.	Data supports existence of lek. Supporting data defined as: a) minimum of 2 years with 2 or more males lekking on site (preferred) or b) 1 year with 2 or more males lekking on site followed with evidence of lekking (vegetation trampling, feathers, and droppings) during subsequent year.	No similar definition.	Default assignment unless criteria are met for “inactive” or “extirpated.”	Default assignment unless criteria are met for “inactive” or “extirpated.”	No similar definition.	No similar definition.	No similar definition.
Occupied	No similar definition.	No similar definition.	No similar definition.	No similar definition.	No similar definition.	No similar definition.	No similar definition.	A lek that has been active during at least one strutting season within the last 10 years.

Term	WAFWA Definition	Billings	Lewistown	HiLine	Miles City	Buffalo	Bighorn Basin	Lander
Inactive	A lek at which all observations within the last 10 years have been less than 2 males and that has had at least 2 males recorded during a lek count between 11 to 20 years ago.	10 years with no males or sign of lek activity - supported by surveys conducted during 3 or more years over the last 10 years. Sage grouse abundance patterns have generally fit within a 10-year time frame, encompassing both years of abundance and relative scarcity. For the purpose of assigning lek status, 10 years with 3 years of supporting data is minimal for characterizing a lek as inactive. However, the capacity for surveying leks at a greater annual frequency in 10 years is generally limited and therefore this Status Definition incorporates both biological (i.e., past abundance patterns) and current administrative factors.	No similar definition.	10 years with no sign of lek activity - supported by surveys conducted during 3 or more years over the last 10 years.	10 years with no sign of lek activity and supported by surveys conducted during 3 or more years over the last 10 years.	No similar definition.	No similar definition.	No similar definition.
Unoccupied lek	No similar definition.	No similar definition.	No similar definition.	No similar definition.	No similar definition.	No similar definition.	No similar definition.	No similar definition.
Historical	A lek at which all observations within the last 20 years have been less than 2 males, but previously met the definition of a lek. (Previously “Historic”, Coates et al. 2021)	No similar definition.	No similar definition.	No similar definition.	No similar definition.	No similar definition.	No similar definition.	No similar definition.
Pending Active	A lek with one observation of at least 2 males in the last 10 years and at least one observation of at least 2 males more than 10 years ago. This status captures leks insufficiently monitored to classify as Active, Inactive, or Historical but contains a more recent observation than Pending Historical. (Previously “Pending New”, Coates et al. 2021)	No similar definition.	No similar definition.	No similar definition.	No similar definition.	No similar definition.	No similar definition.	No similar definition.

Term	WAFWA Definition	Billings	Lewistown	HiLine	Miles City	Buffalo	Bighorn Basin	Lander
Pending Historical	A lek with insufficient observations in the last 10 years to classify as Active, Inactive, Historical, or Pending Active. This requires one observation of at least 2 males recorded 11 to 20 years ago and at least one observation of at least 2 males more than 20 years ago. (Previously “Pending Old”, Coates et al. 2021)	No similar definition.	No similar definition.	No similar definition.	No similar definition.	No similar definition.	No similar definition.	No similar definition.
Lek Complex	Considered an “outmoded” definition. 1. A grouping of leks that likely have frequent movement of individuals between leks. 2. A single lek recorded in multiple locations in multiple years in relatively close proximity. Sub-lek is a lek whose location generally ≤ ¼ mile from other sub-leks is an activity center for a specific year or series of years. A lek can be represent multiple sub-leks, or may contain only one sub-lek.	No similar definition.	No similar definition.	No similar definition.	No similar definition.	No similar definition.	No similar definition.	No similar definition.
Destroyed lek	No similar definition.	No similar definition.	No similar definition.	No similar definition.	No similar definition.	No similar definition.	No similar definition.	No similar definition.
Abandoned lek	No similar definition. Historical lek would be most similar.	(“Confirmed Extirpated”) Habitat changes have caused birds to permanently abandon a lek (e.g., plowing, urban development, overhead power- line).	No similar definition.	(“Extirpated”) Habitat changes have caused birds to permanently abandon a lek (e.g., plowing, urban development, overhead power line).	(Extirpated) habitat changes have caused birds to abandon permanently a lek (e.g., plowing, urban development, overhead power lines).	No similar definition.	No similar definition.	No similar definition.
Provisionally confirmed Greater Sage- Grouse lek	—	—	—	Only one year of survey data is available but more than 5 males were observed.	—	—	—	—
Unconfirmed Greater Sage- Grouse lek	—	—	—	Single count with no subsequent survey or a reported lek without supporting survey data.	—	—	—	—