

Appendix 1:

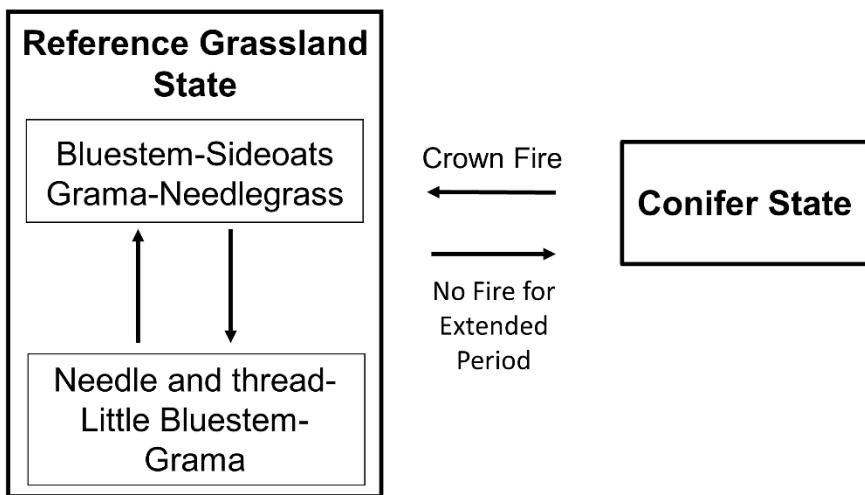


Figure A1.1. A simplified state-and-transition model (STM) from the USDA Ecological Site Descriptions for the ‘Shallow’ ecological site in the Mixed Sandy and Silty Tableland and Badlands Major Labe Resource Area before its alteration in 2019. The STM has been simplified to only highlight the role of fire. Bold outlined boxes denote alternative ecological regimes (also termed states). Arrows represent a transition between ecosystem states (bold boxes) or community phases (light boxes). Words next to arrows represent where fire is a proposed driver of transition.

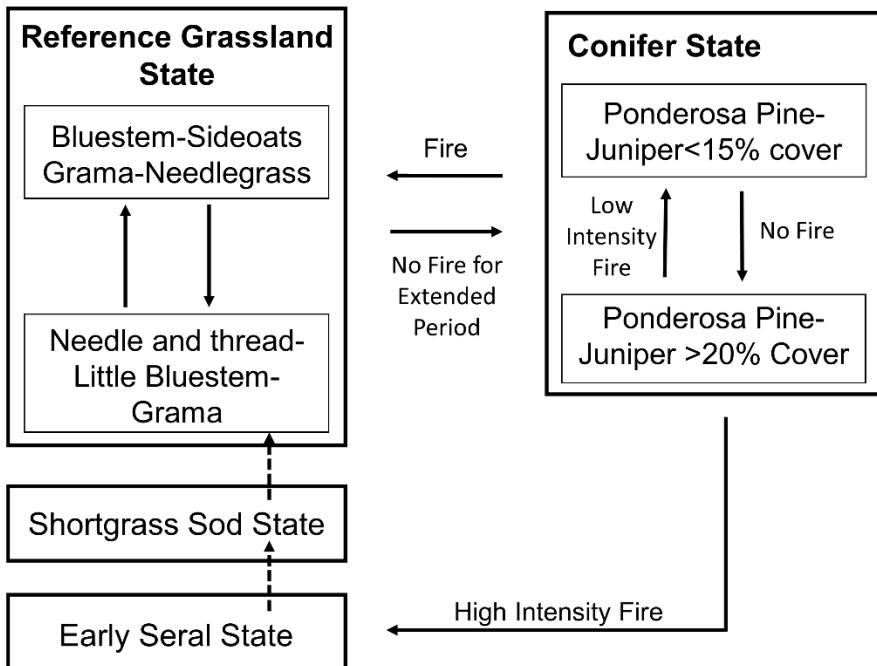


Figure A1.2. A simplified state-and-transition model (STM) from the USDA Ecological Site Descriptions for the ‘Shallow’ ecological site in the Mixed Sandy and Silty Tableland and Badlands Major Labe Resource Area following its update in 2019. The STM has been simplified to only highlight the role of fire. Bold outlined boxes denote alternative ecological regimes (also termed states). Continuous arrows represent a transition between ecosystem states (bold boxes) or community phases (light boxes). Dotted arrows represent where recovery may not be fast. Words next to arrows represent where fire is a proposed driver of transition.

