



**NATIONAL
CONSERVATION
LANDS**

Utah

Red Cliffs National Conservation Area

Annual Manager's Report—Fiscal Year 2016



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1 Red Cliffs NCA Profile

Designating Authority

Designating Authority: The designating authority for the Red Cliffs National Conservation Area (NCA) is the *Omnibus Public Land Management Act* of 2009 (Public Law 111-11, hereinafter OPLMA) at Title I, Subtitle O, Washington County, Utah, sec. 1974.

Date of Designation: March 30, 2009

Acreage

The Red Cliffs NCA boundary encompasses approximately 61,225 total acres.

Total Acres in Unit	BLM Acres	Other Fed. Acres	State Acres	Other Acres
61,225	44,859	0	13,735	2,631

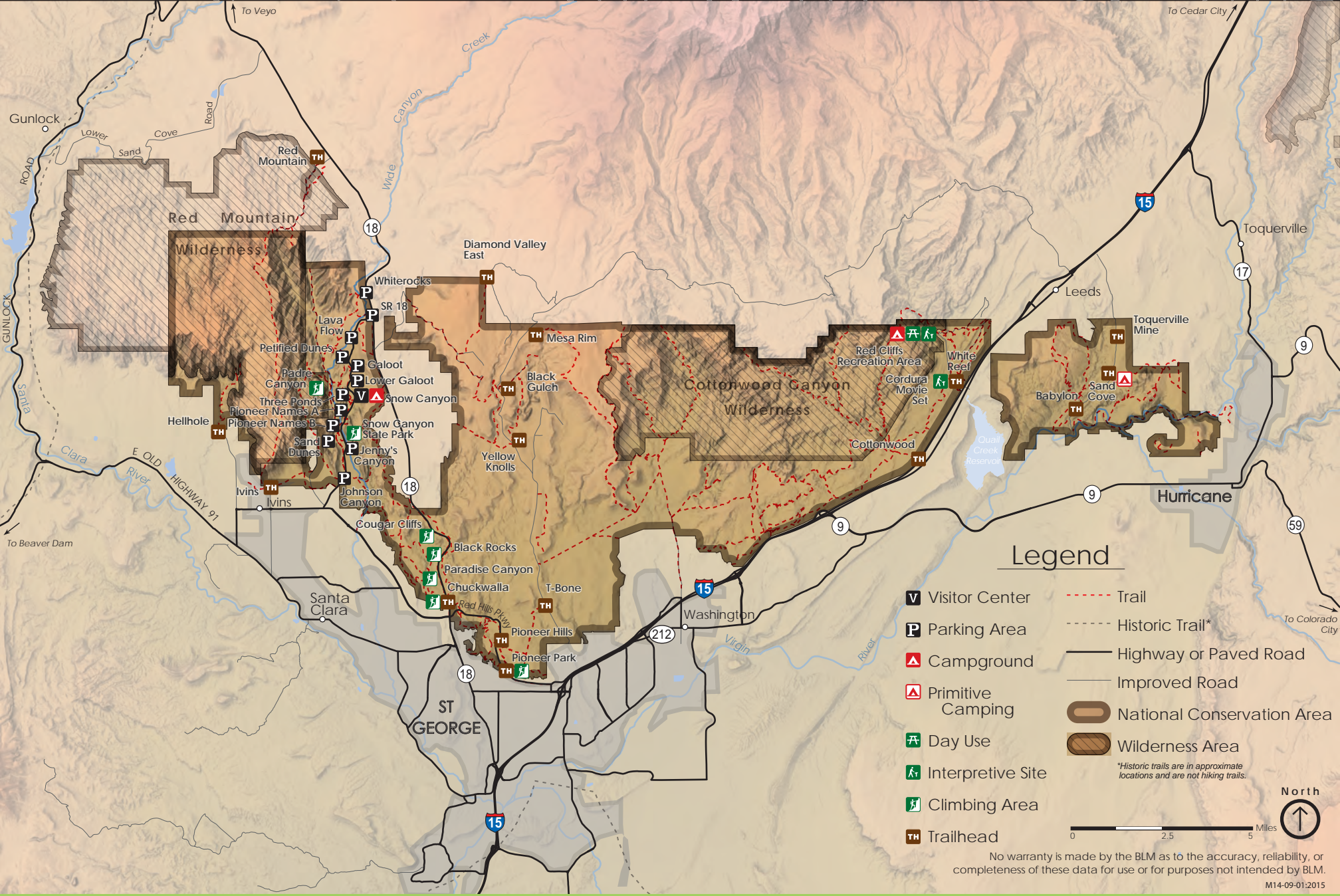
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Field Office	District Office	State Office
St. George Field Office	Color Country District	Utah State Office

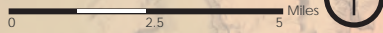


Red Cliffs National Conservation Area



Legend

- Visitor Center
 - Parking Area
 - Campground
 - Primitive Camping
 - Day Use
 - Interpretive Site
 - Climbing Area
 - Trailhead
 - Trail
 - Historic Trail*
 - Highway or Paved Road
 - Improved Road
 - National Conservation Area
 - Wilderness Area
- *Historic trails are in approximate locations and are not hiking trails.



