



Glossary

ON THE PREVIOUS PAGE

Hamilton Lake

NPS Photo

GLOSSARY

abandoned trail – see trail, below.

adaptive management – a system of management practices based on clearly identified desired conditions and monitoring of those conditions to determine if management is achieving them. If not, adaptive management facilitates changes that will either best ensure the desired conditions or reevaluate them. This system recognizes that knowledge about natural resources is sometimes uncertain; it is the preferred method of management in these cases. (Adapted from *Departmental Manual 516 DM 4.16*)

administrative structure – development or facility used to support the administration of wilderness but not intended for public use, for example, ranger stations.

appropriate use – a use that is suitable, proper, fitting, and legal within wilderness.

archeological resource – any material remains or physical evidence of past human life or activities that are of archeological interest, including the record of the effects of human activities on the environment. Archeological resources are capable of revealing scientific or human information through archeological research.

backcountry – primitive, undeveloped portions of parks, some of which may be managed as wilderness.

best management practices – practices that apply the most current means and technologies available to comply with mandatory environmental regulations, and to maintain a superior level of environmental performance. See *mitigation*, below.

cat-hole – a small user-dug hole at least 6 inches deep where human waste is deposited, covered with soil, and left to break down naturally. See *toilet* below.

character – see *wilderness character* below.

closed to grazing – open to travel and camping with stock (see *stock* below) provided that animals are confined on a hardened surface and given substitute feed.

commercial enterprise – for the purposes of this plan, the Bearpaw Meadow High Sierra Camp and the Pear Lake Ski Hut are the only allowed commercial enterprises in the wilderness in Sequoia and Kings Canyon National Parks (pursuant to the House Report 98-40).

commercial service – an activity in which any duties or work are provided by one person or entity for another person or entity in exchange for money; it includes diverse services commonly associated with guiding and outfitting. See *day ride, commercial* below.

counterbalance – a food-storage method in which two bags are hung opposite each other over a branch or rock in a manner that keeps the food inaccessible to wildlife, especially bears.

cultural landscape – a reflection of human adaptation and use of natural resources expressed in the way land is organized and divided, patterns of settlement, land use, systems of circulation, and the types of structures that are built.

cultural resources – archeological resources, historic structures, cultural landscapes, ethnographic resources, and museum objects. Cultural resources may be linked to historic events or noteworthy people;

they may be embodiments of technical accomplishment, design, or workmanship; they may be sources of information important in historical or archeological research; or they may be important in the cultural system of an ethnic group (*NPS-28 Cultural Resource Management Guideline 1998; NPS Management Policies 2006*). See *ethnographic resource* below.

day ride – a horseback ride that does not involve an overnight stay. Areas *open to day rides and pass-through travel only* are open to stock travel but animals may not graze or stay overnight. See *stock* below.

commercial day-ride – guided horseback ride, provided by a commercial-services provider, that does not involve an overnight stay.

wilderness camp day-ride – horseback rides (commercial or private party) that start and end from a single campsite in wilderness.

day use – wilderness use that does not involve an overnight stay. Day-use activities could include hiking, canyoneering, climbing, sightseeing, wildlife viewing, cross-country skiing, day rides, etc., in which the visitor expects to exit wilderness on the same day they enter.

designated campsite – a campsite delineated with a marker that identifies a location in which people who would like to camp in the vicinity are required to camp. Such campsites may or may not include associated facilities (e.g., firepits, toilets, food-storage boxes, etc.).

Designated Potential Wilderness Addition (DPWA) – federal lands that Congress intends to become fully designated wilderness upon the elimination of an existing and allowed nonconforming use prohibited by the Wilderness Act that is associated with that land.

desired condition – qualitatively describes an ideal condition of wilderness character. This is both a holistic condition, as well as the desired condition for all qualities of wilderness character: *untrammelled, natural, undeveloped, and opportunities for solitude or primitive and unconfined recreation*, and the other features of value quality.

destination quota – a limit on the number of visitors, groups, or campsites in a specific wilderness location. Destination quotas help to protect wilderness quality and visitor experience in given areas. Quotas are based on resource information, desired condition, and professional judgment by an interdisciplinary team of specialists and decision makers.

dunnage – when visitors' supplies and/or equipment are carried into wilderness on stock (see *stock*, below), or by a porter, while the visitors hike in; stock or porter(s) leave once the supplies are delivered to the visitors at their destinations. This could occur at the beginning of a trip, in the middle of a trip as a resupply, or at the end of a trip to remove supplies and/or equipment.

effect (used interchangeably in this document with the word *impact*) – the likely impact of an action or proposed action upon specific natural, cultural, social, or socioeconomic resources. Effects may be direct, indirect, individual, cumulative, beneficial, or adverse.

established camp – a campsite that has been previously used and has indications of use, such as bare ground or a fire ring.

ethnographic resource – expressions of human culture and the basis of continuity of cultural systems (*NPS-28 Cultural Resource Management Guideline 1998*). Ethnographic resources can include sites,

structures, objects, traditional landscapes, or a natural resource feature assigned traditional legendary, religious, subsistence, or other significance in the cultural system of a traditionally associated group.

food-storage box – also referred to as food-storage *locker*: an administrative structure that is semi-permanently fixed to a location such as a campsite, intended to prevent bears and other wildlife from obtaining food.

food-storage container – a portable, visitor-owned or rented, bear-resistant storage device that is designed to be carried from location to location. Note: Only products allowed by *both* Sequoia and Kings Canyon National Parks and Yosemite National Park can be used in the parks.

forage – plant material (mainly plant leaves and stems) eaten by grazing animals. Forage areas are defined as the parks' primary meadows and their associated forested or upland grasslands that are commonly used by stock for grazing. See *weed-free forage*, below.

formal trail –see *trail* below.

frontcountry – areas of the park that are not designated or managed as wilderness. The frontcountry contains developed park areas and is generally along or accessed by roads.

gateway community – a community in close proximity to a national park, whose residents are often affected by decisions made in the course of managing the park and whose decisions may affect the resources of the park. Because of this, there are shared interests and concerns regarding decisions. Gateway communities usually offer food, lodging, and other services to park visitors. They also provide opportunities for employee housing, and a convenient location to purchase goods and services essential to park administration.

General Management Plan (GMP) – a comprehensive plan that guides park management for 15–20 years. It is accompanied by a draft and final environmental impact statement. The Sequoia and Kings Canyon National Parks General Management Plan was approved in 2007.

historic structure – “a constructed work...consciously created to serve some human activity” (*NPS-28 Cultural Resource Management Guideline 1998*). Usually immovable, although some have been relocated and others are mobile by design. Historic structures in Sequoia and Kings Canyon National Parks include buildings, cabins, historic districts, shelters, Civilian Conservation Corps (CCC)-era structures, campgrounds, roads, fences, and other structures of historic, aesthetic, or scientific importance.

historic travelway– a route and/or formal trail that has special value under the National Historic Preservation Act (NHPA).

impact (used interchangeably in this document with the word *effect*) – the likely effect of an action or proposed action upon specific natural, cultural, social, or socioeconomic resources. Impacts may be direct, indirect, individual, cumulative, beneficial, or adverse.

impairment – an impact that, in the professional judgment of a responsible NPS manager, would harm the integrity of park resources or values and violate the 1916 NPS Organic Act's mandate that park resources and values remain unimpaired.

indicator – a distinct and important element within each quality of wilderness character, which has measurable attributes that can be the focus of wilderness character monitoring. These function as

categories that have one or more measures within them, and are established in *Keeping it Wild* (Landres et.al. 2008). See *qualities of wilderness*, below, and “Appendix A: Visitor Capacity.”

informal trail – a landscape impact such as bare ground or damaged vegetation, caused solely by repeated use, that looks like a segment of trail. An informal trail does not receive trail maintenance. See *trail* below.

inholding – privately-owned land that is inside the boundary of the parks.

installation – structure used to support activities such as telecommunications, water development, grazing, or wildlife management. It includes debris such as old dump sites, aircraft-crash sites, or memorials or other monuments. It also includes unattended measurement devices for the purpose of recording environmental data, such as meteorology or seismic activity.

invasive species – a nonnative species whose introduction does or is likely to cause economic or environmental harm or harm to human health. Invasive species display rapid growth and spread, establish over large areas, and persist.

lacustrine – see *wetlands*, below.

management actions – deliberate actions taken by park management to address anticipated problems or mitigate undesirable conditions or impacts.

management directive – a document providing NPS field employees with guidance on NPS policy, including compilations of legal references, operating policies, standards, procedures, general information, recommendations, and examples. They may reiterate or compile requirements (for example, laws, regulations, and policies) that have been imposed by higher authorities.

measure – a specific aspect of wilderness resources or character that can be measured or quantified. Specific feature(s) used to quantify an indicator, as specified in a monitoring or sampling protocol. One or more specific measures may be used to quantify or qualitatively evaluate the condition of an indicator at a particular place and time.

Minimum Requirement Analysis (MRA) – a written analysis that helps determine and document if potential actions by the National Park Service or its approved cooperators are the minimum necessary to accomplish a particular objective in wilderness and, if so, how to minimize any adverse effects.

minimum tool – a use or activity that has been determined to be necessary in order to accomplish an essential task in a wilderness area. It is generally the tool, equipment, device, force, regulation, or practice that has the least impact on wilderness character while achieving the management objective.

Mission 66 – the most-recent intensive systemwide program of park development. It represented a nationwide response to deteriorated park conditions and increasing visitorship in the postwar era. The program sought to implement large-scale capital improvement between 1956 and 1966 (the latter marked the 50th anniversary of the founding of the NPS). Mission 66 buildings have been recognized by the National Register of Historic Places as significant historic structures and as important representatives of a new building type.

mitigation – activities that will avoid, reduce the severity of, or eliminate an adverse environmental impact.

monitoring – activities designed to detect changes or trends in a resource over time. Further defined as collection and analysis of repeated observations or measurements to evaluate changes in condition and progress toward meeting a management objective. As used in this document, it is synonymous with tracking change in wilderness character. See *wilderness character*, below.

National Environmental Policy Act of 1969 (NEPA) – a public law requiring federal agencies to look at alternatives for proposed major federal actions and to fully analyze the impacts of those alternatives on the human environment before a decision is made.

native species – all species that have occurred, now occur, or may occur in a given area as a result of natural processes. Native species in a place have evolved in concert with each other.

natural quality – one of the qualities of wilderness character. See *qualities of wilderness*, below.

necessary – important in order to achieve a specific result, or desired by authority or convention.

nonnative species – those species that occupy or could occupy park lands directly or indirectly as the result of deliberate or accidental human activities. (Also commonly referred to as *exotic*, *alien*, or *invasive* species.) Because a nonnative species did not evolve in concert with the species native to the place, it is not a natural component of the natural ecosystem at that place.

nonconforming use – uses or activities that do not conform to the purposes and preservation of wilderness outlined in the Wilderness Act; for example, the presence of modern structures, installations, habitations, and the use of motor vehicles, motorized equipment, or mechanical transport in wilderness. Nonconforming uses influence the *undeveloped* and *solitude* qualities of wilderness.

off-trail – travel in areas with no formal trail. See *trail*, below.

on-trail – travel along a Class 1, Class 2 or Class 3 trail. See *trail*, below.

other features of value quality – See *qualities of wilderness*, below.

pack-out waste kit – a user carried waste kit composed of a bag(s) with a chemical agent where waste is deposited. Kit is carried out by user and disposed of in a waste receptacle (e.g., WagBag®, or Restop®). See *toilet*, below.

palustrine – see *wetlands*, below.

pass-through area – an area open to stock travel but animals may not graze or stay overnight.

pass-through rides – stock rides (commercial or private party) that start and end in wilderness when relocating to a new wilderness-based campsite. Areas *open to day rides and pass-through travel only* are open to stock travel but animals may not graze or stay overnight. See *stock* below.

permit – a written authorization to engage in uses or activities that are otherwise prohibited, restricted, or regulated.

porter – a person(s) who carries materiel for another person as a commercial service. This could involve carrying in supplies at the start of a trip, carrying in food/equipment in the middle of a trip as a resupply, or carrying out equipment at the end of a trip.

preferred alternative – the alternative NPS decision-makers have identified as preferred at the draft EIS stage. It is identified to show the public which alternative is likely to be selected to help focus their comments.

primeval – of or relating to the first or earliest age or ages, where forces other than humans dominate, wild (referenced in the Wilderness Act Section 2(c): “wilderness is . . . an area of undeveloped Federal land retaining its primeval character and influence”).

primitive – of or relating to early or earliest state or stage of development, marked by simplicity, e.g., walking is a primitive form of transport (referenced in the Wilderness Act Section 2(c): “a primitive and unconfined type of recreation”).

pristine – having its original purity uncorrupted, unsullied, or unspoiled; remaining in a pure state (pristine is not contained in the Wilderness Act and thus is not a mandatory condition or standard to be achieved).

privy (or privies) – see *toilet*, below.

propagule – any part or structure of a plant capable of being propagated or acting as an agent of reproduction.

propagule pressure – a measure of the number of individual nonnative plants released into an area, or the quality, quantity, and frequency of invading organisms.

public involvement – public input sought in planning for public lands and required under National Environmental Policy Act of 1969 (NEPA). Comment is sought at the initial scoping and at the draft environmental impact statement (DEIS) stages. Substantive comment on the DEIS must be responded to in the final environmental impact statement (FEIS).

qualities of wilderness – primary elements of wilderness character that link directly to the statutory language of the 1964 Wilderness Act. All defined qualities are assessed to establish trends in wilderness character. See *wilderness character*, below, and “Chapter 3: Affected Environment.”

natural quality – This quality is related to the effects of modern society on ecological systems inside wilderness since the time the area was designated. Wilderness ecological systems are to be substantially free from the effects of modern civilization.

other features of value quality – sometimes referred to as the *fifth quality*, this quality of wilderness character has been defined by the National Park Service to capture features with ecological, geological, scientific, educational, scenic, or historical value that may not be included under the other four qualities. This quality is unique to an individual wilderness and, typically, the *other features of value* occurs only in specific locations within a wilderness.

solitude or primitive-and-unconfined-recreation quality – wilderness is to provide opportunities to experience solitude or primitive and unconfined recreation, including the values of inspiration and physical and mental challenge. This quality is related to conditions that affect the opportunity for people to experience solitude or primitive, unconfined recreation, rather than monitoring visitor experiences per se.

undeveloped quality – wilderness is to be essentially without permanent improvements or modern human occupation. This quality is related to the presence or absence of structures, installations, habitations, and other evidence of modern human presence or occupation.

untrammelled quality – wilderness is to be essentially unhindered and free from modern human control or manipulation. This quality is related to human activities that directly control or manipulate the components or processes of ecological systems inside wilderness.