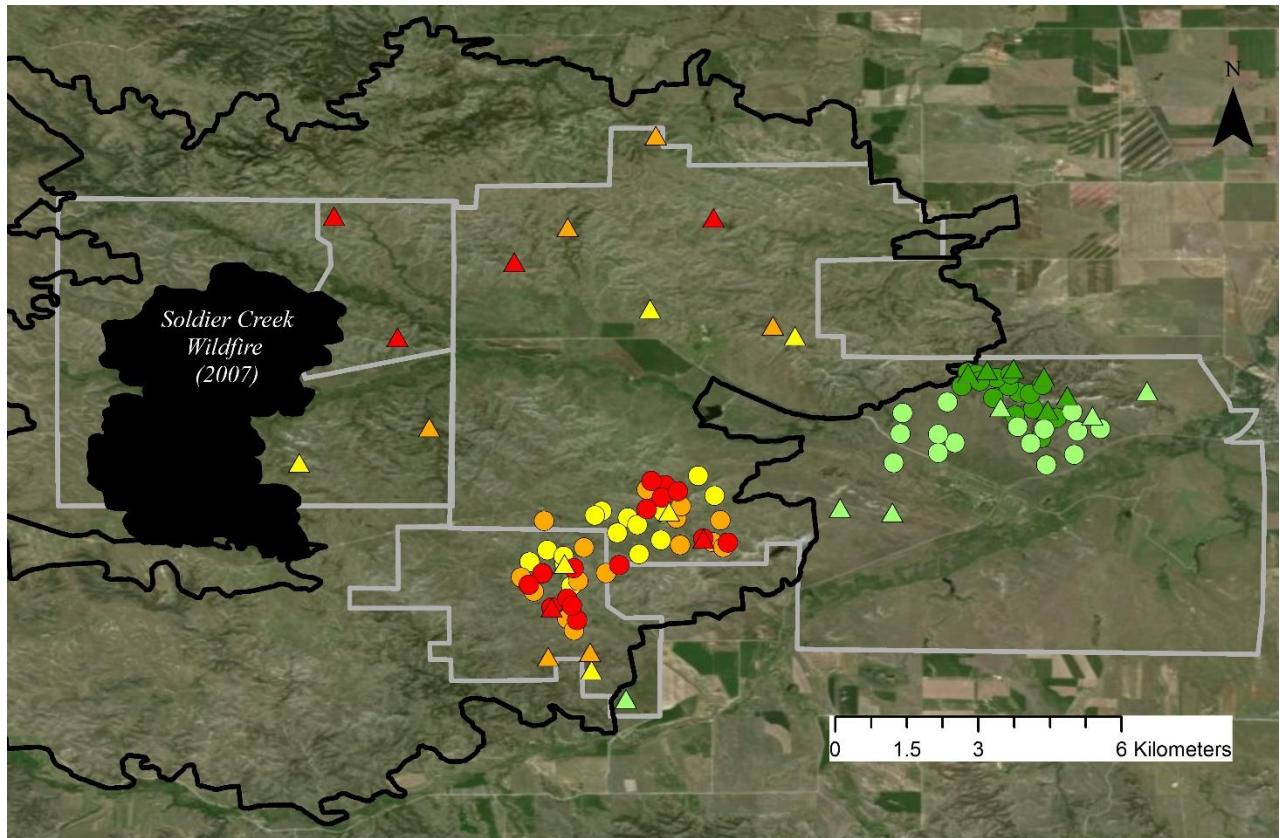


Figure A1.3. A map of the 1989 Fort Robinson wildfire perimeter (outlined in black) with sampling sites for bird community, understory woody plant community, and stand structural characteristics represented by circles, and herbaceous community sample sites represented by triangles. Dark green symbols represent unburned forest sites, orange symbols represent forests that burned at low severity and are expected to have the same identity as unburned forest, red symbols represent forests that burned at high severity and are expected to have the same identity as unburned grassland, yellow symbols represent grasslands that burned and are expected to have the same identity as unburned grasslands, and light green symbols represent unburned grasslands. Public land perimeters we sampled in are outlined in grey. The soldier creek wildfire perimeter, marked in black, was excluded from sampling.