No warranty is made by the BLM as to the accuracy, reliability, or completeness of these data for use or for purposes not intended by BLM.

Budget

Total FY16 Budget	Sub-activity 1711	Other Sub-activities Contributions	Other Funding
\$ 980,000	\$380,000	\$600,000	Land and Water Conservation Funds (\$375,000 awarded) Proceeds from sales of Public Lands (\$690,000)

Managing Partners

N/A

Staffing

The Red Cliffs NCA shares management and staff with the Beaver Dam Wash NCA, also administered by the St. George Field Office (SGFO). The NCA Manager supervises the following positions that comprise the permanent, full-time staff for the two NCAs: Archeologist; Archeological Technician; Biologist; GIS Specialist; Landscape Architect; two Outdoor Recreation Planners, and two Park Rangers. The NCA staff also supports the SGFO, performing work in their areas of expertise on public lands outside of the two NCAs. Approximately 30% of staff time is devoted to work in the NCAs, the remainder for work on other public lands managed by SGFO; salaries and other costs for work outside of the NCAs are funded by other BLM programs, such as livestock grazing, recreation, wildlife, and wilderness management, etc.

The NCA Biologist is assigned collateral duties as the NEPA Coordinator for the NCAs and the SGFO. The NCA Landscape Architect provides design support to all programs managed by the SGFO and also oversees the development of multi-media interpretive products for the NCAs and SGFO. One of the NCA Outdoor Recreation Planners is currently assigned collateral duties as the point of contact for the Wilderness Management Program and the Visual Resource Management Program for the SGFO and serves as the project lead for completion of the OPLMA-mandated Comprehensive Travel and Transportation Management Plan for all public lands in Washington County. The other NCA Outdoor Recreation Planner manages the Special Recreation

Permit program and serves as the point of contact for the Wild and Scenic Rivers Program and Caves and Karst Management for the NCAs and the SGFO and also has collateral duties as BLM-Utah's State Program Lead for the Cave and Karst Management Program. The NCA Manager, GIS Specialist, Biologist, Landscape Architect, and two Outdoor Recreation Planners comprise the core RMP Planning Team for the OPLMA-mandated Resource Management Plan (RMP) and Environmental Impact Statement (EIS) for the NCA.

Administrative, Lands and Realty, and Rangeland Management staff from the SGFO also support the NCAs. Fire Management, Engineering, Force Account/Maintenance, and Budget services are obtained from the Color Country District Office, located in Cedar City, Utah. Two Law Enforcement Rangers are based in the St. George Field Office and conduct regular patrols in the NCA, but are under the supervision of a Lead Law Enforcement Ranger, located in the Color Country District Office.

Headquarters/Visitor Center

The NCA management and staff are co-located in an interagency Public Land Information Center Office in St. George, UT with management and staff from the SGFO, the BLM-Arizona Strip District Office, the Arizona Strip Field Office, and the Vermillion Cliffs National Monument.

2 Planning and NEPA

Status of the Resource Management Plan

The NCA is currently managed under the *St. George Field Office Record of Decision and Resource Management Plan* (RMP, 1999), as modified by the designation language of OPLMA, at Subtitle O, Title 1, sec. 1974, which mandated the preparation of a new comprehensive management plan. Through OPLMA, Congress segregated the public lands of the NCA from entry under the General Mining Law, the Mineral Leasing Act, the Fluid Minerals Leasing Act, subject to any valid existing rights, and from disposal under the public land laws.

In 2010, the SGFO initiated a planning process to prepare new RMPs for the Beaver Dam Wash and Red Cliffs NCAs, as well as a focused amendment for the SGFO RMP, all supported by a single Environmental Impact Statement (EIS). A Notice of Intent (NOI) was published in the *Federal Register* on May 10, 2010 (Vol.75, No. 89: 25876-25877), initiating a 90 day public scoping process that included four public workshops. Washington County, Utah, Mojave County Arizona, and the State of Utah signed agreements to become Cooperating Agencies to the three-part planning process. The Paiute Indian Tribe of Utah and the Shivwits Band of the Paiute Indian Tribe were invited to be Cooperating Agencies but declined. Both continued to be involved throughout the planning process.