Record of Decision (ROD) – a document that states the official decision for alternative actions proposed by agencies in a draft environmental impact statement and revised in a final environmental impact statement.

restroom – see *toilet*, below.

riparian – adjacent to, or living on, the bank of a river, or sometimes a lake or pond.

riverine – see *wetlands*, below.

route – see *trail*, below.

scoping – internal NPS decision-making on issues, alternatives, mitigation measures, the analysis boundary, appropriate level of documentation, lead and cooperating agency roles, available references and guidance, defining purpose and need, and so forth. External scoping is the early involvement of the interested and affected public.

service day (or commercial service day) – all or part of a day spent by a client of a commercial service provider on NPS-managed lands.

soil orders – the most general level of classification in the USDA system of soil taxonomy, frequently defined by a single dominant characteristic affecting soils in a location. Soil orders in these parks include Mollisols, Entisols, Alfisols, Inceptisols, Spodosols, and Gelisols.

solitude, or primitive and unconfined recreation quality – see *qualities of wilderness*, above.

spookum – a temporary barrier at a narrow or “pinch” point to contain stock. Temporary barriers may only be used when stock is actually roaming free in permitted grazing areas; barriers must be removed when the stock is gathered. Damaging natural resources and preventing unencumbered travel by the public when constructing temporary barriers is prohibited.

spot trip – a trip in which visitors ride stock into wilderness and are dropped off at their chosen site. The stock are then removed from the area. This also includes visitors being picked up from a camp in wilderness and all or part of a party riding out of wilderness.

standards – the thresholds which conditions should not exceed. Standards identify the minimum level of acceptable wilderness condition, beyond which management action to improve conditions is triggered.

stewardship – the ethic of using the most effective concepts, techniques, equipment, and technology to prevent, avoid, or mitigate unacceptable impacts on natural or cultural resources.

stock – defined as horses, mules, burros/donkeys, and llamas only (as designated in the Superintendent's Compendium) that can be ridden or used to carry supplies.

stock use – travelling, camping, and grazing with horses, mules, burros/donkeys, or llamas.

Superintendent's Compendium – park-specific rules implemented under the discretionary authority of the park superintendent. It serves as public notice with an opportunity for public comment, identifies areas closed for public use, provides a list of activities requiring either a special-use permit or reservation, and elaborates on those public-use and resource-protection regulations that pertain to the specific administration of the park. It does not contain those regulations found in 36 Code of Federal Regulations (CFR) and other United States Codes (USC) and CFR titles, which are enforced without further elaboration at the park level.

Toilet, varieties of – methods of containing human waste:

cat-hole – a small user-dug hole at least 6 inches deep where human waste is deposited, covered with soil, and left to break down naturally.

pack-out waste kit – a user carried waste kit composed of a bag(s) with a chemical agent where waste is deposited. Kit is carried out by user and disposed of in a waste receptacle (e.g., WagBag®, or Restop®).

privy (or privies) – a primitive toilet facility usually consisting of a dug hole with a small privacy structure, and a toilet seat on a platform constructed over the dug hole. Deposited waste is left to break down naturally. The privy structure is portable and is moved to a new hole in the general locale when necessary.

restroom – a permanent building that houses one or more composting toilets. There are only two public restrooms in the parks' wilderness, one at Emerald Lake and one at Pear Lake.

vault toilet – a self-contained vault where human waste is deposited, then subsequently removed.

trail, types of –

abandoned trail – a trail that was once a formal, maintained trail, but maintenance has been discontinued.

formal trail – designated Class 1, Class 2, or Class 3 trails that are regularly maintained.

informal (or social) trail – a landscape impact, such as bare ground or damaged vegetation, caused solely by repeated use that looks like a segment of trail. An informal trail does not receive trail maintenance.

restored trail – a feature that was at one time a formal or informal trail that has had restoration work done to restore the landscape to its natural, untrailed condition.

route – a travel corridor of social value with no designated trail; it does not receive maintenance (except in rare cases where restoration may occur to protect resources). Traffic may create informal trails in parts of a route; a route may include informal trails and abandoned trails.

unmaintained trail – an informal term that includes many different situations. For clarity, this term will not be used.

transitory crew camps – short-term camps used by small traveling work crews who use minimum-impact practices and rehabilitate the camps when work is completed.

undeveloped quality – see *qualities of wilderness*, above.

untrammelled quality – see *qualities of wilderness*, above.

vault toilet – see *toilet*, above.

visitor capacity – a component of visitor-use management consisting of the maximum amounts and types of visitor use that an area can accommodate while sustaining desired resource conditions and visitor experiences, consistent with the purpose for which the area was established. See *desired condition*, above.

visitor/user of wilderness – a person in the wilderness. The term includes hikers, backpackers, and stock users.

weed-free forage, certified – hay, feed, or straw products grown in a field that received reasonable and prudent visual inspection that detected no propagative plant parts or seeds from state or federal noxious-weed list. Fields passing inspection are state certified; the producer may then label the product *certified weed-free*. Certification does not guarantee complete absence of noxious weeds, nor are these materials inspected for nonnative or invasive plants not listed on the state- or federal-noxious weed list.

weighted value per campable mile (WVCM) – a metric that considers three factors of a travel subzone: length of shoreline of water courses and lakes; the number of campsites; and the condition class of the campsites. The final WVCM number is calculated using these three factors (Parsons and Stohlgren 1987, Cole and Parsons 2013).

wetlands – all wetlands within these parks fall into one of three system types: **riverine** (rivers, creeks, and streams), **palustrine** (shallow ponds, marshes, swamps, and sloughs), or **lacustrine** (lakes and deep ponds). The lacustrine class represents wetlands and deepwater habitats that are situated in topographic depressions or dammed river channels; that lack trees, shrubs, and emergent mosses and lichens over 60% of their area; and that are greater than 8 hectares (20 acres) in size.

wilderness:

designated wilderness – federal land designated by Congress as a component of the national wilderness preservation system.

eligible, study, proposed and/or recommended wilderness – federal lands found to possess wilderness character based on the criteria specified in the Wilderness Act. The four categories reflect different stages of the wilderness review process; all are managed to preserve the wilderness resources and values that make them eligible for wilderness designation.

potential wilderness – federal lands surrounded by, or adjacent to, lands designated or proposed for wilderness designation that do not themselves immediately qualify for designation due to temporary, nonconforming uses or incompatible conditions. Potential wilderness is a subset of the other wilderness categories (it can be eligible, study, proposed, recommended, or designated potential wilderness).

wilderness character – the combination of biophysical, experiential, and symbolic ideals that distinguishes wilderness from other lands. These ideals combine to form a complex and subtle set of relationships among the land, its management, its users, and the meanings people associate with wilderness (source: *Keeping It Wild*, 2008). See *qualities of wilderness*, above, and “Chapter 3: Affected Environment.”

wilderness character monitoring – gathering data on selected measures of wilderness character in order to assess if and how wilderness character is changing over time. See “Appendix C, Wilderness Character Monitoring Strategy.”

wilderness travel zone, and subzone – the parks use wilderness travel zones as a way of monitoring and analyzing wilderness conditions and use, and to address a variety of wilderness-stewardship issues. In the early 1970s, park managers divided the parks into 52 wilderness travel zones overlying the parks’ wilderness, generally based on geographic features (watersheds). Each zone is subdivided into multiple subzones (273 in total).

REFERENCES

LAWS AND POLICIES REFERENCED

- Administrative Procedure Act of 1946. 5 USC 551 et seq. 3; PL 79-404, 60 Stat. 237. June 11, 1946.
- California Endangered Species Act. California Fish and Game Code, Sections 2050 et seq.
- California Wilderness Act of 1984. 16 USC 1131 et seq.; PL 98-425; 98 Stat. L. 1619. Enacted September 28, 1984.
- Clean Air Act of 1963, as amended. 42 USC 7401 et seq.; PL 88-206; 77 Stat. 392. December 17, 1963.
- Clean Water Act of 1972, as amended. 33 USC 1251 et seq.; PL 92-500; 86 Stat. L. 816. October 18, 1972.
- Consolidated Appropriations Act of 2005. PL 108-447. December 8, 2004.
- Council on Environmental Quality. 40 CFR 1500 et seq.
- Endangered Species Act of 1973, as amended. 16 USC 1531–1544; PL 93-205; 87 Stat. L. 884. Approved December 28, 1973.
- Executive Order 11990, *Protection of Wetlands*. 42 FR 26961. May 24, 1977.
- Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*. 59 FR 7629. February 11, 1994.
- Executive Order 13112, *Invasive Species*. 64 FR 6183. February 8, 1999.
- House of Representatives Committee Report 98-40, March 18, 1983 (accompanying California Wilderness Act, 1984, PL 98-425).
- Kings Canyon National Park enlarged PL 89-111, 79 Stat L., 446. August 6, 1965.
- Kings Canyon National Park established 16 USC 80, 54 Stat. L., 41. March 4, 1940.
- National Environmental Policy Act of 1969, as amended. 42 USC 4321 et seq.; PL 91-190, Sec. 2; 83 Stat. L. 852. January 1, 1970.
- National Forest Management Act of 1976. 16 USC §1604; PL 94-588.
- National Historic Preservation Act. PL 89-665; 16 USC 470 et seq. October 15, 1966.
- National Park Service Concessions Management Improvement Act of 1998. 16 USC 5966.
- National Park Service Director's Order 12: *Conservation Planning, Environmental Impact Analysis, and Decision-Making*. Approved October 5, 2011.
- National Park Service Director's Order 41: *Wilderness Stewardship*. Approved May 13, 2013.
- National Park Service Director's Order 77: *Natural Resource Protection*. Under development.
- National Park Service Director's Order 77-1: *Wetland Protection*. Approved October 30, 2002.
- National Park Service *Management Policies 2006*
- National Parks and Recreation Act of 1978. PL 95-625, Stat. 3467. November 10, 1978.
- Native American Graves Protection and Repatriation Act, Pub. L. 101-601, 25 U.S.C. 3001 et seq., 104 Stat. 3048. November 16, 1990.
- Omnibus Public Land Management Act of 2009. PL 111-11; H.R. 146. March 30, 2009.

- Organic Act of 1916. 16 USC 123, and 4, 39 Stat. 535. August 25, 1916.
- Redwood Act. 16 USC 1a-1; PL 95-250; 92 Stat. L. 163. March 27, 1978.
- Secretarial Order 3175: Identification, Conservation, and Protection of Indian Trust Assets. November 8, 1993.
- Sequoia and Kings Canyon National Parks Backcountry Access Act. PL 112-128. June 5, 2012.
- Sequoia and Kings Canyon National Parks Management Directive 49: Minimum Requirement Analysis and Determination.
- Sequoia National Park enlarged 26 Stat. 650. October 1, 1890.
- Sequoia National Park enlarged 16 USC 688, 44 Stat. L., 818. July 3, 1926.
- Sequoia National Park enlarged PL 106-574, 114 Stat. 3062. December 28, 2000.
- Sequoia National Park established 16 USC 41, 26 Stat. L., 478. September 25, 1890.
- To Authorize the Continued Use of Certain Lands within Sequoia National Park by Portions of an Existing Hydroelectric Project. PL 99-338. June 19, 1986.
- Wilderness Act of 1964. 16 USC 1131–1136; PL 88-577; 78 Stat. L. 890. September 3, 1964.

BIBLIOGRAPHIC ABBREVIATIONS USED IN TEXT

BEA	Bureau of Economic Analysis, in the U.S. Department of Commerce
BLM	Bureau of Land Management, in the U.S. Department of the Interior
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CEQ	Council on Environmental Quality
CFGC	California Fish and Game Commission
CNDDB	California State Natural Diversity Database
CNPS	California Native Plant Society
NPS	National Park Service, in the U.S. Department of the Interior
NRC	National Research Council
SEKI	Sequoia and Kings Canyon National Parks, in the National Park Service
USDA	U.S. Department of Agriculture
USDI	U.S. Department of the Interior
USEPA	U.S. Environmental Protection Agency
USFS	U.S. Forest Service, in the U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service, in the U.S. Department of the Interior
USGS	U.S. Geological Survey, in the U.S. Department of the Interior
WACAP	Western Airborne Contaminants Assessment Project

LITERATURE CITED

Allen-Diaz, B.H.

- 1991 "Water table and plant species relationships in Sierra Nevada meadows." *American Midland Naturalist* 126: 30-43.

Anderson, R.S.

- 1971 Crustacean plankton of 146 alpine and subalpine lakes in Western Canada. *Journal of the Fisheries Research Board of Canada* 28:311–321.

Anderson, T.