Tables

Table A1.1. Eigenvalues and the proportion of explained variation that was represented by RDA1 and RDA2 in two redundancy analyses on community and structural data collected in 2015 and 2016 within and surrounding the perimeter of the 1989 Fort Robinson wildfire, Nebraska, USA across a range of transition classes. Transition classes were used as predictor variables and were composed of fire severity (unburned, low severity, or high severity) and the ecological regime (grassland or forest) that occurred prior to the fire. Italicized titles represent the data used in redundancy analyses, where “Herbaceous Community” indicates RDA outputs with herbaceous plant community data and “Additional Ecosystem Characteristics” indicates RDA outputs with understory woody plant height and cover, bird species presence, coarse woody debris cover, and snag DBH.

| | Eigenvalue | Proportion Explained |
|---|------------|----------------------|
| <i>Herbaceous Community</i> | | |
| RDA1 | 0.03 | 0.63 |
| RDA2 | 0.01 | 0.23 |
| <i>Additional Ecosystem Characteristics</i> | | |
| RDA1 | 0.13 | 0.57 |
| RDA2 | 0.05 | 0.21 |

Table A1.2. Inertia and the proportion of inertia that was constrained versus unconstrained in two redundancy analyses on community and structural data collected in 2015 and 2016 within and surrounding the perimeter of the 1989 Fort Robinson wildfire, Nebraska, USA across a range of transition classes. Transition classes were used as predictor variables and were composed of fire severity (unburned, low severity, or high severity) and the ecological regime (grassland or forest) that occurred prior to the fire. Italicized titles represent the data used in redundancy analyses, where “Herbaceous Community” indicates RDA outputs with herbaceous plant community data and “Additional Ecosystem Characteristics” indicates RDA outputs with understory woody plant height and cover, bird species presence, coarse woody debris cover, and snag DBH.

| | Inertia | Proportion of Inertia |
|---|---------|-----------------------|
| <i>Herbaceous Community</i> | | |
| Constrained | 0.05 | 0.24 |
| Unconstrained | 0.17 | 0.76 |
| <i>Additional Ecosystem Characteristics</i> | | |
| Constrained | 0.23 | 0.23 |
| Unconstrained | 0.76 | 0.76 |

Table A1.3. A list of species codes, species names, and common names of herbaceous vegetation that was recorded within and surrounding the perimeter of the 1989 Fort Robinson wildfire, Nebraska, USA.

| Species Code | Species | Common Name |
|--------------|--------------------------------|----------------------------|
| ACMI | <i>Achillea millefolium</i> | Common yarrow |
| ALTE | <i>Allium textile</i> | Prairie Onion |
| ALDE | <i>Alyssum desertorum</i> | Desert madwort |
| AMPS | <i>Ambrosia psilostachya</i> | Cuman ragweed |
| ANMA | <i>Anaphalis margaritacea</i> | Western pearly everlasting |
| ANGE | <i>Andropogon gerardii</i> | Big bluestem |
| ANHA | <i>Andropogon hallii</i> | Sand bluestem |
| ANCY | <i>Anemone cylindrica</i> | Candle anemone |
| ANPA | <i>Antennaria parvifolia</i> | Small-leaf pussytoes |
| ARHI | <i>Arabis hirsuta</i> | Hairy rockcress |
| ARPU | <i>Aristida purpurea</i> | Purple threeawn |
| ARDR | <i>Artemisia dracunculus</i> | Tarragon |
| ARFI | <i>Artemisia filifolia</i> | Sand sagebrush |
| ARFR | <i>Artemisia frigida</i> | Prairie Sagewort |
| ARLU | <i>Artemisia ludoviciana</i> | White sagebrush |
| ASPU | <i>Asclepias pumila</i> | Plains milkweed |
| ASFA | <i>Aster falcatus</i> | White prairie aster |
| ASLA | <i>Aster laevis</i> | Smooth blue aster |
| ASOB | <i>Aster oblongifolia</i> | Aromatic aster |
| ASCR | <i>Astragalus crassicarpus</i> | Groundplum Milkvetch |
| ASGR | <i>Astragalus gracilis</i> | Slender milkvetch |

| | | |
|------|----------------------------------|----------------------|
| ASLA | <i>Astragalus laxmannii</i> | Laxmann's milkvetch |
| ASLO | <i>Astragalus lotiflorus</i> | Lotus milkweed |
| ASMI | <i>Astragalus missouriensis</i> | Missouri milkvetch |
| BG | <i>Bare ground</i> | Bare Ground |
| MARE | <i>Berberis repens</i> | Creeping barberry |
| BEWY | <i>Besseyea wyomingensis</i> | Wyoming besseya |
| BOHO | <i>Boechera hoboellii</i> | Holboell's rockcress |
| BOCU | <i>Bouteloua curtipendula</i> | Sideoats grama |
| BOGR | <i>Bouteloua gracilis</i> | Blue grama |
| BOHI | <i>Bouteloua hirsuta</i> | Hairy grama |
| BREU | <i>Brickellia eupatorioides</i> | False boneset |
| BRIN | <i>Bromus inermis</i> | Smooth brome |
| BRTE | <i>Bromus japonicus/tectorum</i> | Cheatgrass |
| CALO | <i>Calamovilfa longifolia</i> | Prairie Sandreed |
| CANU | <i>Calochortus nuttallii</i> | Sego lily |
| CASE | <i>Calylophus serrulatus</i> | Yellow sundrops |
| CAMI | <i>Camelina microcarpa</i> | Littlepod false flax |
| CARO | <i>Campanula rotundifolia</i> | Bluebell bellflower |
| CADU | <i>Carex eleocharis</i> | Needlelead sedge |
| CAFI | <i>Carex filifolia</i> | Threadleaf sedge |
| CAIN | <i>Carex heliophila</i> | Sun sedge |
| CASA | <i>Carex saximontana</i> | Rocky Mountain sedge |
| CEAR | <i>Cerastium arvense</i> | Field chickweed |
| CHPR | <i>Chenopodium pratericola</i> | Desert goosefoot |
| CIAR | <i>Cirsium arvense</i> | Canada thistle |