Release of the Draft Resource Management Plans/Draft Environmental Impact Statement

The *Draft Resource Management Plans for the Beaver Dam Wash National Conservation Area and the Red Cliffs National Conservation Area and a Draft Amendment to the St. George Field Office RMP/Draft EIS* were

released for a 90 day public review and comment period on July 17, 2015. Notices of Availability (NOA) for the draft plans were published by the EPA and BLM in the *Federal Register* (Vol. 80, No. 137: 42527-42529), announcing the opening of the public comment period. Copies of the Draft RMPs/Draft RMP Amendment /Draft EIS were posted as PDF documents for viewing and download on the BLM website at <https://eplanning.blm.gov/>. The four alternatives proposed in the Draft RMPs and Draft Amendment included Alternative A, the No Action alternative that represents the



continuation of current management practices under the St. George Field Office RMP; Alternative B, the agency's Preferred Alternative; and two other alternatives, Alternative C and Alternative D.

A public comment period ran for 120 days, closing on November 16, 2015. Public open houses were held during the month of September in St. George, UT; Hurricane, UT; and Salt Lake City, UT. Management and staff from the NCAs and SGFO were available to answer questions and assist the public with providing written comments.

Public Comments

During the 120-day public comment period, the BLM received approximately 6,500 written comments; these were submitted at public meetings, through the planning website, e-mail, and regular mail from the public, Cooperating Agencies, other federal and state agencies, Indian tribes, local governments, and organizations. The BLM reviewed, categorized, and considered every comment in the development of the Proposed NCA RMPs, Proposed RMP Amendment, and Final EIS. In analyzing comments, the BLM emphasized the content of the comment rather than the number of times a comment was received. The BLM prepared written responses to all substantive comments and these were included in the Final EIS.

Release of the Proposed Resource Management Plans, Proposed Amendment/Final Environmental Impact Statement

With the publication of an NOA on EPA's website on September 2, 2016, the Proposed NCA RMPs and Proposed Amendment/Final EIS were released for a 30 day protest period and the State of Utah's Governor's 60 day consistency review period. In developing the Proposed RMPs and Proposed Amendment and Final EIS, the BLM has the discretion to combine components of the four alternatives presented in the Draft RMPs and Draft Amendment/Draft EIS. The Proposed Plans included many of the management goals, objectives, and actions identified in BLM's Preferred Alternative, Alternative B. However, in response to public comments and input from the Cooperating Agencies, other Federal and State agencies, Tribal and local governmental entities, the proposed plans also included components of the other alternatives that were analyzed in the Draft EIS.

Because only minor edits or clarifications were required between the draft and proposed plans, and none required modifications to the analysis of the environmental consequences presented in Chapter 4 of the Draft EIS, the BLM prepared an abbreviated Final EIS to support the Proposed NCA RMPs and Proposed Amendment, consistent with federal regulations at 40 CFR 1503.4 (c). The abbreviated Final EIS includes a summary of the comments received on the Draft EIS, responses to

substantive comments, and an errata section which shows the specific edits and clarifications that were made in response to comments (40 CFR 1503.4). Appendix E included a table that shows how the Proposed NCA RMPs and Proposed Amendment vary from Alternative B, BLM's preferred alternative, of the draft plans and also included *errata*. The summary of comments received during the public comment period and responses to substantive comments was provided in Appendix J of the proposed plans.

Biological Assessments

In FY 16, a biological assessment (BA) were prepared by the NCA and St. George Field Office biologists and submitted to the USFWS on September 13, 2016, to initiate formal Section 7 (a) consultations, pursuant to the Endangered Species Act (ESA), for the Proposed RMP for the Beaver Dam Wash NCA / Final EIS. The assessment analyzed the potential effects on those plant and animal species that occur or have the potential to occur in the NCA area and that are currently listed as threatened and endangered species or managed as 10 (j) experimental, non-essential populations.

Section 106 Consultations

Consultations under the authority of Section 106 of the National Historic Preservation Act (NHPA) were conducted with the Utah State Historic Preservation Officer (USHPO) relating to management decisions contained in the Proposed NCA RMPs and Proposed Amendment to the St. George Field Office RMP/Final EIS. In a letter dated September 20, 2016, the USHPO concurred with BLM determination that approval of the management decisions identified in the proposed plans, through the signing of Records of Decision for the RMP for the Beaver Dam Wash NCA, will result in No Adverse Effects to historic properties.

Tribal Consultations

Consultations related to this planning process have been conducted with the following Tribes and Bands which claim cultural affiliation to the NCA and southwestern Utah:

The Hopi Tribe

The Navajo Nation

The Pueblo of Zuni

The Paiute Indian Tribe of Utah

Shivwits Band

Cedar Band

Indian Peaks Band

Kanosh Band

Koosharem Band

The Kaibab Band of Paiutes

Status of the RMP Implementation Strategy

A Record of Decision was signed for the Red Cliff NCA Resource Management Plan in early fiscal year 2017 (December 21, 2016). As the RMP was not approved in fiscal year 2016, the RMP Implementation Strategy was not prepared during the period covered by this report.