- 2010 New species from ancient caves *National Wildlife* 48: 14-16.

Andrews, E.D.

- 2012 Hydrology of the Sierra Nevada Network national parks: Status and trends. Natural Resource Report NPS/SIEN/NRR—2012/500. National Park Service, Fort Collins, Colorado.

Atkinson, P., L. Lyness, and M. Scatteregia

- 1990 Ground fuel inventories of eighteen sites in the Kern River drainage of Sequoia National Park, California. Unpublished National Park Service report. 25 p.

Austin, J., D. Boiano, D. Gammons, E. Meyer, and H. Werner

- 2013 A natural resource condition assessment for Sequoia and Kings Canyon National Parks: Appendix 19 – native and nonnative vertebrate species. Natural Resource Report NPS/SEKI/NRR—2013/665.19. National Park Service, Fort Collins, Colorado.

Bahls, P.

- 1992 The status of fish populations and management of high mountain lakes in the western United States. *Northwest Science* 66:183-193.

Barnett T.P, D.W. Pierce, H.G. Hidalgo, C. Bonfils, B.D. Santer, T. Das, G. Bala, A.W. Wood, T. Nozawa, A.A. Mirin, D.R. Cayan, and M.D. Dettinger

- 2008 "Human-induced changes in the hydrology of the western United States." *Science* no. 319:1080-1083

Barbour, M.G., T. Keeler-Wolf, and A.A. Schoenherr

- 2007 *Terrestrial vegetation of California*. Third edition. University of California. Available [online]: http://books.google.com/books?id=YNAWPSMm2CUC&pg=PA456&source=bs_toc_r&cad=#v=onepage&q&f=false. Accessed May 31, 2013.

Bartolome, James W., D.C. Erman, and C.F. Schwara

- 1990 Stability and change in minerotrophic peatlands, Sierra Nevada of California and Nevada. Res. Paper PSW-RP-198. Berkeley, CA: Pacific Southwest Forest and Range Experiment Station, Forest Service, U.S. Department of Agriculture; 11 p.

Basagic, H.J., IV

- 2008 *Quantifying twentieth century glacier change in the Sierra Nevada, California*. Geography, Portland State University, Portland, Oregon.

Bedford, B.L. and K.S. Godwin

- 2003 Fens of the United States: distribution, characteristics, and scientific connection versus legal isolation. *Wetlands* 23: 608-629.

Berlow, E.L., C.M. D'Antonio, and S.A. Reynolds

- 2002 Shrub expansion in montane meadows: the interaction of local-scale disturbance and site aridity. *Ecological Applications* 12:1103-1118

Blank, R.R., T. Svejcar, and G. Riegel

- 2006 Soil attributes in a Sierra Nevada riparian meadow as influenced by grazing. *Rangeland ecology & management*, 59(3), 321-329.

Blaustein, A.R., P.D. Hoffman, D.G. Hokit, J.M. Kiesecker, S.C. Walls, and J.B. Hayes

- 1994 UV repair and resistance to solar UV-B in amphibian eggs: a link to population declines? *Proceedings of the National Academy of Sciences of the United States of America* 91:1791-1795.

Bock, C.E., V.A. Saab, T.D. Rich, and D.S. Dobkin

- 1993 Effects of livestock grazing on neotropical migratory landbirds in western North America. Pages 296-309 in Finch, D.M., P.W. Stangel, eds. *Status and management of neotropical migratory birds*. General Technical Report RM-229. US Forest Service, Rocky Mountain Forest and Range Experiment Station, Fort Collins, Colorado, USA.

Bond, M.L., R.B. Siegel, and D.L. Craig, editors

- 2012 A Conservation Strategy for the Black-backed Woodpecker (*Picoides arcticus*) in California. Version 1.0. The Institute for Bird Populations and California Partners in Flight. Point Reyes Station, California

Bradford, D.F., D.M. Graber, and F. Tabatabai

- 1994 Population declines of the native frog, *Rana muscosa*, in Sequoia and Kings Canyon National Parks, California. *Southwestern Naturalist* 39:323-327.

Brewer, W.H.

- 1966 *Up and Down California in 1860-1864: The Journal of William H. Brewer*. Berkeley, CA: University of California Press.

Broom, T.J. and T.E. Hall

- 2009 A guide to monitoring encounters in wilderness. Prepared for the US Forest Service. University of Idaho, College of Natural Resources, Department of Conservation Social Sciences.

Brown, C.

- 2012 Personal communication, telephone interview.. (as cited in NPS 2013d)

Brown, P.M.

- 1996 OLDLIST: A database of maximum tree ages. In: J.S. Dean, D.M. Meko, and T.W. Swetnam, eds., *Tree Rings, Environment, and Humanity: Proceedings of the International Conference, Tucson, Arizona, 17-21 May, 1994*. *Radiocarbon* 1996:727-731. (<http://www.rmtrr.org/oldlist.htm> updated list accessed Nov. 21, 2013)

Brown, N.A., K.E. Ruckstuhl, S. Donelon, and C. Corbett

- 2010 Changes in vigilance, grazing behavior and spatial distribution of bighorn sheep due to cattle presence in Sheep River Provincial Park, Alberta. *Agriculture, Ecosystems and Environment* 135: 226-231.

Buchsbaum, R., M. Buchsbaum, J. Pearse, and V. Pearse

- 1987 *Animals without backbones: an introduction to the invertebrates* Third Edition University of Chicago Press, Chicago, Illinois, USA.

Buol, S.W., R.J. Southard, R.C. Graham, and P.A. McDaniel

- 2011 *Soil genesis and classification*. John Wiley & Sons.

Bureau of Land Management (BLM)

- 2013 *Payments in Lieu of Taxes, Total Payments and Total Acres by Agency, Fiscal Year 2012 – California*. Available online: <http://www.doi.gov/pilt/index.cfm>. Accessed: August 18, 2013.

Burge, Thomas L.

- 2010 *High Sierra Surveys in Sequoia and Kings Canyon National Parks: A summary of Site Sourcing Protein Projectiles, and Hydration*, Proceedings of the Society of California Archeology 24: 1-7.

California Department of Finance

- 2009 2008 California Statistical Abstract – 48th edition. Available online: http://www.dof.ca.gov/html/FS_DATA/STAT-ABS/documents/CaliforniaStatisticalAbstract2008.pdf. Accessed: August 18, 2013.
- 2013a E-1 Population Estimates for Cities, Counties and the State with Annual Percent Change — January 1, 2012 and 2013. Available online: http://www.dof.ca.gov/research/demographic/reports/estimates/e-1/documents/E-1_2013_Press_Release.pdf. Accessed: May 2013.
- 2013b *Population Projections for California Counties, 2015 to 2060*. Available online: <http://www.dof.ca.gov/research/demographic/reports/projections/P-1/>. Accessed: August 2013.

California Department of Fish and Game (CDFG)

- 2005 *The Status of Rare, Threatened, and Endangered Plants and Animals of California 2000-2004*.

California Department of Fish and Wildlife (CDFW)

- 2007 *Lake Davis Pike Eradication Project Final EIR/EIS*. State of California, The Resources Agency, Department of Fish and Game; United States Department of Agriculture, Forest Service Pacific Southwest Region, Plumas National Forest.
- 2013 *A Status Review Of The Black-Backed Woodpecker (*Picoides arcticus*) In California*. March.

California Fish and Game Commission (CFGC)

- 2012 *Fish and Game Commission: notice of findings*. Southern mountain yellow-legged frog (*Rana muscosa*), Sierra Nevada mountain-yellow legged frog (*Rana sierrae*). Sonke Mastrup, Executive Director. 14 February 2012.

California Native Plant Society (CNPS)

- 2014 Inventory of rare and endangered plants (online edition). California Native Plant Society, Sacramento, CA. Accessed January 2014. Available online: <http://www.cnps.org/inventory>

Campbell J.E. and D.J. Gibson

- 2001 The effect of seeds of exotic species transported via horse dung on vegetation along trail corridors. *Plant Ecology* 157: 23–35, 2001.

Caprio, A.C.

- 2004 Temporal and spatial dynamics of pre-EuroAmerican fire at a watershed scale, Sequoia and Kings Canyon National Parks. *Association for Fire Ecology Misc. Publ.* 2:107-125.

Caprio, A.C. and T.W. Swetnam

- 1995 Historic fire regimes along an elevational gradient on the west slope of the Sierra Nevada, California. In: *Proceedings: Symposium on Fire in Wilderness and Park Management: Past Lessons and Future Opportunities*, March 30-April 1, 1993. Missoula, MT. Gen. Tech. Rep. INT-GTR-320. Ogden, UT; U.S. Department of Agriculture, Forest Service, Intermountain Research Station.

Chavez, D.J.

- 2000 Wilderness Visitors in the 21st Century: Diversity, Day Use, Perceptions and Preferences. *International Journal of Wilderness*, August 2000.

Chimner, R. A. and D. J. Cooper

- 2003 Carbon dynamics of pristine and hydrologically modified fens in the southern Rocky Mountains. *Canadian Journal of Botany* 81: 477-491.

Chornesky, E.A. and J.M. Randall

- 2003 The Threat of Invasive Alien Species to Biological Diversity: Setting a Future Course. *Annals of the Missouri Botanical Garden* 90(1): 67-76.

Christenson, D. P.

- 1977 History of trout introductions in California high mountain lakes. Pp 9-15 in *Symposium on the management of high lakes in California national parks*. (A. Hall and R. May, editors). May 9-16, San Francisco, California Trout, Inc.

Chung-MacCoubrey, A.

- 2013 *A natural resource condition assessment for Sequoia and Kings Canyon National Parks: Appendix 16 – bats*. Natural Resource Report NPS/SEKI/NRR–2013/665.16. National Park Service, Fort Collins, Colorado.

Cilimburg, A., C. Monz, and S. Kehoe

- 2000 Wildland Recreation and Human Waste: A Review of Problems, Practices, and Concerns. *Environmental Management* Vol. 25, No. 6, pp. 587–598.

Clow, D.W., R.S. Peavler, J. Roche, A.K. Panorska, J.M. Thomas, and S. Smith

- 2011 Assessing possible visitor-use impacts on water quality in Yosemite National Park, California. *Environ Monitoring and Assessment*. 2011 Dec;183(1-4):197-215.

- Clow, D.W., H. Forrester, V. Miller, H. Roop, J.O. Sickman, H. Ryu, and J. Santo Domingo
- 2013 Effects of Stock Use and Backpackers on Water Quality in Wilderness in Sequoia and Kings Canyon National Parks, USA, *Environmental Management*, V.52, N.4
- Cole, D.N.
- 1983 Campsite conditions in the Bob Marshall Wilderness, Montana. USDA Forest Serv. Res. Pap. INT-312, Ogden, Utah.
- 1987 Effects of three seasons of experimental trampling on five montane forest communities and a grassland in western Montana, USA. *Biological Conservation* 40: 219-244.
- 1989a Viewpoint: Needed research on domestic and recreational livestock in wilderness, *Journal of Range Management*, Vol. 42, No. 1, January.
- 1989b Recreation in whitebark pine ecosystems: demand, problems, and management strategies. pp 305-309. Paper presented at the Symposium on Whitebark Pine Ecosystems: Ecology and Management of a High-Mountain Resource; 1989 March 29-31; Bozeman, MT: 305-309pp.
- 1993 Trampling Effects on Mountain Vegetation in Washington, Colorado, New Hampshire, and North Carolina. Research Paper INT-464. Ogden, UT: USDA Forest Service, Intermountain Research Station. 56p.
- 1995a "Experimental trampling of vegetation. I. Relationship between trampling intensity and vegetation response." *Journal of Applied Ecology*. (1995): 203-214.
- 1995b "Experimental trampling of vegetation. II. Predictors of resistance and resilience." *Journal of Applied Ecology*. (1995): 215-224.
- 2002 Ecological impacts of wilderness recreation and their management. In: J.C. Hendee and C.P. Dawson (2002) *Wilderness Management: Stewardship and Protection of Resources and Values*, third edition. Fulcrum Press, Golden, Co. Pp. 412-459.
- Cole, D.N. and D.J. Parsons
- 2013 Campsite impact in the wilderness of Sequoia and Kings Canyon National Parks: Thirty years of change. Natural Resource Technical Report NPS/SEKI/NRTR—2013/665. National Park Service, Fort Collins, Colorado.
- Cole, D.N. and J. Dalle-Molle
- 1982 Managing campfire impacts in the backcountry. Gen.Tech. Rep. INT-135. Ogden, UT: USDA For. Serv., Intermountain Forest and Range Exper. Stn. 16 p.
- Cole D.N., M.E. Petersen, R.C. Lucas
- 1987 Managing wilderness recreation use: common problems and potential solutions. General Technical Report INT-230, U.S. Department of Agriculture, Forest Service, Intermountain Research Station, Ogden, UT. As cited in Frenzel and Fauth 2013.
- Cole, D.N. and T.E. Hall.
- 1992 Trends in campsite condition: Eagle Rock Wilderness, Bob Marshall Wilderness, and Grand Canyon National Park. Research Paper INT-453:41, U.S. Department of Agriculture, Forest Service. Intermountain Forest and Range Experiment Station. Ogden, Utah.