| | | |
|------|--------------------------------|---------------------------|
| CIPL | <i>Cirsium plattensis</i> | Platte thistle |
| CIUN | <i>Cirsium undulatum</i> | Wavyleaf thistle |
| COUM | <i>Comandra umbellata</i> | Bastard toadflax |
| COCA | <i>Conyza canadensis</i> | Canadian horseweed |
| CRTE | <i>Croton texensis</i> | Texas Croton |
| CYOF | <i>Cynoglossum officinale</i> | Gypsyflower |
| CYFR | <i>Cystopteris fragilis</i> | Brittle bladderfern |
| DACA | <i>Dalea candida</i> | White prairie clover |
| DAPU | <i>Dalea purpurea</i> | Purple prairie clover |
| DEPI | <i>Descurainia pinnata</i> | Western tansymustard |
| DRRE | <i>Draba reptans</i> | Carolina draba |
| ECPU | <i>Echinacea purpurea</i> | Eastern purple coneflower |
| ELCA | <i>Elymus canadensis</i> | Canada wildrye |
| ELLA | <i>Elymus lanceolatus</i> | Thickspike wheatgrass |
| ELSM | <i>Elymus smithii</i> | Western wheatgrass |
| ELTR | <i>Elymus trachycaulus</i> | Slender wheatgrass |
| ELVI | <i>Elymus villosus</i> | Hairy wildrye |
| ERHO | <i>Eremogone hookeri</i> | Hooker's sandwort |
| ERST | <i>Erigeron strigosus</i> | Prairie fleabane |
| ERAN | <i>Eriogonum annuum</i> | Annual buckwheat |
| ERCE | <i>Eriogonum cernuum</i> | Nodding buckwheat |
| ERAS | <i>Erysimum asperum</i> | Western wallflower |
| ERCH | <i>Erysimum cheiranthoides</i> | Wormseed wallflower |
| EUGL | <i>Euphorbia glyptosperma</i> | Ribseed sandmat |
| EUMI | <i>Euphorbia missurica</i> | Prairie sandmat |

| | | |
|-------|--------------------------------|-------------------------|
| EUBR | <i>Euphorbia robusta</i> | Horned spurge |
| GAAP | <i>Galium aparine</i> | Stickywilly |
| GABO | <i>Galium boreale</i> | Northern bedstraw |
| GATR | <i>Galium triflorum</i> | Fragrant bedstraw |
| OESU | <i>Gaura coccinea</i> | Scarlet beeblissom |
| GLLE | <i>Glycyrrhiza lepidota</i> | American licorice |
| GNPA | <i>Gnaphalium palustre</i> | Western marsh cudweed |
| GUSA | <i>Gutierrezia sarothrae</i> | Broom snakeweek |
| HEHI | <i>Hedeoma hispida</i> | Rough false pennyroyal |
| HEPE | <i>Helianthus petiolaris</i> | Prairie sunflower |
| HECO | <i>Hesperostipa comata</i> | Needle and threat |
| HEVI4 | <i>Heterotheca villosa</i> | Hairy goldenaster |
| HERI | <i>Heuchera richardsonii</i> | Richardson's alumroot |
| HIUM | <i>Hieracium umbellatum</i> | Narrowleaf hawkweed |
| IPLE | <i>Ipomoea leptophylla</i> | Bush morning-glory |
| KOMA | <i>Koeleria macrantha</i> | Prairie junegrass |
| LALU | <i>Lactuca ludoviciana</i> | Biannual lettuce |
| LASE | <i>Lactuca serriola</i> | Prickly lettuce |
| LATA | <i>Lactuca tatarica</i> | Blue lettuce |
| LAPO | <i>Lathyrus polymorphus</i> | Manystem pea |
| LEAR | <i>Lesquerella arenosa</i> | Great Plains bladderpod |
| LELU | <i>Lesquerella ludoviciana</i> | Foothill bladderpod |
| LIPU | <i>Liatris punctata</i> | Dotted blazing star |
| LIRI | <i>Linum rigidum</i> | Stiffstem flax |
| LIIN | <i>Lithospermum incisum</i> | Narrowleaf stoneseed |