Status of Activity Plans

Comprehensive Travel and Transportation Management Plan

Initial public scoping for the Travel and Transportation Management Plan (TMP) was conducted during the four scoping workshops that were held in June of 2010 for the RMP-level planning efforts. A Scoping Report was completed in October, 2010 and issues identified through scoping used to develop the range of management alternatives for the draft TMP. Informal scoping with various Federal and State agencies, Tribes, local governments, and diverse public land user groups has been on-going since 2010. Evaluations have been completed for all routes on public lands in Washington County (2,800 miles), including those within the NCA that are available for public travel. Four draft management alternatives were provided to the Cooperating Agencies (Washington County and the State of Utah, through the Office of the Governor's Public Lands Coordination Office) for review and comments. The BLM staff made any needed changes to the alternatives, based on the comments provided by the Cooperating Agencies.

During FY 16, BLM staff worked with an environmental services contractor (Applied Resources Solutions) to prepare an Environmental Assessment (EA) to satisfy the NEPA requirements of the TMP. The Draft TMP/ EA are scheduled for release for public review and comment in 2017.

Key National Environmental Policy Act Actions and/or Project Authorizations

Red Cliffs NCA/Long Valley Exchange

In FY16, the BLM Director approved the proposed exchange of 605 acres of public lands located southeast of the City of St. George, in an area called Long Valley, for approximately 80 acres of private land inholdings in the Red Cliffs NCA. The fair market appraised values of the public lands and the private inholdings were \$7,690,000, based on appraisals completed by the federal Office of Valuation Services.

The NCA staff completed an EA level NEPA analysis to evaluate the potential environmental consequences related to the proposed exchange of lands. Based on that analysis, a Finding of No Significant Impact was made, and a Decision Record signed. The proposed exchange was supported by Washington County, as it furthered the goals of the county's *Habitat Conservation Plan for the Mojave Desert Tortoise* (HCP-1995). The HCP prioritized the acquisition of all private and state inholdings in the approximately 62,000 acre multi-jurisdictional mitigation reserve that is managed to assist the recovery and delisting of desert tortoise. The Red Cliffs NCA comprises 70% of the land base of Washington County's mitigation reserve and any inholdings acquired in the NCA are managed for conservation and protection, consistent with the Congressionally-defined purpose for the NCA and the county's HCP.

Red Cliffs Recreation Area Potable Water System Replacement

A Determination of NEPA Adequacy, tiered to prior Environmental Assessments prepared for recent maintenance and improvement projects in the Recreation Area, was completed and a Decision Record signed authorizing the BLM's proposal to replace the potable water system in the Red Cliffs Recreation Area, a fee site campground and day use area within the NCA. The water system consists of an existing pipeline and pressure release valves that are connected to the municipal water system of the City of Hurricane, which provides potable water to the Recreation Area. The existing pipeline is more than 20 years old and in need of replacement. The project also includes the addition of short segments of new waterline, both within the campground and to the White Reef trailhead that would allow additional water freezer-less hydrants to be added within the campground and day use facilities and future upgrading of the restroom facilities to flush toilets.

3 Year's Projects and Accomplishments

General Accomplishments

Fire-Damaged Habitat Restoration Program

In FY15, Watershed Restoration Initiative funding was granted by the Utah Partners for Conservation and Development (UPCD) to support a multi-year experimental habitat restoration program in fire-damaged tortoise critical habitat in the Beaver Dam Wash NCA, based on a joint proposal submitted by the Utah Division of Wildlife Resources (UDWR) and BLM. As re-seeding has proven to be generally unsuccessful as a restoration method in the arid Mojave Desert, this program will research the effectiveness of out-planting mature, nursery grown containerized native species on a large scale, with the goal of re-establishing native shrubs, forbs, and grasses that are beneficial to desert tortoise and other wildlife.

This program is also supported by funding from multiple sources, including the BLM, the Utah Division of Wildlife Resources (UDWR), The Nature Conservancy, the National Fish and Wildlife Service Foundation, and from Washington County Habitat Conservation Plan Administrator's Office. A Cooperative Agreement was signed in 2015 between the University of Nevada, Las Vegas (UNLV) and UDWR to allow the transfer of funding to UNLV's Department of Restoration Ecology to provide 5,000 mature containerized plants of seven native species for this program. Dr. Dale Devitt from UNLV is responsible for providing the containerized plants and in the spring of 2016, he acquired locally-sourced seeds from NCA staff and commercial sources and began propagation at UNLV's greenhouse facilities.

Biologists and botanists from the BLM, UDWR, the U.S. Fish and Wildlife Services, and UNLV selected a 100 acre fire damaged site in the NCA, north and east of the Cottonwood Road, as the first habitat restoration research area.

A GPS-based grid was overlaid on this 100 acre site and 350 equally-sized smaller research plots were established within that grid, with pin flags denoting the center of each plot. The plots were inventoried and data collected on the native vegetation species and exotic and invasive annual grasses and forbs that have regrown since the area was damaged by a large wildfire in 2006.