- Cole, D.N. and D.R. Spildie
1998 Hiker, horse and llama trampling effects on native vegetation in Montana, USA. . *Journal of Environmental Management* 53: 61-71.
- Cole, D.N. and C.A. Monz
2002 Trampling disturbance of high-elevation vegetation, Wind River Mountains, Wyoming, U.S.A. *Arctic, Antarctic, and Alpine Research* 34(4): 365-376.
- Cole, D.N., J.W. Van Wagtenonk, M.P. McClaran, P.E. Moore and N.K. McDougald
2004 Response of Mountain Meadows to Grazing by Recreational Pack Stock. *Journal of Range Management*, Vol. 57, No. 2 (Mar., 2004), pp. 153-160.
- Cook, L.F.
1955 "Size of the Giant Sequoia". *The Giant Sequoias of California*. National Park Service. Available [online]: http://www.nps.gov/history/history/online_books/cook/index.htm. Accessed May 31, 2013.
- Cook, S. F.
1976 *The Population of California Indians: 1769-1970*. University of California Press, Berkeley, CA.
- Cook, P.S.
2013 Impacts of visitor spending on the local economy. Sequoia and Kings Canyon National Parks, 2012. Natural Resource Report NPS/NRSS/EQD/NRR-2013/713. Available online: <http://www.psu.uidaho.edu/c5/vsp/vsp-reports>.
- Cooper, D. J.
1990 Ecology of wetlands in Big Meadows, Rocky Mountain National Park, Colorado . *Biological Report* 90(15). U.S. Fish and Wildlife Service, Washington, D.C.
- Cooper, D. J. and E. Wolf
2006 Fens of the Sierra Nevada, California. Unpublished report to the USDA Forest Service. Colorado State University, Department of Forest, Rangeland, and Watershed Stewardship, Fort Collins, CO.
- Cooper, D.J., R. Chimner, and E. Wolf
2005 Livestock use and the sustainability of southern Sierra Nevada Fens. Unpublished report prepared for the US Forest Service Region 5, Inyo National Forest.
- Cosyns, E., S. Claerbout, I. Lamoot, and M. Hoffmann
2005 Endozoochorous seed dispersal by cattle and horse in a spatially heterogeneous landscape. *Plant Ecology* 178:149-162.
- Council on Environmental Quality (CEQ)
1997 *Considering Cumulative Effects under the National Environmental Policy Act*. Council on Environmental Quality, Executive Office of the President, Washington, DC. January.
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe
1979 *Classification of Wetlands and Deepwater Habitats of the United States*. U.S. Fish and Wildlife Service Publication FWS/OBS-79/31. U.S. Government Printing Office, Washington, D.C. December 1979.

- Cushing, C.E., K. W. Cummins, and G. W. Minshall, eds.
2006 River and Stream Ecosystems of the World. Berkeley: University of California Press.
- D'Antonio, C. M., E. L. Berlow, and K. L. Haubensak
2004 *Invasive exotic plant species in Sierra Nevada ecosystems*. USDA Forest Service Gen. Tech Rep. PSW-GTR-193.
- Dale, D. and Weaver, T.
1974 Trampling effects on vegetation of the trail corridors of North Rocky Mountain Forests. *Journal of Applied Ecology*, 11, 767-72.
- Das, A., and N. Stephenson
2013 A natural resource condition assessment for Sequoia and Kings Canyon National Parks: Appendix 22 – climate change. Edited by National Park Service. Fort Collins, Colorado
- Davidson, C., and R. Knapp
2007 Multiple stressors and amphibian declines: dual impacts of pesticides and fish on yellow-legged frogs. *Ecological Applications* 17:587–597. (as cited in NPS 2013d).
- Davidson, C., H. B. Shafer, and M. R. Jennings
2002 Spatial tests of the pesticide drift, habitat destruction, UV-B, and climate-change hypotheses for California amphibian declines. *Conservation Biology* 16:1588-1601.
- Davilla, B.
1979 Firewood production, use and availability in the High Sierra. In A report on the wilderness impact study. P94-128. J.T. Stanley Jr., H.T. Harvey, and R.J. Hartesveldt, eds. Sierra Club, San Francisco, CA. As sited in Cole and Dalle-Molle 1982.
- Deluca, T.H., W.A. Patterson IV, W.A. Freimund, and D.N. Cole
1998 Influence of llamas, horses, and hikers on soil erosion from established recreation trails in western Montana, USA. *Environmental Management* 22: 255-262 [63].
- Derlet, R.W.
2008 Backpacking in Yosemite and Kings Canyon National Parks and Neighboring Wilderness Areas: How Safe is the Water to Drink?, *Journal of Travel Medicine*, V.15, I.4, p. 209-215.
- Derlet, R.W. and J.R. Carlson,
2004a An Analysis of Wilderness Water in Kings Canyon, Sequoia, and Yosemite National Parks for Coliform and Pathologic Bacteria, *Wilderness and Environmental Medicine*, 15, 238-244.
2006 Coliform Bacteria in Sierra Nevada Wilderness Lakes and Streams: What is the impact of Backpackers, Pack Animals, and Cattle?, *Wilderness and Environmental Medicine*, 17, 15-20.
- Derlet, R.W., J.R. Carlson, and M.N. Nopenen
2004b Coliform and Pathologic Bacteria in Sierra Nevada National Forest Wilderness Area Lakes and Streams, *Wilderness and Environmental Medicine*, 15, 245-249.

- Derlet, R.W., K. Ali Ger, J. R. Richards, and J. R. Carlson.
- 2008a Risk factors for coliform bacteria in backcountry lakes and streams in the Sierra Nevada mountains: a 5-year study. *Wilderness and Environmental Medicine* 19:82-90.
- Derlet, R.W., J.R. Carlson, and J.R. Richards
- 2008b Risk Factors for Coliform Bacteria in Sierra Nevada Mountain Wilderness Lakes and Streams, *Internatinoal Journal of Wilderness*, V.14, N.1, 28-31.
- Derlet, R.W., C.R. Goldman and M.J. Connor
- 2010 Reducing the impact of summer cattle grazing on water quality in the Sierra Nevada Mountains of California: a proposal, *Journal of Water and Health*, 08.2. 326-333.
- Dilsaver, L. M. and W. C. Tweed
- 1990 *Challenge of the Big Trees: A Resource History of Sequoia and Kings Canyon National Parks*. Three Rivers, CA: Sequoia Natural History Association.
- Dodge, C.M. and V.T. Vredenburg
- 2012 The sad song of the Yosemite toad: The role of the amphibian chytrid fungus in an enigmatic decline. Presentation Abstract. *Disease and Epidemiology I: The Preliminary Program for 97th ESA Annual Meeting (August 5–10, 2012)*. 1 pg.
- Drost, C. A. and G. M. Fellers
- 1994 Decline of frog species in the Yosemite section of the Sierra Nevada. Technical Report NPS/WRUC/NRTR-94-02, Technical Report NPS/WRUC/NRTR-94-02, US Department of the Interior, National Park Service, Western Region, Cooperative National Park Studies Unit, University of California, Davis. (as cited in NPS 2013d).
- 1996 Collapse of a regional frog fauna in the Yosemite area of the California Sierra Nevada, USA. *Conservation Biology* 10:414-425. (as cited in NPS 2013d).
- Dull, R.A.
- 1999 Palynological evidence for 19th century grazing-induced vegetation change in the southern Sierra Nevada, California, USA. *Journal of Biogeography*, 26(4), 899-912.
- Duriscoe, D. M., and C. S. Duriscoe.
- 2002 Survey and monitoring of white pine blister rust in Sequoia and Kings Canyon National Parks: Final report on 1995-1999 survey and monitoring plot network. Science and Natural Resources Management Division Sequoia and Kings Canyon National Parks, Three Rivers, California. Unpublished.
- Duriscoe, D., C. Moore, and T.Jiles
- 2011 Draft Guidance for Outdoor Lighting, Sequoia and Kings Canyon National Parks. NPS Natural Sounds and Night Skies Division. 32p.
- The Ecology Graduate Student Project Collective and M. W. Schwartz
- 2013 *A natural resource condition assessment for Sequoia and Kings Canyon National Parks: Appendix 15b – animals of conservation concern, supplemental information*. Natural Resource Report NPS/SEKI/NRR–2013/665.15b. National Park Service, Fort Collins, Colorado.

Edwards, D.R., Moor, P.A., Workman, S.R., Bushee, E.L.

- 1999 Runoff of metals from alum-treated horse manure and municipal sludge. *Journal of the American Water Resources Association* 35, 155–165.

Erman, N.A.

- 1996 Status of aquatic invertebrates. Pages 987-1008 in *Sierra Nevada Ecosystem Project, Final Report to Congress, vol. II, Assessments and Scientific Basis for Management Options*. Centers for Water and Wildland Resources, University of California, Davis, California, USA.

Etchberger, R.C., P.R. Krausman, and R. Mazaika

- 1989 Mountain sheep habitat characteristics in the Pusch Ridge Wilderness, Arizona. *Journal of Wildlife Management* 53:902-907.

Fauth, G. D., and B. Tarpinian

- 2011 Unpublished. Summary of responses to the Wilderness Planning Workbook (May 1998), Sequoia and Kings Canyon National Parks, March 2011.

Fellers, G. M., D. F. Bradford, D. Platt, and L. L. Wood

- 2007 Demise of repatriated populations of mountain yellow-legged frogs (*Rana muscosa*) in the Sierra Nevada of California. *Herpetological Conservation and Biology* 2:5-21.

Fenn, D.B., G.J. Gogue, and R.E. Burge

- 1976 Effects of campfires on soil properties. U.S. Department of the Interior, National Park Service Ecol. Serv. Bull. 5, 16 p. Washington DC. As cited in Cole and Dalle-Molle 1982.

Fenn, M.E. S. Jovan, F. Yuan, L. Geiser, T. Meixner, and B.S. Gimeno

- 2008 Empirical and simulated critical loads for nitrogen deposition in California mixed conifer forests. *Environmental Pollution*. 155: 492-511.

Ferrick, M.G. and L.W. Gatto

- 2005 “Quantifying the effect of a freeze–thaw cycle on soil erosion: Laboratory experiments.” *Earth Surface Processes and Landforms* 30.10 (2005): 1305-1326

Few, A.P., German, D.W., Pierce, B.M., Wehausen, J.D., and Stephenson, T.R.

- 2013 2011-2012 Annual Report of the Sierra Nevada Bighorn Sheep Recovery Program. Funding primarily provided by the California Department of Fish and Wildlife.

Finlay, J. C. and V. T. Vredenburg

- 2007 Introduced trout sever trophic connections in watersheds: consequences for a declining amphibian. *Ecology* 88: 2187-2198.

Fleurance, G., P. Duncan, and B. Mallevaud

- 2001 Daily intake and the selection of feeding sites by horses in heterogeneous wet grasslands. *Animal Research*, 50(2), 149-156.

Flint, K.P.

- 1987 The long-term survival of *Escherichia coli* in river water. *Journal of Applied Bacteriology* 1987, 63, 261-270.

Foreyt, W. J., and J. E. Lagerquist

- 1996 Experimental contact of bighorn sheep (*Ovis canadensis*) with horses and cattle, and comparison of neutrophil sensitivity to *Pasteurella haemolytica* cytotoxins. *Journal of Wildlife Diseases* 32: 594-602.

Formichella, C., K. Frstrup, D. Joyce, E. Lynch, and E. Pilcher

- 2006 Sequoia and Kings Canyon National Parks Acoustic Monitoring Report: 2005 & 2006. NPS Natural Sounds Program. 72p.

Frenzel, E. and G. Fauth

- 2014 Wilderness Character Assessment: An examination of the characteristics and conditions of designated and proposed wilderness in Sequoia and Kings Canyon National Parks. National Park Service, Sequoia and Kings Canyon National Parks. Unpublished internal document.

Frenzel, E. and S. Haultain

- 2013 Summary report of stock use and grazing in wilderness meadows, Sequoia and Kings Canyon National Parks, 2012. Sequoia and Kings Canyon National Parks, Three Rivers, CA, USA.

Gerlach J.D. Jr, P.E. Moore, B. Johnson, D.G. Roy, P. Whitmarsh, D.M. Lubin, D.M. Graber, S. Haultain, A. Pfaff, and J.E. Keeley

- 2003 *Alien plant species threat assessment and management prioritization for Sequoia-Kings Canyon and Yosemite national parks*. U.S. Geological 803 Survey Open-File Report 02-170.

Gibson, C.W.D., V.K. Brown, L.Losito, and G.C. McGavin

- 1992 The response of invertebrate assemblies to grazing. *Ecography* 15: 166-176.

González-Megías, A., J. M. Gómez, and F. Sánchez-Piñero

- 2004 Effects of ungulates on epigeal arthropods in Sierra Nevada National Park (southeast Spain). *Biodiversity and Conservation* 13:733-752.

Graber, D.M.

- 1996 "Status of Terrestrial Vertebrates". In *Sierra Nevada Ecosystem Project: Final Report to Congress, vol. II, Assessments and scientific basis for management options*. Davis: University of California, Centers for Water and Wildland Resources.

Gregory, S.V., F.J. Swanson, W.A. McKee, and K.W. Cummings

- 1991 "An Ecosystem Perspective on Riparian Zones." *Bioscience* 41: 540-51.

Grinnell, J., and T. I. Storer

- 1924 Animal life in the Yosemite. University of California Press, Berkeley. (as cited in NPS 2013d)

Gruver, J. C. and D. A. Keinath

- 2006 Townsend's Big-eared Bat (*Corynorhinus townsendii*): A Technical Conservation Assessment. USDA Forest Service, Rocky Mountain Region. Available online: <http://www.fs.fed.us/r2/projects/scp/assessments/townsendsbigearedbat.pdf>.

Habeck, R. J.

- 1992 *Sequoiadendron giganteum*. In: Fire Effects Information System. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory. Available [online]: <http://www.fs.fed.us/database/feis/>. Accessed July 24, 2013.

Hammit, W. E. and Cole, D. N.

- 1987 Wildland recreation: Ecology and management. John Wiley & Sons, New York.