| | | |
|--------|-------------------------------------|---------------------------------|
| LITTER | <i>Litter</i> | Litter |
| LOOR | <i>Lomatium orientale</i> | Northern Idaho biscuitroot |
| LUPL | <i>Lupinus plattensis</i> | Nebraska lupine |
| LYJU | <i>Lygodesmia juncea</i> | Rush Skeletonplant |
| MATA | <i>Machaeranthera tanacetifolia</i> | Tanseyleaf tansyaster |
| MAST | <i>Maianthemum stellatum</i> | Starry false lily of the valley |
| MEOF | <i>Melilotus officinalis</i> | Sweetclover |
| MIHI | <i>Mirabilis hirsuta</i> | Hairy four o'clock |
| MILI3 | <i>Mirabilis linearis</i> | Narrowleaf four o'clock |
| MOPE | <i>Monarda pectinata</i> | Pony beebalm |
| NAVI | <i>Nassella viridula</i> | Green needlegrass |
| OPFR | <i>Opuntia fragilis</i> | Brittle pricklypear |
| OPHU | <i>Opuntia humifusa</i> | Devil's-tongue |
| OXLA | <i>Oxytropis lambertii</i> | Purple locoweed |
| PACA | <i>Panicum capillare</i> | Witchgrass |
| PAOL | <i>Panicum oligosanthes</i> | Scribner's panic grass |
| DIWI | <i>Panicum wilcoxianum</i> | Fall rosette grass |
| PEAR | <i>Pediomelum argophyllum</i> | Silverleaf Indian breadroot |
| PEES | <i>Pediomelum esculentum</i> | Large Indian beadroot |
| PEAL | <i>Penstemon albidus</i> | White penstemon |
| PEAN | <i>Penstemon angustifolius</i> | Broadbeard beardtongue |
| PEGR | <i>Penstemon gracilis</i> | Lilac penstemon |
| PEGRA | <i>Penstemon grandiflorus</i> | Large beardtongue |
| PHAN | <i>Phlox andicola</i> | Prairie phlox |
| PHHO | <i>Phlox hoodii</i> | Spiny phlox |

| | | |
|-------|--------------------------------|----------------------------|
| PHHI | <i>Physalis hispida</i> | Prairie groundcherry |
| PHLO | <i>Physalis longifolia</i> | Longleaf groundcherry |
| PIPO | <i>Pinus ponderosa</i> | Ponderosa pine |
| PIMI | <i>Piptatherum micranthum</i> | Littleseed ricegrass |
| PLPA | <i>Plantago patagonica</i> | Woolly plantain |
| POFE | <i>Poa fendleri</i> | Muttongrass |
| POPR | <i>Poa pratensis</i> | Kentucky bluegrass |
| POPE | <i>Potentilla pensylvanica</i> | Pennsylvania cinquefoil |
| PRVI | <i>Prunus virginiana</i> | Chokecherry |
| PSLA | <i>Psoralidium lanceolatum</i> | Lemon scurfpea |
| PSTE | <i>Psoralidium tenuiflorum</i> | Slimflower scurfpea |
| PUPA | <i>Pulsatilla patens</i> | Eastern pasqueflower |
| RACO | <i>Ratibida columnifera</i> | Upright prairie coneflower |
| RHTR | <i>Rhus trilobata</i> | Skunkbush sumac |
| RIBES | <i>Ribes sp.</i> | Currant |
| ROCK | <i>Rock</i> | Rock |
| ROAR | <i>Rosa arkansana</i> | Prairie rose |
| ROWO | <i>Rosa woodsii</i> | Woods' rose |
| SCSC | <i>Schizachyrium scoparium</i> | Little bluestem |
| SEIN | <i>Senecio integerrimus</i> | Lambstongue ragwort |
| SEPL | <i>Senecio plattensis</i> | Praire groundsel |
| SIMO | <i>Sisyrinchium montanum</i> | Strict blue-eyed grass |
| SOCA | <i>Solidago canadensis</i> | Canadian goldenrod |
| SOMI | <i>Solidago missouriensis</i> | Missouri goldenrod |
| SOMO | <i>Solidago mollis</i> | Velvety goldenrod |