Dr. Devitt and Dr. Scott Abella, also with UNLV's Department of Restoration Ecology, helped to develop a planting plan and provided other support for the initial planting in

the Red Cliffs NCA, scheduled for early November of 2016. Approximately 1,000 containerized plants of four native species: brittlebush (*Encelia farinosa*), big galleta (*Pleuraphis rigida*), desert globemallow (*Sphaeralcea ambigua*), and milkvetch (*Astragalus* spp.) will be planted in the plots of this research site in November of 2016, as the first phase of this restoration program. Chicken wire cages will be used in every other plot to protect plants from small mammal herbivory. In November of 2017, 4000 additional containerized plants will be planted in this research site.

The success of the out-plantings, with the variables identified in the planting plan, will be monitored over the initial four-year term of this restoration program. If out planting is demonstrated to be a cost-effective restoration method, over time, additional plots will be strategically located in other fire damaged areas of the NCA, to create “fertile islands” that will act as seed banks from which native plants can naturally propagate and disperse seeds.

Land Health Monitoring



Five monitoring plots were re-established by the NCA Biologist, in areas where rangeland monitoring plots had previously been located, when livestock grazing was authorized on public lands in the NCA. The new plots will be read annually and data on native vegetation community composition, exotic invasive species, and noxious weeds will be compared to historical data on file to determine how these communities have changed since the late 1990s, when the

public lands were made unavailable for livestock grazing, through the 1999 SGFO RMP. Approximately 100 acres of the NCA were inventoried for noxious weeds and GPS data on noxious weed infestations were encoded in NISMS database. Small scale infestations eradicated using hand tools wherever they were encountered.

Recreation Management

Recreational opportunities are locally well known and the NCA does attract visitors from outside the region; however, a majority of the recreational use is by local residents. The NCA Park Rangers, Outdoor Recreation Planners, and Law Enforcement Rangers monitored visitor numbers and uses within the NCA, through visitor contacts and digital traffic counters placed along designated trails, at trailheads and entry

points to popular recreation sites, and on major travel routes. With 81 trails and routes of varying length and difficulty, hiking, mountain biking, and horseback riding are popular activities in the NCA. Because federal, state, municipal, county, and private lands are all encompassed within the boundaries of the NCA, trails cross jurisdictional boundaries. Almost all the trails, with the exception of those in designated wilderness, have been signed, and all major roads leading into the NCA have portal signs. There are 35 trailheads where visitors can enter the NCA and park a vehicle. Trailheads typically include vault toilets, kiosks, interpretive panels, directional signs, and fences. Thirty-six Special Recreation Permits are currently authorized and regularly monitored for commercial activities in the NCA that include guided hiking, equestrian trail rides, mountain biking, and rock climbing. In FY 16, the estimated number of visits was 151,000, with the estimated number of visitor days at 54,000.

Within the boundaries of the NCA is the Red Cliffs Recreation Area, a fee site that includes a developed campground, day use area, a non-motorized trail system, and interpreted public use sites, including an Ancestral Puebloan habitation site, dinosaur trackways, the 1863 Orson B. Adams House, a historic structure that has been rehabilitated to Secretary of the Interior Standards for adaptive re-use as an interpretive site, and the partial standing walls of a 1950's era Hollywood movie set. There were nearly 40,000 visits to the Red Cliffs Recreation Area in FY 16, a majority of which was day use by hikers, mountain bikers, and equestrians who enjoy riding the long distance trail system.

The Cottonwood Canyon and Red Mountain Wilderness areas are located within the NCA and were added to the National Wilderness Preservation System through the OPLMA in 2009. Outstanding opportunities for primitive and unconfined recreation are available on approximately 19, 989 acres in the two wilderness areas. Both areas are popular with hikers and backpackers, while Red Mountain Wilderness is the destination for local and visiting equestrian trail riders. In FY 16, an estimated 25,000 visitors enjoyed wilderness experiences in these two designated wilderness areas.

Current Area of Focus

The Proposed NCA RMP/Final EIS were released on September 2, 2016, for a 30 day protest period. The remainder of FY 16 focused on preparing the Red Cliffs NCA Record of Decision and approved RMP for signature by the BLM-Utah State Director, which was completed in early FY 17. Completion of the OPLMA-mandated Comprehensive Travel and Transportation Management Plan for public lands in Washington County will continue to be a high priority of the NCA management and staff. The release of the draft TMP in 2017 is expected to generate considerable public interest and require a commitment of staff time to respond to public comments.

Education, Outreach, and Interpretation

National Conservation Lands Sign Installations



In FY 16, 18 new special designation and recreation signs were installed in the NCA, at major road entry points and at each trailhead or recreational site. These signs, which featured the new National Conservation Lands graphics and design, were placed either on wood posts or on new stone veneer bases, depending on sign type.