Halterman, M.D., S. Allen, and S.A. Laymon

- 1999 Assessing the impact of brown-headed cowbird parasitism in eight national parks. Pages 153-159 in Morrison, M.L., L.S. Hall, S.K. Robinson, S.I. Rothstein, D. Caldwell Hahn, and T.D. Rich (eds.). Research and management of the brown-headed cowbird in western landscapes. Studies in Avian Biology No. 18.

Hartley, Ernest

- 1999 Visitor impacts at Logan Pass, Glacier National Park: A thirty-year vegetation study. In: Harmon, David, ed. On the Frontiers of Conservation: Proceedings of the 10th Conference on Research and Management in National Parks and on Public Lands; Asheville, NC. Hancock, MI: The George Wright Society: 297-305.

Harvey, A.E., M.F. Jurgensen, and M.J. Larsen.

- 1979 Role of forest fuels in the biology and management of soil. USDA For. Serv. Gen. Tech. Rep. INT-65, 8 p. Intermt. For. and Range Exp. Stn., Ogden, Utah.

Haultain, S.

- 2013 *A natural resource condition assessment for Sequoia and Kings Canyon National Parks: Appendix 8 – alpine environments*. Natural Resource Report NPS/SEKI/NRR 2013/665.8. National Park Service, Fort Collins, Colorado.

Heath, Sacha

- 2008 Yellow Warbler Species Account. In: *California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California*. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.

Hendee, J.C. and C.P. Dawson

- 2002 Wilderness Management: Stewardship and Protection of Resources and Values. Third Edition. Fulcrum Publishing, Golden, Colorado.

Herbst, D.B., M.T. Bogan, S.K. Roll, and H.D. Safford

- 2012 “Effects of livestock exclusion on in-stream habitat and benthic invertebrate assemblages in montane streams” *Freshwater Biology*, 57(1), 204-217.

Herrero, S.M

- 1985 Bear attacks: their causes and avoidance. Winchester Press, Piscataway, New Jersey, USA.

Heywood, V. H.

- 1995 Global Biodiversity Assessment. Cambridge University Press, Cambridge, U.K.

Hicks, L.L. and J.M. Elder

- 1979 Human disturbance of Sierra Nevada bighorn sheep. *Journal of Wildlife Management* 43: 909-915.

Holmgren, A.L., R.L. Wilkerson, and R.B. Siegel

- 2012 *Sierra Nevada Network Bird Monitoring: 2011 Annual Report*. Natural Resources Technical Report NPS/SIEN/NRDS–2012/362. September.

Holmquist, J. G.

- 2004 Trails and meadow fragmentation in Yosemite National Park: effects on invertebrate fauna and patterns of abundance and biodiversity. . University of California, White Mountain Research Station, Bishop, California, USA. . Unpublished report prepared for Yosemite National Park.

Holmquist, J. G. and J. M. Schmidt-Gengenbach.

- 2006 A Pilot Study and Assessment of the Efficacy of Invertebrates as Indicators of Meadow Change in Sierra Nevada Network Parks: 2004-2005 Final Report to Sierra Nevada Network. University of California, White Mountain Research Station, Bishop, CA.

Holmquist, J. G., and J. Schmidt-Gengenbach, and S.A. Haultain

- 2010 Does long-term grazing by pack stock in subalpine wet meadows result in lasting effects on arthropod assemblages? *Wetlands* 30: 252-262.

Holmquist, J. G., J. Schmidt-Gengenbach, and S.A. Haultain. .

- 2013a Effects of a long-term disturbance on arthropods and vegetation in subalpine wetlands: manifestations of pack stock grazing in early versus mid-season. . *PloS One* 8: e54109. doi:10.1371/journal.pone.0054109.

- 2013b Equine grazing in managed subalpine wetlands: effects on arthropods and plant structure as a function of habitat. . *Environmental Management* 52: 1474-1486.

Holmquist, J.G., J. Schmidt-Gengenbach, and E.A. Ballenger

- In press “Patch-scale effects of equine disturbance on arthropod assemblages and vegetation.” *Environmental Management*.

Hooper, Lennon

- 1983 *NPS Trail Management Handbook*. United States National Park Service, Denver Service Center, US Dept of the Interior, National Park Service, Denver Service Center; Publication NPS 2023.

Hopkinson, P., M. Hammond, J. Bartolome, M. Brooks, E.L. Berlow, R. Klinger, J.R. Matchet, P. Moore, S. Ostoja, C. Souldard, R. Williams, O. Alvarez, Q. Guo, S. Haultain, E. Frenzel, and D. Saah.

- 2013 *A natural resource condition assessment for Sequoia and Kings Canyon National Parks: Appendix 13 – meadows*. Natural Resource Report NPS/SEKI/NRR—2013/665.14. National Park Service, Fort Collins, Colorado.

Huber, N.K.

- 1987 *The Geologic Story of Yosemite National Park: a Comprehensive Geologic View of the Natural Processes That Have Created and Are Still Creating the Stunning Terrain We Know as Yosemite*. Dept. of the Interior, U.S. Geological Survey, Reston, Va. As cited in

Jones, J.R. 2011. *Patterns of floristic diversity in wet meadows and fens of the Southern Sierra Nevada, California, USA*. Page 4.

Huber, A., A. Das, R. Wenk, and S. Haultain

2013 *A natural resource condition assessment for Sequoia and Kings Canyon National Parks: Appendix 14 – Plants of conservation concern*. Natural Resource Report NPS/SEKI/NRR–2013/665.12. National Park Service, Fort Collins, Colorado.

Huntington, G.L. and M.A. Akeson

1987 Soil Resource Inventory of Sequoia National Park, Central Part, California, Project Report Department of Land, Air and Water Resources, University of California, Davis and the National Park Service, US Department of the Interior, 170 pps.

Jackson, L.A.

2004 *The Mule Men: A history of stock packing in the Sierra Nevada*. Mountain Press, Missoula, Montana.

Jansen, B.D., P.R. Krausman, J.R. Heffelfinger, and J.C. de Vos, Jr

2007 Influence of mining on behavior of bighorn sheep. *The Southwestern Naturalist* 52: 418-423.

Janzen, Daniel H.

1981 *Enterlobium cyclocarpum seed passage rate and survival in horses, Costa Rican Pleistocene seed dispersal agents*. *Ecology* 62:593-601.

Jennings, M. R.

1996 Status of amphibians. Pages 921-944 in *Sierra Nevada Ecosystem Project: final report to Congress. Volume II. Centers for Water and Wildland Resources, University of California, Davis*. (as cited in NPS 2013d)

Jennings, M. R., and M. P. Hayes

1994 Amphibian and reptile species of special concern in California, Final Report. The California Department of Fish and Game, Inland Fisheries Division, Rancho Cordova, California, Contract No. 8023.

Kagarise Sherman, C.

1980 A comparison of the natural history and mating system of two anurans: Yosemite toads (*Bufo canorus*) and black toads (*Bufo exsul*). Ph.D. Dissertation, University of Michigan, Ann Arbor, Michigan. 394 pp. (as cited in NPS 2013d)

Kagarise Sherman, C. and M. L. Morton

1984 The toad that stays on its toes. *Natural History* 93:72-78.

1993 Population declines of Yosemite toads in the eastern Sierra Nevada of California. *Journal of Herpetology* 27:186-198. (as cited in NPS 2013d)

Karlstrom, E. L.

1962 The toad genus *Bufo* in the Sierra Nevada of California, ecological and systematic relationships. *Univ. Calif. Pub. Zool.* 62:1-104. (as cited in NPS 2013d)

Keay, J.A., and J.W. van Wagtenonk

- 1983 Effect of Yosemite backcountry use levels on incidents with black bears. . International Conference on Bear Research and Management 5: 307-311.

Keeley, J. E., D. Lubin, and C. J. Fotheringham

- 2003 Fire and grazing impacts on plant diversity and alien plant invasions in the southern Sierra Nevada. *Ecological Applications* 13(5):1355-1374.

Kimsey, L.S.

- 1996 Status of terrestrial insects. Pages 735-741 in Sierra Nevada Ecosystem Project, Final Report to Congress, vol. II, Assessments and Scientific Basis for Management Options. Centers for Water and Wildland Resources, University of California, Davis, California, USA.

Knapp, R. A.

- 1996 “Nonnative Trout in Natural Lakes of the Sierra Nevada: An Analysis of their Distribution and Impacts on Native Aquatic Biota”. In *Sierra Nevada Ecosystem Project: Final report to Congress*, vol. III, *Assessments and scientific basis for management options*. Davis: University of California, Centers for Water and Wildland Resources, 1996.

- 2003 Inventory of high elevation waterbodies in Sequoia and Kings Canyon National Parks. Unpublished data submitted to National Park Service, Sequoia and Kings Canyon National Parks, Three Rivers, CA. (as cited in NPS 2013d)

Knapp, R. A., and K. R. Matthews

- 2000 Nonnative fish introductions and the decline of the mountain yellow-legged frog from within protected areas. *Conservation Biology* 14:428-438.

Knapp, R. A., C. P. Hawkins, J. Ladau, and J. G. McClory

- 2005 Fauna of Yosemite National Park Lakes has low resistance but high resilience to fish introductions. *Ecological Applications* 15:835-847.

Knapp, R. A., D.M. Boiano, and V. T. Vredenburg

- 2007 Removal of nonnative fish results in population expansion of a declining amphibian (mountain yellow-legged frog, *Rana muscosa*). *Biological Conservation* 135:11-20.

Knapp, R. A., C. J. Briggs, T. C. Smith, and J. R. Maurer

- 2011 Nowhere to hide: impact of a temperature-sensitive amphibian pathogen along an elevation gradient in the temperate zone. *Ecosphere* 2:art93.

Knight, R.L., and D.N.Cole

- 1991 Effects of recreational activity on wildlife in wildlands. . Transactions of the North American Wildlife and Natural Resources Conference 56:238-247.

Knowles, N. M.D. Dettinger, and D.R. Cayan

- 2006 “Trends in snowfall versus rainfall in the western United States.” *Journal of Climate* no. 19:454-4559.

Kondolf, G. M., R. Kattelman, M. Embury, and D. C. Erman

- 1996 Status of riparian habitat. In: Sierra Nevada ecosystem project, final report to congress. Volume II, Chapter 36. Assessments and scientific basis for management options. Center for Water and Wildland Resources, University of California, Davis, California.

Kozlowski, T. T.

- 1999 Soil compaction and growth of woody plants. *Scandinavian Journal of Forest Research* 14.6: 596-619.

Krausman, P.R., A.V. Sandoval, and R.C. Etchberger

- 1999 Natural history of desert bighorn sheep Pages 139-191 in R. Valdez and P.R. Krausman, editors. Mountain sheep of North America. The University of Arizona Press, Tucson, Arizona, USA.

Kroeber, A. L.

- 1919 *Handbook of Indians of California*. Bulletin 78 of the Bureau of American Ethnology of the Smithsonian Institution, Washington, DC.

Kuss, F.R. and C.N. Hall

- 1991 Ground flora trampling studies: Five years after closure. *Environmental Management*. 15(5): 715-727

Lacan, I., K. Matthews, and K. Feldman

- 2008 Interaction of an introduced predator with future effects of climate change in the recruitment dynamics of the imperiled Sierra Nevada yellow-legged frog (*Rana sierrae*). *Herpetological Conservation and Biology* 3:211–223.

Landers, D.H., S.L. Simonich, D.A. Jaffe, L.H. Geiser, D.H. Campbell, A.R. Schwindt, C.B. Schreck, M.L. Kent, W.D. Hafner, H.E. Taylor, K.J. Hageman, S. Usenko, L.K. Ackerman, J.E. Schrlau, N.L. Rose, T.F. Blett, and M.M. Erway

- 2008 *The fate, transport, and ecological impacts of airborne contaminants in western national parks (USA)*. Western Airborne Contaminants Assessment Project final report: volume 1; Office of Research and Development, U.S. Environmental Protection Agency: Corvallis, Oregon.

Landres, Peter, ed.

- 2010 A framework to evaluate proposals for scientific activities in wilderness. Gen. Tech. Rep. RMRS-GTR-234WWW. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station.

Landres, P., S. Boutcher, L. Merigliano, C. Barns, D. Davis, T. Hall, S. Henry, B. Hunter, P. Janiga, M. Laker, A. McPherson, D.S. Powell, M. Rowan, S. Sater.

- 2005 Monitoring selected conditions related to wilderness character: a national framework. US Department of Agriculture General Technical Report RMRS-GTR-151. April.

Landres P., C. Barns, J. G. Dennis, T. Devine, P. Geissler, C. S. McCasland, L. Merigliano, J. Seastrand, and R. Swain

- 2008 Keeping It Wild: An Interagency Strategy to Monitor Trends in Wilderness Character Across the National Wilderness Preservation System. General Technical Report RMRS-GTR-212. Rep. General Technical Report RMRS-GTR-212, U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fort Collins, CO.

Lannoo, M. J. (Ed).

- 2005 Amphibian Declines: The Conservation Status of U.S. Amphibians. University of California Press, Berkeley, California. 1094 pp.

Leave No Trace

- 2002 Leave No Trace Skills and Ethics: Horse Use. Leave No Trace, Inc., Boulder, Colorado.
2005 Leave No Trace Skills and Ethics: Sierra Nevada. Leave No Trace, Inc., Boulder, Colorado.

Lee, S.R.

- 2013 Contemporary pack stock effects on subalpine meadow plant communities in Sequoia and Yosemite National Parks. Masters thesis, University Of California, Merced. 38 pp.

Liddle, M.

- 1997 Recreation ecology: the ecological impact of outdoor recreation and ecotourism. Chapman & Hall Ltd.