| | | |
|-------|------------------------------------|---------------------|
| SORI | <i>Solidago rigida</i> | Stiff goldenrod |
| SPCO | <i>Sphaeralcea coccinea</i> | Scarlet globemallow |
| SPCOM | <i>Sporobolus compositus</i> | Composite dropseed |
| SPCR | <i>Sporobolus cryptandrus</i> | Sand dropseed |
| SYOC | <i>Symphoricarpos occidentalis</i> | Western snowberry |
| TAOF | <i>Taraxacum officinale</i> | Common dandelion |
| THRH | <i>Thermopsis rhombifolia</i> | Prairie thermopsis |
| TORY | <i>Toxicodendron rydbergii</i> | Western poison ivy |
| TROC | <i>Tradescantia occidentalis</i> | Prairie spiderwort |
| TRDU | <i>Tragopogon dubius</i> | Yellow salsify |
| VETH | <i>Verbascum thapsus</i> | Common mullein |
| VEST | <i>Verbena stricta</i> | Hoary verbena |
| VINU | <i>Viola nuttallii</i> | Nuttall's violet |
| VIRI | <i>Vitis riparia</i> | Riverbank grape |
| VUOC | <i>Vulpia octoflora</i> | Sixweeks fescue |
| XASP | <i>Xanthisma spinulosum</i> | Sping goldenbush |
| YUGL | <i>Yucca glauca</i> | Soapweed yucca |
| ZIVE | <i>Zigadenus venenosus</i> | Meadow deathcamas |

Table A1.4. A list of species codes, species name, and common names used in the ‘Additional Ecosystem Characteristics’ ordination that were found in 2016 within and surrounding the perimeter of the 1989 Fort Robinson wildfire, Nebraska, USA.

| Species Codes | Species | Common Name |
|---------------|------------------------------------|--------------------------------|
| CWD | Coarse Woody Debris | Coarse Woody Debris |
| Snag_DBH | Snag Diameter at Breast Height | Snag Diameter at Breast Height |
| Snag_Density | Snag Density | Snag Density |
| AMGO | <i>Spinus tristis</i> | American Goldfinch |
| AMRO | <i>Turdus migratorius</i> | American Robin |
| AUWA | <i>Setophaga coronata auduboni</i> | Audubon's Warbler |
| BCCH | <i>Poecile atricapillus</i> | Black-capped Chickadee |
| BGGN | <i>Polioptila caerulea</i> | Blue-gray Gnatcatcher |
| BHCO | <i>Molothrus ater</i> | Brown-headed Cowbird |
| BHGR | <i>Pheucticus melanocephalus</i> | Back-headed Grosbeak |
| BRBL | <i>Euphagus cyanocephalus</i> | Brewer's Blackbird |
| BRTH | <i>Toxostoma rufum</i> | Brown Thrasher |
| BUOR | <i>Icterus bullockii</i> | Bullock's Oriole |
| CAKI | <i>Tyrannus vociferans</i> | Cassin's Kingbird |
| CERW | <i>Setophaga cerulea</i> | Cerulean Warbler |
| CHSP | <i>Spizella passerina</i> | Chipping Sparrow |
| CONI | <i>Chordeiles minor</i> | Common Nighthawk |
| EABL | <i>Sialia sialis</i> | Eastern Bluebird |
| EAKI | <i>Euphagus cyanocephalus</i> | Eastern Kingbird |
| GRSP | <i>Ammodramus savannarum</i> | Grasshopper Sparrow |

| | | |
|--------|-------------------------------------|------------------------|
| HAWO | <i>Dryobates villosus</i> | Hairy Woodpecker |
| HOWR | <i>Troglodytes aedon</i> | House Wren |
| MAKE | <i>Falco sparverius</i> | American Kestrel |
| LASP | <i>Chondestes grammacus</i> | Lark Sparrow |
| MOBL | <i>Sialia currucoides</i> | Mountain Bluebird |
| MODO | <i>Zenaida macroura</i> | Mourning Dove |
| OVEN | <i>Seiurus aurocapilla</i> | Ovenbird |
| PIJA | <i>Gymnorhinus cyanocephalus</i> | Pinyon Jay |
| PLVI | <i>Vireo plumbeus</i> | Plumbeous Vireo |
| PRFA | <i>Falco mexicanus</i> | Prairie Falcon |
| PYNU | <i>Sitta pygmaea</i> | Pygmy Nuthatch |
| RBNU | <i>Sitta canadensis</i> | Red-breasted Nuthatch |
| RHWO | <i>Melanerpes erythrocephalus</i> | Red-headed Woodpecker |
| ROWR | <i>Salpinctes obsoletus</i> | Rock Wren |
| RSTO | <i>Pipilo maculatus</i> | Rufous-sided Towhee |
| BANS | <i>Riparia riparia</i> | Bank Swallow |
| TUVU | <i>Cathartes aura</i> | Turkey Vulture |
| WEKI | <i>Tyrannus verticalis</i> | Western Kingbird |
| WEME | <i>Sturnella neglecta</i> | Western Meadowlark |
| WEWP | <i>Contopus sordidulus</i> | Western Wood-peewee |
| YSFL | <i>Colaptes auratus auratus</i> | Yellow-shafted Flicker |
| ACNE_C | <i>Acer negundo</i> (Cover) | Box elder |
| ACNE_H | <i>Acer negundo</i> (Height) | Box elder |
| ARFI_C | <i>Artemisia filifolia</i> (Cover) | Sand sagebrush |
| ARFI_H | <i>Artemisia filifolia</i> (Height) | Sand sagebrush |