Public Information Center Brown Bag Programs

Weekly “Brown Bag” programs are offered on Fridays at noon in the interagency Public Information Center and feature guest speakers who provide information on local history, natural and cultural resources, and other topics of interest to the general public. In FY16, one of the weekly Brown Bag programs, presented by David Lee of the Western Rock Art Research Association, highlighted the abundance of Native American rock art (petroglyphs and pictographs) that are preserved in Washington County, UT, including sites located in the Red Cliffs NCA.



“Day in the Desert” Learning Experiences

NCA staff provided curriculum-based learning experiences for 100 Washington County middle school students during two “Day in the Desert” field days, held annually in the spring and fall, in the Red Cliffs Recreation Area. In the photo at left, the NCA Biologist examines a crayfish, as part of a study of vertebrates

and micro-invertebrates that are commonly found in creeks in the NCA.

Partnerships

Southern Utah National Conservation Lands Friends (SUNCLF)

Management of the Red Cliffs NCA continues to be supported by the Southern Utah National Conservation Lands Friends (SUNCLF), a 501 (c) (3) non-profit “friends” group, through a Cooperative Assistance Agreement. SUNCLF assists BLM with volunteer stewardship programs, environmental education outreach, and special projects. In FY16, SUNCLF helped to provide information about the NCA at local events, such as “Day in the Desert”, “Take it Outdoors Day” and “Junior Ranger Day”.



In May of 2016, SUNCLF hosted a one day public Photography Workshop in May of 2016, instructed by BLM’s master photographer Bob Wick. The workshop included a classroom session at the Interagency Public Information Center in St. George, during which attendees were shown methods to improve their photographs of landscapes and people. Following that session, workshop attendees could join Bob in the Red Cliffs NCA for field training on photographing landscapes.

In FY 16, SUNCLF helped to support the evaluation of two important prehistoric rock art sites in the NCA by Dean and Associates, professional rock art conservators, through funding and logistical support. Both sites had been damaged in the past by vandalism and graffiti and are in need of rehabilitation. This evaluation provided recommendations for treatments that will help to restore the integrity of both sites and potentially lessen the potential that either site will be further damaged by additional vandalism.

Dixie-Arizona Strip Interpretive Association (DASIA)

Outreach for the NCA is also provided by Dixie-Arizona Strip Interpretive Association (DASIA), also a 501 (c) (3) not-for-profit group, through a Cooperative Assistance



Agreement with BLM. DASIA recruits volunteers who assist with public contacts and visitor services in the interagency Public Lands Information Center in St. George, UT and with special projects. Speakers are scheduled by DASIA for the very popular weekly Friday Brown Bag Lecture Series, held in Public Lands Information Center and the lectures are hosted by DASIA staff.

Volunteers

Volunteers donated more than 2,000 hours of time to the conservation and protection of resource values in the NCA, assisting with data collection, resource monitoring and restoration, and recreation trails maintenance in the NCA. As examples:

- Volunteers hosted by SUNCLF used hand tools to remove noxious weed infestations of purple nightshade, Scotch thistle, and Russian thistle from approximately 15 acres in the NCA;
- 27 Trail Stewards, sponsored by Washington County HCP Administrator's Office, regularly patrolled more than 130 miles of designated non-motorized trails in the NCA, making visitor contacts and documenting trail conditions; in FY 16, these volunteers donated more than 1500 hours of volunteer time.
- Trained Site Stewards donated more than 200 hours, monitoring 20 archeological and paleontological sites in the NCA, assisted with graffiti removal at the Red Reef Shelter and with repainting of the protective shutters for the Orson B. Adams house doors and windows.

Land (or Interests in Land) Acquisitions

Acquisitions

In FY 16, a total of 89 acres of private land were acquired in the NCA, through direct purchase from willing sellers and through the exchange of other public lands managed by the SGFO in Washington County.

Approximately 9 acres of private inholdings were purchased for \$690,000, using the proceeds from the sale of public lands managed by the SGFO in Washington County, Utah. These private inholdings provide high quality critical habitat for the threatened Mojave desert tortoise and the acquisition was supported by the USFWS and Washington County, as it would further the goals of its HCP.

Land and Water Conservation Funds Land and Water Conservation Funds were used to acquire 5 acres of private land located along the Virgin River in the NCA, providing river access for recreationalists and protecting important aquatic and riparian habitats for federally-listed native fish, bats, and migratory birds. This tract also contains important historic period archeological sites, including the ruins of a late 19th century Stormont Mill, a stamp mill that processed silver ores from the nearby Harrisburg-Silver Reef Mining District.

Approximately 80 acres of private land inholdings in the NCA were acquired through the exchange of 600 acres of public land, located in Long Valley, south of the City of Hurricane, as described above under Key NEPA Actions and/or Project Authorizations. Financial support to further this exchange was provided by Washington County, as the acquisition of private land holdings within its mitigation reserve helps to meet critical goals of the County's HCP.