Mabuhay, J. A., Y. Isagi, and N. Nakagoshi

- 2006 "Wildfire effects on microbial biomass and diversity in pine forests at three topographic positions." *Ecological Research* 21.1: 54-63.

MacArthur, R.A., R.H. Johnston, and V. Geist.

- 1979 Factors influencing heart rate in free ranging bighorn sheep: a physiological approach to the study of wildlife harassment. *Canadian Journal of Zoology* 57: 2010 - 2021.

MacArthur, R. A., V. Geist, R. H. Johnston.

- 1982 Cardiac and behavioral responses of mountain sheep to human disturbance. *Journal of Wildlife Management* 46: 351-358.

MacDonald, L.H. and E.L. Huffman

- 2004 "Post-fire soil water repellency." *Soil Science Society of America Journal* 68.5: 1729-1734.

Major, J. and Taylor, D.W.

- 1988 Alpine. In Barbour, MG and Major, J. (eds.), *Terrestrial Vegetation of California*. California Native Plant Society Special Publication 9. Sacramento, Calif., 601-677.

Manning, Robert E.

- 2011 *Studies in outdoor recreation*. Corvallis, OR: Oregon State University Press; 3rd Edition.

Mao, J., D. E. Green, G. Fellers and V. G. Chinchar

- 1999 Molecular characterization of iridoviruses isolated from sympatric amphibians and fish. *Virus research* 63:45-52. (as cited in NPS 2013d)

Marcus, W.A., G. Milner, and B. Maxwell

- 1998 Spotted knapweed distribution in stock camps and trails of the Selway-Bitterroot Wilderness. *Western North American Naturalist*, 58(2), 156-166.

Marion, J.L. and D.N. Cole

- 1996 Spatial and temporal variation in soil and vegetation impacts on campsites. *Ecological Applications*, 6(2), 1996, pp. 520-530.

Marion, J.L. and Leung, Y.

- 2001 Trail resource impacts and an examination of alternative assessment techniques. *Journal of Park and Recreation Administration* 19, 17–37.

Martin, D. L.

- 2008 Decline, movement, and habitat utilization of the Yosemite toad (*Bufo canorus*): an endangered anuran endemic to the Sierra Nevada of California. Ph.D. Dissertation. University of California, Santa Barbara. 406 pp. (as cited in NPS 2013d)

Martin, S. and J. Blackwell

- 2013 Visitor Survey. In: *Sequoia and Kings Canyon National Parks (SEKI) Wilderness: Taking Stock of Visitor Perceptions and Trends, Manager Recollections, Long-term Observations and Resource Conditions*. pp 5-120. Humboldt State University.

Matthews, K.R., and R.A. Knapp

- 1999 “A Study of High Mountain Lake Fish Stocking Effects in the U.S. Sierra Nevada Wilderness” *International Journal of Wilderness* 5(1): 24-26.

Mazur, R.

- 2008 Backpacker use of bear-resistant canisters and lockers at Sequoia and Kings Canyon National Parks. *Ursus* 19: 53-58.
- 2010 “Does Averse Conditioning Reduce Human–Black Bear Conflict?” *The Journal of Wildlife Management* 74(1): 48-54. January.

Mazur, R., and V. Seher

- 2008 Socially learned foraging behavior in wild black bears, *Ursus americanus*. *Animal Behaviour* 75: 1503-1508.

McClaran, M.

- 2000 Improving Livestock Management in Wilderness. USDA Forest Service Proceedings RMRS-P-15-VOL-5. 2000.

McClaran M.P. and D.N. Cole

- 1993 Packstock in Wilderness: Use, Impacts, Monitoring, and Management. General Technical Report INT-301. Written by: MP McClaran and DN Cole. September.

McClaran, M. P., Ratcliff F., Bartolome, J. W.

- 2013 Soil Resistance, Vegetation Cover, and Soil Moisture Trends in Yosemite National Park Subalpine Meadows. Unpublished report on file. El Portal, CA.

McCullough, D.R.

- 1982 Behavior, bears, and humans. *Wildlife Society Bulletin* 10: 27-33.

McCurdy, K., and S.R. Martin

- 2007 An assessment of bear-resistant food canister use in Yosemite National Park. Humboldt State University, Arcata, California, USA.

McKee, E.A., Jr.

- 2013 Echoes of Blossom Peak: Cowboys, horsemen and history of Three Rivers. Self-published.

Mitsch, W. J. and J. G. Gosselink.

- 2007 Wetlands. 4th ed. John Wiley. New York, NY.

Moore, P.E., and J.D. Gerlach

- 2001 “Exotic species threat assessment in Sequoia, Kings Canyon, and Yosemite national parks”. *Crossing Boundaries in Park Management: Proceedings of the 11th Conference on Research and Resource Management in Parks and on Public Lands*. George Wright Society.

Morgan J. A. T., V. T. Vredenburg, L. J. Rachowicz, R. A. Knapp, and M. J. Stice

- 2007 Population genetics of the frog-killing fungus *Batrachochytrium dendrobatidis*. *Proceedings of the National Academy of Sciences* 104:13845–13850. (as cited in NPS 2013d)

Moriarty, K.M., W.J. Zielinski, A.G. Gonzales, T.E. Dawson, K.M. Boatner, C.A. Wilson, F.V. Schlexer, K.L. Pilgrim, J.P. Copeland, and M.K. Schwartz.

- 2009 Wolverine confirmation in California after nearly a century: native or long-distance migrant? *Northwest Science* 83: 154-162.

Moritz, C., J.L. Patton, C.J. Conroy, J.L. Parra, G.C. White, and S.R. Beissinger

- 2008 “Impact of a century of climate change on small-mammal communities in Yosemite National Park, USA.” *Science* no. 322:261-264

Mote, P.W., A.F. Hamlet, M.P. Clark, and D.P. Letternmaier

- 2005 “Declining mountain snowpack in western North America.” *Bulletin of the American Meteorological Society* (January):39-49.

Mullally, D. P.

- 1953 Observations on the ecology of the toad *Bufo canorus*. *Copeia* 1953:182-183. (as cited in NPS 2013d)

Murphy, J. D., D.W. Johnson, W.W. Millera, R.F. Walkera, E.F. Carrolla, and R.R. Blank

- 2006 “Wildfire effects on soil nutrients and leaching in a Tahoe Basin watershed.” *Journal of Environmental Quality* 35.2: 479-489.

Mutch, L., M. Goldin Rose, A. Heard, D. Schweizer, S. Martens, H. Werner, S. Stock, K. Kaczynski, T. Caprio, S. Haultain, J. van Wagtenonk, P. Rowlands, S. Thompson, and L. Rachowicz.

- 2008a Appendix F: Ecosystem Conceptual Models, In: Mutch et al., Sierra Nevada Network vital signs monitoring plan: Appendices A-F. Natural Resource Report NPS/SIEN/NRR-2008/072.

- 2008b Sierra Nevada Network vital signs monitoring plan: Appendix F. Ecosystem conceptual models. Natural Resource Report NPS/SIEN/NRR—2008/072. National Park Service, Fort Collins, Colorado.

National Park Service (NPS)

- 1977 Procedural Manual #77-1: Wetland Protection. Reissued January 2012.
- 1986a *Backcountry Management Plan*. Sequoia and Kings Canyon National Parks, Three Rivers, CA.
- 1986b *Stock Use and Meadow Management Plan*. Sequoia and Kings Canyon National Parks. February.
- 1989 *Aquatic/Water Resources Management Plan*. Sequoia and Kings Canyon National Parks. January.
- 1990 Addendum to the Stock Use and Meadow Management Plan for Sequoia and Kings Canyon National Parks.
- 1991 NPS Director's Order 77: *Natural Resource Protection*.
- 1992 *Bear Management Plan*. Sequoia and Kings Canyon National Parks. April Revision.
- 1997 *The Visitor Experience and Resource Protection (VERP) Framework, A Handbook for Planners and Managers*. September 1997.
- 1998a *Wilderness Planning Workbook*. May 1998.
- 1998b Sequoia and Kings Canyon National Parks, Cave Management Plan. Approved 1998.
- 1998c *NPS-28 Cultural Resource Management Guideline*. Department of the Interior.
- 1999 *Natural and Cultural Resources Management Plan*. Sequoia and Kings Canyon National Park. December.
- 2003 *Final Fire and Fuels Management Plan/Environmental Assessment*. Sequoia and Kings Canyon National Parks.
- 2005 Sequoia and Kings Canyon National Parks. *Water Resources Information and Issues Overview Report*. Technical Report NPS/NRWRD/NRTR-2005/333. National Park Service Water Resources Division, Denver, CO. 147 pp. As cited in NPS 2013d.
- 2006a *Management Policies*. 2006. U.S. Government Printing Office, Washington, DC.
- 2006b *Comprehensive Plan for Resource Education*. Sequoia and Kings Canyon National Parks. April.
- 2007a *Final General Management Plan and Comprehensive River Management Plan/Environmental Impact Statement*. Sequoia and Kings Canyon National Parks, Three Rivers, CA. 657 pp.
- 2007b Vegetation of Sequoia and Kings Canyon National Parks. National Park Service, Three Rivers, California, USA.
- 2008 *Climate-Friendly Parks: Sequoia and Kings Canyon National Parks*.
- 2009a *National Park Service General Management Planning Dynamic Sourcebook, Version 2.2*. December.
- 2009b Sequoia and Kings Canyon National Parks Management Directive 49, Minimum Requirement Analysis and Determination
- 2011a Wilderness visitation data, 1970-2010. Three Rivers, CA: Sequoia and Kings Canyon National Parks

- 2011b Sierra Nevada Bighorn Sheep Environmental Assessment: Research and Recovery Actions. Sequoia and Kings Canyon National Parks. June.
- 2012a Sequoia and Kings Canyon National Parks Wilderness Use Statistics 2002-2012. Prepared by Gregg Fauth.
- 2012b National Park Service Procedural Manual #77-1: Wetland Protection.
- 2012c Mountain Yellow-legged Frog Restoration Project: 2011 Field Season Summary. Sequoia and Kings Canyon National Park, 47050 Generals Highway, Three Rivers, CA 93271.
- 2013a *Fire and Fuels Management Plan*. 2013 Annual Update. Sequoia and Kings Canyon National Parks.
- 2013b *Certified Species List for all Taxonomic Categories in Sequoia and Kings Canyon National Parks*. July 9. Available online: <https://irma.nps.gov/App/Species/Search>. Accessed: July 9, 2013.
- 2013c *A natural resource condition assessment for Sequoia and Kings Canyon National Parks*. Natural Resources Report NPS/SEKI/NRR-2013/665. National Park Service, Fort Collins, Colorado.
- 2013d *Restoration of Native Species in High Elevation Aquatic Ecosystems Plan and Draft Environmental Impact Statement*. September 2013.
- 2013e *Sequoia and Kings Canyon National Parks (SEKI) Wilderness: Taking Stock of Visitor Perceptions and Trends, Manager Recollections, Long-term Observations and Resource Conditions*. January 2, 2013. A collaborative project funded by Sequoia and Kings Canyon National Parks, Humboldt State University and the Aldo Leopold Wilderness Research Institute.
- 2013f Wilderness Day Use by hikers and riders – Sequoia and Kings Canyon National Parks. Managed by NPS & USFS. September 26.
- 2013g Sequoia and Kings Canyon National Parks Fact Sheet 2013. Available online: <http://www.nps.gov/seki/parkmgmt/upload/FINAL2-SEKI-FACT-SHEET-2013.pdf>.
- 2014a *Wilderness Stewardship Plan Handbook — Planning to Preserve Wilderness Character*.
- 2014b *Keeping it Wild in the National Park Service: A User Guide to Integrating Wilderness Character Into Park Planning, Management, and Monitoring*. Wilderness Character Integration Team. January.
- 2014c National Park Service, Hydrographic and Impairment Statistics Database. Available online: <http://www.nature.nps.gov/water/HIS/> Accessed: 5/15/2014.
- n.d. a Unpublished Data (2001-2012). Aquatic Resources Office. Sequoia and Kings Canyon National Parks, 47050 Generals Highway, Three Rivers, CA 93271. (as cited in NPS 2013d)
- n.d. b NPS - Black bear incidents (unpublished data). Sequoia and Kings Canyon National Parks, 47050 Generals Highway, Three Rivers, CA 93271
- National Park Service and U.S. Forest Service (NPS-USFS)
- 2013 Wilderness and trailhead use levels and quotas. Sequoia and Kings Canyon National Parks, 47050 Generals Highway, Three Rivers, CA 93271

National Research Council (NRC)

- 1995 *Wetlands: Characteristics and Boundaries*. Washington, DC: The National Academies Press.

Nesmith, J.

- 2013 Personal communication. November 5, 2013.

Neuman, M.J.

- 1996 Packstock hoofprint depth and soil strength relationships in wet meadow soils of Sequoia and Kings Canyon National Parks, California. Masters thesis, University of Arizona, Tuscon. 133 pp.

Olson-Rutz, K.M.; C.B. Marlow, K. Hansen, L.C. Gagnon and R.J. Rossi

- 1996a Recovery of a high elevation plant community after packhorse grazing. *Journal of Range Management*. 49:541-545.
- 1996b Packhorse grazing behavior and immediate impact on a timberline meadow. *Journal of Range Management*. 49:546-550.

Ostermann, S., E. R. Atwill, E.S. Rubin, M.C. Jorgensen, and W.M. Boyce

- 2008 Interactions between feral horses and desert bighorn sheep. *Journal of Mammalogy* 89: 459-466.

Panek, J., D. Saah, and A. Esperanza

- 2013 A Natural Resource Condition Assessment for Sequoia and Kings Canyon National Parks: Air Quality. Natural Resource Report NPS/SEKI/NRR—2013/665.2.