| | | |
|--------|--|------------------------|
| GUSA_C | <i>Gutierrezia sarothrae</i> (Cover) | Broom snakeweed |
| GUSA_H | <i>Gutierrezia sarothrae</i> (Height) | Broom snakeweed |
| JUNI_C | <i>Juniperus sp.</i> (Cover) | Juniper |
| JUNI_H | <i>Juniperus sp.</i> (Height) | Juniper |
| MARE_C | <i>Mahonia repens</i> (Cover) | Creeping barberry |
| MARE_H | <i>Mahonia repens</i> (Height) | Creeping barberry |
| PP_C | <i>Pinus ponderosa</i> (Cover) | Ponderosa pine |
| PP_H | <i>Pinus ponderosa</i> (Height) | Ponderosa pine |
| PRAM_C | <i>Prunus americana</i> (Cover) | American plum |
| PRAM_H | <i>Prunus americana</i> (Height) | American plum |
| PRVI_C | <i>Prunus virginiana</i> (Cover) | Chokecherry |
| PRVI_H | <i>Prunus virginiana</i> (Height) | Chokecherry |
| RHTR_C | <i>Rhus trilobata</i> (Cover) | Skunkbush |
| RHTR_H | <i>Rhus trilobata</i> (Height) | Skunkbush |
| RIAM_C | <i>Ribes americanum</i> (Cover) | American black currant |
| RIAM_H | <i>Ribes americanum</i> (Height) | American black currant |
| RIAU_C | <i>Ribes aureum</i> (Cover) | Golden current |
| RIAU_H | <i>Ribes aureum</i> (Height) | Golden current |
| RIOD_C | <i>Ribes odoratum</i> (Cover) | Clove current |
| RIOD_H | <i>Ribes odoratum</i> (Height) | Clove current |
| RIOX_C | <i>Ribes oxyacanthoides</i> (Cover) | Canadian gooseberry |
| RIOX_H | <i>Ribes oxyacanthoides</i> (Height) | Canadian gooseberry |
| ROWO_C | <i>Rosa woodsii</i> (Cover) | Woods rose |
| ROWO_H | <i>Rosa woodsii</i> (Height) | Woods rose |
| SYOC_C | <i>Symphoricarpos occidentalis</i> (Cover) | Western snowberry |

| | | |
|--------|--|--------------------|
| SYOC_H | <i>Symporicarpos occidentalis</i> (Height) | Western snowberry |
| TORA_C | <i>Toxicodendron radicans</i> (Cover) | Eastern poison ivy |
| TORA_H | <i>Toxicodendron radicans</i> (Height) | Eastern poison ivy |
| ULAM_C | <i>Ulmus americana</i> (Cover) | American elm |
| ULAM_H | <i>Ulmus americana</i> (Height) | American elm |

Table A1.5. A list of herbaceous species that were unique to each transition class, along with the number of sampling site and number of quadrats that each species was recorded in.

| Abbrev. | Species | Number of Sites | Number of Quadrats |
|--------------------|-------------------------------|-----------------|--------------------|
| Unburned Forest | | | |
| | <i>Berberis Repens</i> | 1 | 1 |
| | <i>Carex saximontana</i> | 1 | 2 |
| | <i>Cynoglossum officinale</i> | 1 | 2 |
| | <i>Cystopteris fragilis</i> | 5 | 22 |
| | <i>Descurainia pinnata</i> | 1 | 1 |
| | <i>Elymus canadensis</i> | 1 | 10 |
| | <i>Galium triflorum</i> | 1 | 3 |
| | <i>Viola nuttallii</i> | 1 | 1 |
| | <i>Hieracium umbellatum</i> | 1 | 1 |
| | <i>Senecio plattensis</i> | 1 | 1 |
| Forest → Forest | | | |
| | <i>Cirsium arvense</i> | 1 | 3 |
| | <i>Galium aparine</i> | 1 | 1 |
| | <i>Galium boreale</i> | 1 | 2 |
| | <i>Phlox andicola</i> | 1 | 3 |
| | <i>Solidago mollis</i> | 1 | 2 |
| | <i>Anaphalis margaritacea</i> | 1 | 2 |
| | <i>Glycyrrhiza lepidota</i> | 1 | 2 |
| | <i>Vitus riparia</i> | 1 | 1 |
| Forest → Grassland | | | |
| | <i>Anemone cylindrica</i> | 1 | 1 |
| | <i>Camelina microcarpa</i> | 1 | 2 |