4 Science

Science Plan

A Science Plan has not yet been formalized for the Red Cliffs NCA. However, some of the opportunities for research that would inform the long-term management of the NCA are identified in the management alternatives that were presented in the Draft NCA RMP and will be included in a future Science Plan.

In FY 16, an informal working group comprised of the NCA Manager, NCA Archeologist, NCA Biologist, representatives from the National Park Service for the Grand Canyon-Parashant National Monument, UDWR, faculty from the Biology and Earth Sciences Departments of Dixie State University, SUNCLF, and local volunteers met on a regular basis to share information and discuss short and long-term research needs and opportunities in the NCA. The group determined that the near-term focus of its efforts should be on furthering the Habitat Restoration Research Program in the NCA, by training volunteers to assist with the collection of native seeds and to develop partnerships with local elementary and middle public schools that have greenhouses for students to be involved in the growing of containerized native plant species needed for the restoration plantings. In FY 16 a partnerships was formed Dixie State University 's Biology Department to use its greenhouse and students to propagate of native plants, while SUNCLF and local volunteers committed to assist with native seed collection, under the direction of BLM staff; both initiatives are planned to start early in FY 17.



Presence/Absence Studies for Mojave Desert Tortoise

The NCA Biologist, assisted by biologists from UDWR, USFWS, and Washington County conducted presence/absence studies for desert tortoise in a fire-damaged area of the NCA that is within designated critical tortoise habitat but where such studies had not previously been conducted. The study was conducted according to USFW protocols, which require that qualified tortoise biologists walk parallel transects spaced at 10 meter intervals and that they document native and exotic vegetation, other wildlife observed, as well as any tortoise, burrows, scat, or other evidence of tortoise in the study area. This study inventoried approximately 50 acres of the NCA and identified tortoise scat in the study area, attesting to use of the area by tortoise within the past year. As the study area had

previously been considered marginal tortoise habitat because of its elevation and loss of some native vegetation to wildfire in 2005, this intensive inventory demonstrated that that tortoise do occupy this higher elevation habitat and it may become more important to tortoise recovery, under predicted drought scenarios.

Bat Monitoring Studies

In FY 15, funding from a small grant proposal to the BLM's National Cave and Karst Management Program was used to purchase an ultrasonic bat recorder and an iPad, to test the feasibility of using stationary and portable recorders to identify bat species and distribution in the NCA. The success of the initial studies using a single recorder prompted the acquisition of four additional recorders and a second iPad in FY 16. A permanent ultrasonic bat recorder is now located in the Red Cliffs NCA, and, with the use of the two mobile iPads and identification software, it has been possible to record calls and make real time identification at multiple locations in the NCA.



acoustical monitoring studies in the NCA. View of bat acoustical data being collected in the NCA.

The acoustical data collected is processed through specialized software that analyzes each bat call and provide species identification and call signature in full wave spectrum and zero cross referencing formats. A geodatabase was created in GIS to capture all relevant data, such as bat species identified, location, date, ecological setting, and meteorological conditions. Using these data, models can be created for species/habitat distribution and diversity. Of the 18 bat species reported to occur in Utah, 16 have been identified through the

Raven (*Corvus corax*) Predation Study

The NCA Biologist and the Washington County HCP Biologist continued work on a raven predation study in the NCA, visiting all previously known raven nesting areas and investigating potential new nesting locations. They monitored nest activity and inspected all nest and roost areas for any remains of Mojave desert tortoise. This

study seeks to collect data that will help to determine the extent of raven predation on hatchling and juvenile tortoise and the locations where predation is most prevalent. These data will be used to determine when raven control measures are required and help to inform the least invasive control measures that will be effective.

Southwestern Willow Flycatcher (*Empidonax traillii extimus*) and Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) Monitoring

Avian biologists with UDWR conducted annual monitoring studies along the Virgin River through the NCA for evidence of these riparian obligate species that are both now federally-listed species. Monitoring studies attempt to determine if either species is present in this reach of the river and to identify any foraging and nesting locations. Funding for these studies is provided by the Virgin River Recovery Program and the Washington County Habitat Conservation Plan.

Human Impact Monitoring

Students from Southern Utah University, under the direction of Dr. Bridget Eastep, conducted annual monitoring of recreational use impacts in the Red Cliffs Recreation Area, the Babylon Area, and along non-motorized trails in tortoise designated critical habitat within the NCA. Any new social trails and dispersed camping sites were documented, through GPS locations and photographs. This annual monitoring program is funded by Washington County's HCP and data provided to the multi-jurisdictional land managers of the County's mitigation reserve, of which the NCA comprises 70% of the land base.