Papouchis, C. M., F. J. Singer, and W. B. Sloan.

- 2001 Responses of desert bighorn sheep to increased human recreation. *Journal of Wildlife Management* 65:573-582.

Parsons, D.J. and T. J. Stohlgren

- 1987 Impacts of Visitor Use on Backcountry Campsites in Sequoia and Kings Canyon National Parks, California. Cooperative National Park Resources Studies Unit Technical Report No. 25. University of California Davis and National Park Service.
- 1989 Effects of varying fire regimes on annual grasslands in the southern Sierra Nevada of California. *Madrono* 36(3): 154-168.

Pauchard, A., Kueffer, C., Dietz, H., Daehler, C. C., Alexander, J., Edwards, P. J. & Seipel, T.

- 2009 Ain't no mountain high enough: plant invasions reaching new elevations. *Frontiers in Ecology and the Environment*, 7(9), 479-486.

Payne, Todd

- 2014 Sequoia and Kings Canyon National Parks Safety Manager, Ash Mountain, Personal communication, January 24, 2014.

Pelletier, E.

- 2006 Effects of tourist activities on ungulate behavior in a mountain protected area. *Journal of Mountain Ecology* 8:15-19.

Pickering, C.M., W. Hill, D. Newsome, and Y.F. Leung

- 2010 Comparing hiking, mountain biking and horse riding impacts on vegetation and soils in Australia and the United States of America, *Journal of Environmental Management*, 91(2010), pp.551-562.

Poesen, Jean, J. Nachtergaele, G. Verstraeten, and C. Valentin

- 2003 Gully erosion and environmental change: importance and research needs. *Catena* 50.2: 91-133.

Pope, K. L., and K. R. Matthews

- 2001 Movement ecology and seasonal distribution of mountain yellow-legged frogs, *Rana muscosa*, in a high-elevation Sierra Nevada basin. *Copeia* 2001:787-793.

Pough, F. H., R. M. Andrews, J. E. Cadle, M. L. Crump, A. H. Savitzky, and K. D. Wells.

- 2001 Herpetology, 2nd Ed. Prentice Hall, Upper Saddle River, New Jersey. 612 pp.

Powell, R.A., S.W. Buskirk, and W.J. Zielinski

- 2003 Fisher and marten. Pages 635-649 in G. A. Feldhamer, B. Thompson, and J. A. Chapman, editors. *Wild mammals of North America*. Second edition. Johns Hopkins University Press, Baltimore, Maryland.

Purcell, K.L., and J.Vener

- 1999 Abundance and rates of brood parasitism by brown-headed cowbirds over an elevational gradient in the southern Sierra Nevada. *Studies in Avian Biology* 18:97-103.

Pyrooz, N.N., C. Cann, J.C.B. Nesmith, E. Frenzel, S.A. Haultain, and P. Hardwick.

- 2014 Wet Meadow and Fen Mapping of Sequoia and Kings Canyon National Parks: A photo interpretation mapping project of the Parks' wetland resources (in preparation). Natural Resource Technical Report NPS/SIEN/NRTR—2014/XXX. National Park Service, Fort Collins, Colorado.

Quinn, L.D, M. Kolipinski, V.R. Coelho, B. Davis, J.Vianney, O. Batjargal, M. Alas, and S. Ghosh

- 2008 Germination of invasive plant seeds after digestion by horses in California. *Natural Areas Journal* 28(4):356-362

Rachowicz, L. J., and V. T. Vredenburg.

- 2004 Transmission of *Batrachochytrium dendrobatidis* within and between amphibian life stages. *Diseases of Aquatic Organisms* 61:75-83.

Rachowicz, L. J., R. A. Knapp, J. A. T. Morgan, M. J. Stice, and V. T. Vredenburg

- 2006 Emerging infectious disease as a proximate cause of amphibian mass mortality. *Ecology* 87: 1671–1683. (as cited in NPS 2013d)

Ratliff, R.D.

- 1976 Decomposition of filter paper and herbage in meadows of the high Sierra Nevada: preliminary results. Res. Note PSW-308. Berkeley, CA: Pacific Southwest Forest and Range Experiment Station, Forest Service, U.S. Department of Agriculture.

- 1980 Decomposition of native herbage and filter paper at five meadow sites in Sequoia National Park, California. *J. Range Man-age.* 33:262-266; July.

- 1985 Meadows in the Sierra Nevada of California: state of knowledge. Gen. Tech. Rep. PSW-84. Berkeley, CA: Pacific Southwest Forest and Range Experiment Station, Forest Service, U.S. Department of Agriculture; 1985. 52 p.
- Ratliff, R.D., M.R. George, and N.K. McDougald
- 1987 Managing livestock grazing on meadows of California's Sierra Nevada. Univ. of California Coop. Ext. Leaflet 21421, Davis, Calif.
- Renard, K.G. et al
- 1997 Predicting soil erosion by water: a guide to conservation planning with the revised universal soil loss equation (RUSLE)" Agriculture Handbook (Washington) 703 (1997).
- Richardson, D.M. and P. Pysek
- 2006 Plant invasions: merging the concepts of species invasiveness and community invasibility. *Progress in Physical Geography* 30(3):409-431.
- Rosenthal, A. M.
- 2003 High Sierra ecosystems: the role of fish stocking in amphibian declines. *Science Perspectives* PSW-SP-002. Albany, CA: U.S. Department of Agriculture, Forest Service, Pacific Southwest Research Station.
- Rothstein S. I., J. Verner, and E. Stevens
- 1980 Range expansion and diurnal changes in dispersion of the Brown-headed Cowbird in the Sierra Nevada. *Auk* 97:253-267.
- Safford, H.D., M. North, and M.D. Meyer.
- 2012 "Climate change and the relevance of historical forest conditions." In *Managing Sierra Nevada forests*, edited by Malcolm North. Albany, CA: U.S. Department of Agriculture, Forest Service, Pacific Southwest Research Station.
- Saunders, Paul R.
- 1979 Vegetational impact of human disturbances on the spruce-fir forests of the Southern Appalachian Mountains. Ph.D. dissertation. Colorado State University, Fort Collins. 95 p. As cited in Cole and Dalle-Molle 1982.
- Scherbinski, Scott
- 2013 Personal communication with Daniel Gammons, SEKI wildlife biologist.
- Schoenecker, K.A. and P.R. Krausman
- 2002 Human disturbance in bighorn sheep habitat, Pusch Ridge Wilderness, Arizona. *Journal of Arizona-Nevada Academy of Science*. 34(1) 63-68.
- Schulman, E.
- 1954 Longevity under adversity in conifers. *Science* 119:396-399.
- Schwartz, M. W., J. Thorne, and A. Holguin
- 2013 *A natural resource condition assessment for Sequoia and Kings Canyon National Parks: Appendix 20a – biodiversity*. Natural Resource Report NPS/SEKI/NRR—2013/665.20a. National Park Service, Fort Collins, Colorado.

Scuderi, L.A.

- 1987 Glacier variations in the Sierra Nevada, California, as related to a 1200-year tree-ring chronology. *Quaternary Research* 27:220-231.

Sears, C.

- 2006 Assessing Distribution, Habitat Suitability, and Site Occupancy of Great Gray Owls (*Strix nebulosa*) in California. Thesis, University of California, Davis.

Sharsmith, C.

- 1940 A contribution to the history of the alpine flora of the Sierra Nevada. Ph.D. thesis, University of California, Berkeley. 273 p.

Sherman C.K., and M. L. Morton

- 1984 The toad that stays on its toes. *Natural History Magazine*, March: 73–78. (as cited in NPS 2013d)

Sickman, J.O., A. Leydecker, and J.M. Melack

- 2001 Nitrogen mass balances and abiotic controls on N retention and yield in high-elevation catchments of the Sierra Nevada, California, United States. *Water Resources Research* 37: 1445–1461.

Siegel, Rodney

- 2014 Institute for Bird Populations, Executive Director. Personal communication with Sequoia and Kings Canyon National Parks, February 24, 2014.

Siegle, R. and D. Ahlers

- 2004 *Brown-headed Cowbird Management Techniques Manual*. U.S. Department of Interior Bureau of Reclamation Technological Service Center, Ecological Planning and Assessment Group. Denver.

Siegel, R.B., and R.L. Wilkerson

- 2005 Landbird inventory for Sequoia and Kings Canyon National Parks (2003–2004). The Institute for Bird Populations, Point Reyes Station, California.

Sierra Nevada Bighorn Sheep Recovery Program

- 2004 Sierra Nevada Bighorn Sheep Progress Report 2003. *Outdoor California* 65:4-17.

Spraker, T.R., C.P. Hibler, G.G. Schoonveld, and W.S. Adney

- 1984 Pathologic changes and microorganisms found in bighorn sheep during a stress-related die-off. *Journal of Wildlife Diseases* 20: 319-327.

St. John-Sweeting, R.S. and K.A. Morris

- 1991 Seed transmission through the digestive tract of the horse. In Proceedings of the 9th Australian Weeds Conference, 6–10 August, 1990. Adelaide, South Australia.

Stanger, M.C., J. Cresto, G. W. Workman, AND T. D. Bunch.

- 1986 Desert bighorn sheep–riverboat interactions in Cataract Canyon, Utah. *Desert Bighorn Council Transactions* 30:5–7.

- Stankey, G.H.
2000 Future Trends in Society and Technology: Implications for Wilderness Reserch and Management. USDA Forest Service Proceedings RMRS-P-15-VOL-1. 2000.
- Stankowich, T.
2008 Ungulate flight responses to human disturbance: a review and meta-analysis. *Biological Conservation* 141:2159–2173.
- Stebbins, R. C., and S. M. McGinnis
2012 *Field Guide to Amphibians and Reptiles of California (Revised Edition)*. University of California Press, Berkeley. 552 pp.
- Steel, Z. L., M. L. Bond, R. B. Siegel, and P. Pyle
2012 Avifauna of Sierra Nevada Network parks: Assessing distribution, abundance, stressors, and conservation opportunities for 145 bird species. Natural Resource Report NPS/SIEN/NRR—2012/506. National Park Service, Fort Collins, Colorado.
- Stephenson, N.L. and P.J. van Mantgem
2005 Forest turnover rates follow global and regional patterns of productivity. *Ecology Letters* 8:524–531.
- Stephenson, N.L., and C.I. Millar.
2012 Climate change: Wilderness's greatest challenge. *Park Science* 28(3):34–38. Available online:
[http://www.nature.nps.gov/ParkScience/archive/PDF/Article_PDFs/ParkScience28\(3\)Winter2011-2012_34-38_StephensonMillar_2839.pdf](http://www.nature.nps.gov/ParkScience/archive/PDF/Article_PDFs/ParkScience28(3)Winter2011-2012_34-38_StephensonMillar_2839.pdf)
- Stephenson, T. R., J.D. Wehausen, A.P. Few, D.W. German, D.F. Jensen, D. Spitz, K. Knox, B.M. Pierce, J. L. Davis, J. Ostergard, and J. Fusaro.
2012 2010-2011 Annual report of the Sierra Nevada Bighorn Sheep Recovery Program: a decade in review. California Department of Fish and Game, Sacramento, California, USA.
- Steward, J. H.
1935 *Indian Tribes of Sequoia National Park Region*. Berkeley, CA: National Park Service.
- Stewart, I.T., D.R. Cayan, and M.D. Dettinger
2005 “Changes toward earlier streamflow timing across western North America.” *Journal of Climate* no. 18:1136-1155
- Stohlgren, T.J., S.H. DeBenedetti, and D.J. Parsons
1989 Effects of herbage removal on productivity of selected High-Sierra meadow community types. *Environmental Management*. 13:485-491.
- Stokland, J.N., J. Siitonen, and B.G. Jonsson.
2012 *Biodiversity in Dead Wood*. Cambridge University Press, Cambridge UK. 509 pp.
- Stynes, D. J.
2011 Economic benefits to local communities from national park visitation and payroll, 2010. Natural Resource Report NPS/NRSS/EQD/NRR—2011/481. National Park Service, Fort Collins, Colorado.

- Suk, T.J., S.K. Sorenson, P.D. Dileanis
1987 The Relation between human presence and occurrence of Giardia cysts in streams in the Sierra Nevada, California. *Journal of Freshwater Ecology*. Vol. 4, Issue 1. pp 71-75.
- Swanson, F.J., T. K. Kratz, N. Caine, and R.G. Woodmansee
1982 "Landform Effects on Ecosystem Patterns and Processes." *BioScience* 38: 2, 92-98.
- Swetnam, T.W., C.H. Baisan, K. Morino, and A.C. Caprio
1998 *Fire History Along Elevational Transects in the Sierra Nevada, California*. Final report to the Sierra Nevada Global Change Research Program by Univ. of Arizona, Laboratory of Tree-Ring Research. 176 pp.
- Taylor, P.A., G.D. Grandjean, and J.H. Gramann
2011 National Park Service Comprehensive Survey of the American Public, 2008-2009, Racial and Ethnic Diversity of National Park System Visitors and Non-visitors. Natural Resource Report NPS/NRSS/SSD/NRR--2011/432. National Park Service, Fort Collins, Colorado.
- Tiner, R. W.
1999 Plant indicators of wetlands and their characteristics. *Wetland indicators: A guide to wetland identification, delineation, classification, and mapping*. 51-99.
- Tobin, B., B. Schwartz, J. Despain, and M. Kelly
2014 Fire Suppression Effects on Water Quality in Karst Aquifers: The Hidden Fire, Sequoia National Park, Submitted to Environmental Earth Science, 2014.
- Tricker, J., P. Landres, G. Fauth, P. Hardwick, and A. Eddy
2014 Mapping wilderness character in Sequoia and Kings Canyon National Parks. Natural Resource Technical Report NPS/SEKI/NRTR—2014/872. National Park Service, Fort Collins, Colorado.
- Trimble, S.W. and A.C. Mendel
1995 The cow as a geomorphic agent—a critical review. *Geomorphology*, 13(1), 233-253.
- Tu, M., A. Demetry, and D.S. Saah
2013 A natural resource condition assessment for Sequoia and Kings Canyon National Parks: Appendix 23 – nonnative plants. Natural Resource Report NPS/SEKI/NRR—2013/665.23. National Park Service, Fort Collins, Colorado.
- Tweed, W.
1977 National Register of Historic Places Nomination Form, Shorty Lovelace Historic District.
2010 "Quinn Horse Camp and Harry Quinn," *SEKI Bulletin*, December 2, n.p.
- Tweed, W.C. and L.M. Dilsaver
1990 Challenge of the Big Trees. Sequoia Natural History Association.