| | | |
|-------------------------------------|---|---|
| <i>Euphorbia missurica</i> | 2 | 3 |
| <i>Melilotus officinalis</i> | 1 | 1 |
| <i>Sisyrinchium montanum</i> | 1 | 2 |
| <i>Verbena stricta</i> | 2 | 4 |
| <i>Bouteloua hirsuta</i> | 2 | 3 |
| <i>Brickellia eupatorioides</i> | 2 | 4 |
| <i>Draba reptans</i> | 2 | 2 |
| <i>Lesquerella arenosa</i> | 1 | 3 |
| <i>Oxytropis lambertii</i> | 1 | 1 |
| <i>Solidago canadensis</i> | 1 | 4 |
| <i>Aster oblongifolia</i> | 1 | 6 |
| <i>Eriogonum cernuum</i> | 1 | 1 |
| <i>Calochortus nuttallii</i> | 1 | 2 |
| <i>Euphorbia robusta</i> | 1 | 1 |
| <i>Machaeranthera tanacetifolia</i> | 1 | 3 |
| <i>Sporobolus compositus</i> | 1 | 1 |

Unburned Grassland

| | | |
|----------------------------|---|----|
| <i>Linum Rigidum</i> | 1 | 1 |
| <i>Opuntia humifusa</i> | 3 | 4 |
| <i>Penstemon albidus</i> | 1 | 1 |
| <i>Physalis longifolia</i> | 3 | 17 |
| <i>Cirsium plattensis</i> | 1 | 1 |
| <i>Panicum capillare</i> | 1 | 2 |
| <i>Artemisia filifolia</i> | 2 | 6 |

Grassland → Grassland

| | | |
|---------------------------------|---|---|
| <i>Aristida purpurea</i> | 2 | 8 |
| <i>Artemisia dracunculoides</i> | 1 | 4 |

| | | |
|--------------------------------|---|---|
| <i>Hedeoma hispida</i> | 1 | 9 |
| <i>Arabis hirsuta</i> | 1 | 4 |
| <i>Eremogone hookeri</i> | 1 | 1 |
| <i>Erysimum cheiranthoides</i> | 1 | 1 |
| <i>Penstemon angustifolia</i> | 1 | 2 |
| <i>Physalis hispida</i> | 1 | 1 |

Table A1.6. A list of understory woody plant and bird species unique to each transition class, along with the number of sampling sites each species was recorded in.

| Abbrv. | Species | Number of Sites |
|--------------------|----------------------------------|-----------------|
| Unburned Forest | | |
| BHGR | <i>Pheucticus melanocephalus</i> | 1 |
| CEWA | <i>Bombycilla cedrorum</i> | 3 |
| AMKE | <i>Falco sparverius</i> | 1 |
| OVEN | <i>Seiurus aurocapillus</i> | 1 |
| PLVI | <i>Vireo plumbeus</i> | 3 |
| PYNU | <i>Sitta pygmaea</i> | 1 |
| RBNU | <i>Sitta canadensis</i> | 1 |
| ACNE | <i>Acer negundo</i> | 1 |
| MARE | <i>Mahonia repens</i> | 4 |
| PRAM | <i>Prunus americana</i> | 5 |
| RIAU | <i>Ribes aureum</i> | 1 |
| RIOX | <i>Ribes oxyacanthoides</i> | 1 |
| Forest → Forest | | |
| AMRO | <i>Turdus migratorius</i> | 1 |
| BUOR | <i>Icterus bullockii</i> | 1 |
| CONI | <i>Chordeiles minor</i> | 1 |
| ULAM | <i>Ulmus americana</i> | 1 |
| Forest → Grassland | | |
| BRTH | <i>Toxostoma rufum</i> | 1 |
| Grassland | | |
| GRSP | <i>Ammodramus savannarum</i> | 5 |
| ARFI | <i>Artemisia filifolia</i> | 5 |

Grassland → Grassland

PRFA *Falco mexicanus*

1