Ulev, E.

- 2007 *Strix nebulosa*. In: Fire Effects Information System. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available online: <http://www.fs.fed.us/database/fDEIS/animals/bird/stne/all.html>. Accessed July 18, 2013.

U.S. Department of Agriculture Forest Service (USDA)

- 2001 Ansel Adams, John Muir and Dinkey Lakes Wildernesses Final Environmental Impact Statement. Inyo and Sierra National Forests, U.S. Department of Agriculture.
- 2004 Sierra Nevada Forest Plan Amendment Final Environmental Impact Statement and Record of Decision. Pacific Southwest Region, January.
- 2010 Giant Sequoia National Monument Management Plan. Specialist Report: Wildlife Biological Assessment.

U.S. Department of Commerce, Bureau of Economic Analysis (BEA)

- 2012 CA25 – Total full-time and part-time employment by industry. Available online: <http://www.bea.gov/iTable/iTable.cfm?reqid=70&step=1&isuri=1&acrdrn=5#>. Accessed: August 2013.

U.S. Department of Commerce, Census Bureau

- 2000 Profile of General Demographic Characteristics: 2000 Census 2000 Summary File 1 (SF 1) 100-Percent Data. Available online: http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC_00_SF1_DP1&prodType=table.
- 2010 Census 2010 Summary File 1, Geographic Header Record G001 - Population, Housing Units, Area, and Density. Available online: http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC_10_SF1_GCTPH1.CY07&prodType=table.
- 2013 County Business Patterns. 2011 County Business Patterns (NAICS). April 2013. Available online: <http://censtats.census.gov/cgi-bin/cbpnaic/cbpsect.pl>. Accessed: August 2013.

U.S. Environmental Protection Agency (USEPA)

- 2009 Giardia: Drinking Water Health Advisory. Office of Science and Technology, U.S. Environmental Protection Agency. Office of Water EPA-822-R-99-008
- 2012 Recreational Water Quality Criteria. Health and Ecological Criteria Division, Office of Science and Technology, U.S. Environmental Protection Agency. Office of Water 820-F-12-058.
- 2014 STORET Data Report. OrgID: 11NPSWRD_WQX, Project NPS_3P. Available online: http://ofmpub.epa.gov/storpubl/dw_pages.querycriteria. Accessed March 24, 2014.

U.S. Fish and Wildlife Service (USFWS)

- 1996 The National Wetlands Inventory. Available online at <<http://www.wetlands.fws.gov/>>.
- 2002 Endangered and threatened wildlife and plants; 12-month finding for a petition to list the Yosemite toad (*Bufo canorus*). US Federal Register 67:75834-75843.

- 2004 Endangered and Threatened Wildlife and Plants; 12-month Finding for a Petition to List the West Coast Distinct Population Segment of the Fisher (*Martes pennanti*). Federal Register vol. 69 no. 68, Proposed Rules.
- 2007 Recovery Plan for the Sierra Nevada Bighorn Sheep. Sacramento, California.
- 2008a Endangered and threatened wildlife and plants; review of native species that are candidates for listing as endangered or threatened; annual notice of findings on resubmitted petitions; annual description of progress on listing actions; proposed rule. Federal Register 73:75176-75244.
- 2008b Designation of Critical Habitat for the Sierra Nevada Bighorn Sheep and Taxonomic Revision, 73 FR 151, 45533-45604.
- 2011 Endangered Species, Mountain-Prairie Region: Whitebark Pine. Available online: <http://www.fws.gov/mountain-prairie/species/plants/whitebarkpine/>. Accessed July 23, 2013.
- 2013 Endangered and threatened wildlife and plants; Endangered status for the Sierra Nevada yellow-legged frog and the northern distinct population segment of the mountain yellow-legged frog, and threatened status for the Yosemite toad. Federal Register 78:24472-24514
- United States Forest Service, California Department of Fish and Game, National Park Service, Fish and Wildlife Service, and United States Geological Survey (USFS et al)
- 2009 Yosemite Toad Conservation Assessment. 17 August, 2009 Draft. 144 pp.
- U.S. Geological Survey (USGS)
- n.d. Unpublished raw data from project entitled: Protect backcountry visitor-use opportunities through Yosemite toad conservation. (as cited in NPS 2013d)
- U.S. Geological Survey and National Park Service (USGS-NPS)
- 2007 Appendix A: NPS/USGS Vegetation Mapping Program, Sequoia and Kings Canyon National Parks, California. Final Mapping Classification. February 28.
- Vander Noot, G.W., L.D. Symons, R.K. Lydman, and P.V. Fonnesebeck
- 1967 Rate of passage of various feedstuffs through the digestive tract of horses. *J. Animal Sci.* 26: 1309–1311 (as cited in Campbell and Gibson 2001).
- Vankat, J. L.
- 1977 “Fire and Man in Sequoia National Park,” *Annals of the American Association of Geographers*, Vol. 6, No. 1 (March): pp. 17-27.
- van Mantgem, P.J. and N.L. Stephenson
- 2007 "Apparent climatically-induced increase of tree mortality rates in a temperate forest." *Ecology Letters* no. 10:909-916
- van Mantgem, P. J., N.L. Stephenson, J.C. Byrne, L.D. Daniels, J.F. Franklin, P.Z. Fulé, M.E. Harmon, A.J. Larson, J.M. Smith, A.H. Taylor, and T.T..
- 2009 Widespread increase of tree mortality rates in the western United States. *Science*. Vol. 323. no. 5913, pp: 521-524
- Vankat, J.L. and J. Major.
- 1987 Vegetation changes in Sequoia National Park. *Journal of Biogeography* 5:377–402.

Vemer, J. and L.V. Ritter

- 1983 Current status of the brownheaded cowbird in the Sierra Nevada National Forest. *Auk* 100:355-368. As cited in Cole and Landres 1996.

Viers, J.H., S.E. Purdy, R.A. Peek, A. Fryjoff-Hung, N.R. Santos, J.V.E. Katz, J.D. Emmons, D.V. Dolan, and S.M. Yarnell

- 2013 Montane Meadows in the Sierra Nevada: changing hydroclimatic conditions and concepts for vulnerability assessment. Center for Watershed Sciences Technical Report (CWS-2013-1), University of California, Davis.

Von Holle, B. and D. Simberloff

- 2005 Ecological resistance to biological invasion overwhelmed by propagule pressure. *Ecology* 86(12): 3212–3218.

Vredenburg, V.T.

- 2004 Reversing introduced species effects: Experimental removal of introduced fish leads to rapid recovery of a declining frog. *Proceedings of the National Academy of Sciences, USA* 101:7646-7650.

Vredenburg, V.T., R. Bingham, R. Knapp, J.A. T. Morgan, C. Moritz, and D. Wake

- 2007 Concordant molecular and phenotypic data delineate new taxonomy and conservation priorities for the endangered mountain yellow-legged frog. *Journal of Zoology* 271:361–374

Vredenburg, V.T., R.A. Knapp, T.S. Tunstall, and C.J. Briggs

- 2010 Dynamics of an emerging disease drive large-scale amphibian population extinctions. *Proceedings of the National Academy of Sciences* 107:9689–9694.

Watson, Alan

- 2013 Compiler, Project Components & Conclusions. In: *Sequoia and Kings Canyon National Parks (SEKI) Wilderness: Taking Stock of Visitor Perceptions and Trends, Manager Recollections, Long-term Observations and Resource Conditions*. pp 1-4, 161-166. Aldo Leopold Wilderness Research Institute.

Watson, A.E., J.J. Niccolucci, D. R. Williams

- 1993 Hikers and Recreational Stock Users: Predicting and Managing Recreation Conflicts in Three Wildernesses, U.S. Department of Agriculture, Forest Service, Intermountain Research Station, November, 1993.

Weaver, T. and D. Dale

- 1978 Trampling effects of hikers, motorcycles and horses in meadows and forests. *Journal of Applied Ecology*. 15: 451-457.

Websters II, New Riverside University Dictionary

- 1994 Riverside Publishing Co., Houghton Mifflin Co., Boston MA. and, Dictionary.com (online dictionary), at www.dictionary.reference.com, (accessed May/2014)

Wehausen, J.D.

- 1980 Sierra Nevada Bighorn Sheep: History and Population Ecology. Dissertation, University of Michigan.

Wehausen, J.D., L. Hicks, D. Graber, and J. Elder

- 1977 Bighorn sheep management in the Sierra Nevada Desert Bighorn Council Transactions 21: 30-32

Weldon, C., L. H. du Preez, A. D. Hyatt, R. Muller, and R. Speare

- 2004 Origin of the amphibian chytrid fungus. *Emerging Infectious Diseases* 10:2100–2105.

Weixelman, D. A., B. Hill, D.J. Cooper, E.L. Berlow, J. H. Viers, S.E. Purdy, A.G. Merrill, and S.E. Gross

- 2011 A Field Key to Meadow Hydrogeomorphic Types for the Sierra Nevada and Southern Cascade Ranges in California. Gen. Tech. Rep. R5-TP-034. Vallejo, CA. U.S. Department of Agriculture, Forest Service, Pacific Southwest Region, 34 pp.

Wells, F.H. and W.K. Lauenroth

- 2007 The Potential for Horses to Disperse Alien Plants Along Recreational Trails. *Rangeland Ecology & Management*: November 2007, Vol. 60, No. 6, pp. 574-577.

Wells, Robert R., C.V. Alonso, and S.J. Bennett

- 2009 Morphodynamics of headcut development and soil erosion in upland concentrated flows. *Soil Science Society of America Journal* 73.2: 521-530.

Werner, Harold W.

- 2004 *Vertebrate Survey for Sequoia and Kings Canyon National Parks and Devils Postpile National Monument*. October 25. Sierra Network Inventory Project.

Westendorf, M.

- 2009 Horses and Manure. Fact Sheet FS036. Rutgers University, New Brunswick. As cited in Pickering et al. 2010.

Westerling, A.L., H.G. Hidalgo, D.R. Cayan, and T.W. Swetnam

- 2006 Warming and earlier spring increase western U.S. forest wildfire activity." *Science* no. 313:940-943

Wheeler, B. D. and M. C. F. Proctor.

- 2000 Ecological gradients, subdivisions and terminology of northwest European mires. *Journal of Ecology* 88: 187-203.

Whitman, R.L., M.B. Nevers, G.C. Korinek and M.N. Byappanahalli

- 2004 "Solar and temporal effects on *Escherichia coli* concentration at a Lake Michigan swimming beach." *Applied and Environmental Microbiology* 70.7 (2004): 4276-4285.

Wilkerson, R.L. and R.B. Siegel

- 2002 Establishing a Southern Sierra Meadows Important Bird Area: Results from Meadow Surveys at Stanislaus, Sierra, and Sequoia National Forests, and Yosemite and Sequoia/Kings Canyon National Parks. January.

Willard, B.E., D.J. Cooper, and B.C. Forbes

- 2007 Natural regeneration of alpine tundra vegetation after human trampling: a 42-year data set from Rocky Mountain National Park, Colorado, USA. *Arctic, Antarctic, and Alpine Research*, 39(1), 177-183.

- Windell, J. T., B. E. Willard, D. J. Cooper, S. Q. Foster, C. F. Knud-Hansen, L. P. Rink, and G. N. Kiladis
- 1986 An ecological characterization of Rocky Mountain montane and subalpine wetlands. USDI Fish and Wildlife Service, National Ecology Center, Division of Wildlife and Contaminant Research. Washington, D. C.
- Winter, T. C.
- 2001 The concept of hydrologic landscapes. *Journal of the American Water Resources Association* 37: 335-349.
- Wischmeier, W. H., and J. V. Mannering
- 1969 Relation of soil properties to its erodibility. *Soil Science Society of America Journal* 33.1: 131-137.
- Wright, A.L.
- 1999 Distribution and abundance of brown-headed cowbirds in the wilderness of central Idaho. *Studies in Avian Biology* 18: 94-96.
- York, R.A., N.L. Stephenson, M. Meyer, S. Hanna, T. Moody, A.C. Caprio, and J.J. Battles
- 2013 *A natural resource condition assessment for Sequoia and Kings Canyon National Parks: Appendix 11a – giant sequoias*. Natural Resource Report NPS/SEKI/NRR 2013/665.11a. National Park Service, Fort Collins, Colorado.
- Zardus, M.J. and D.J. Parsons
- 1980 Black bear management in Sequoia and Kings Canyon National Parks. *International Conference on Bear Research and Management* 4: 195-200.
- Zardus, M., T. Blank, and D. Schulz
- 1977 Status of fishes in 137 lakes in Sequoia and Kings Canyon National Parks, California. Unpublished Report, Sequoia and Kings Canyon National Parks, Three Rivers, California.

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