5 Resources, Objects, Values, and Stressors

The Congressionally-defined purposes for designation of the NCA, as stated in P.L.111-11 at Title I, Subtitle O at sec. 1974(a), are:

To conserve, protect, and enhance for the benefit and enjoyment of present and future generations the ecological, scenic, wildlife, recreational, cultural, historical, natural, educational, and scientific resources of the National Conservation Area; and

To protect each species that is located in the National Conservation Area; and listed as threatened or endangered...under the Endangered Species Act of 1973

The BLM has identified a number of natural and cultural resources within the NCA that are unique and scientifically important. These are but a few of the resource values that make the public lands of the NCA worthy of inclusion in BLM's system of National Conservation Lands and include the following:

- Massive exposures of the Jurassic age Kayenta Formation and Navajo Sandstone that preserve scientifically important dinosaur tracks and trackways, bone beds, plant fossils, and silicified wood;
- Rich ecological diversity resulting from the convergence of three major ecoregions: the Mojave Desert, Colorado Plateau and Great Basin;
- Critical habitats that sustain high densities of the threatened desert tortoise and other Mojave Desert species;
- Critical habitat for the endangered Shivwits milkvetch, a small native plant that grows only in Washington County on specific soil types;
- The Virgin River, Quail, and Leeds Creeks that provide aquatic habitat for the threatened and endangered native fish of the Virgin River system;
- Riparian zones along these streams that support diverse native species and migratory birds;
- Scenic landscapes of the Red Mountain and Cottonwood Canyon Wilderness areas that provide outstanding opportunities for solitude, natural quiet, primitive and unconfined recreation, and high quality wilderness experiences;
- Archaeological sites that preserve evidence of Archaic, Ancestral Puebloan, and Southern Paiute occupations and land uses;
- Mid-19th century and later historic period sites and features relating to the Euro-American settlement of southern Utah, including wagon roads, irrigation

systems, farmsteads, mining sites, and the early 20th century Arrowhead Trails Highway.

The Red Cliffs NCA resources are significant from a regional and national perspective because they afford:

- Opportunities for scientific study of Early and Middle Jurassic age paleo-environments;
- Opportunities for conservation, protection, restoration, scientific study, public use and interpretation of an array of Jurassic-age paleontological resources, including scientifically important plant fossils, bone beds, and track sites;
- Opportunities for restoration of critical habitats for the threatened Mojave desert tortoise and other at-risk native species of this ecoregion.
- Opportunities for restoration and protection of crucial seasonal ranges and migration corridors for mule deer;
- Opportunities to reintroduce native desert bighorn sheep to former habitats in the Red Mountain and Cottonwood Canyon Wilderness areas;
- Opportunities for scientific research in City Creek and Paradise Canyon, where research on the Mojave desert tortoise has been ongoing since the 1950s;
- Opportunities for solitude, natural quiet, dark night skies, primitive and unconfined recreation in the Red Mountain and Cottonwood Canyon Wilderness areas, just minutes from the largest cities in Washington County;
- Opportunities for conservation, protection, restoration, scientific study, public use and interpretation of an array of prehistoric and historic period archaeological sites, documenting the broad span of human history in southwestern Utah;
- Opportunities for sustainable outdoor recreation on public lands that enhance the quality of life for local residents and visitors and help to sustain the economic health of local communities;
- Opportunities for broad-based scientific, academic, and community partnerships, volunteer programs, youth and veteran training and employment initiatives, developed to enhance public appreciation and citizen stewardship of the NCA resources and values.

As benchmarks have not yet been established through a Science Plan, the following assessment focuses on those resources for which status and trend are currently being monitored in the NCA.

Ecological Resources

Native Upland Vegetation Communities

Wild fires, exotic invasive annuals, and predicted drought that benefits invasive species are the primary stressors affecting upland vegetation communities in the NCA. Late successional blackbrush formerly covered nearly 65% of the NCA land base. Over the past 20 years, wild fires fueled by exotic brome grasses have burned or re-burned a majority of this community; many re-burn areas have been converted to annual grasslands. This community will not re-establish as a mature shrubland for centuries, if ever.

Status of Native Upland Vegetation	Trend
Fair to Good, depending on fire history	Stable in unburned areas

Inventory, Assessment, Monitoring of Native Upland Vegetation			
Acres in Unit	Acres Inventoried	Acres Possessing Object by Community	Acres Monitored in FY16
44,859	34,400	Creosote:3,043 Blackbrush:22,265 Pinyon-juniper:3,719 Desert Sand Sage: 1,586 Warm-Season Grassland:118 Big Sagebrush:3,061	Creosote: 150 Blackbrush:500 Pinyon-juniper: 25 Desert Sand Sage: 100 Warm-Season Grassland-50 Big Sagebrush-50

Montane Riparian, Warm Desert Riparian and Riparian Wash Vegetation

Riparian vegetation occurs in three environmental contexts (montane, warm desert, and riparian washes) in the NCA and was mapped by The Nature Conservancy at a detailed scale in 2011 during the Landscape Conservation Forecasting Process. Species that typify the riparian communities include mesquite, native willows, and

Fremont’s cottonwood; montane riparian areas include velvet ash, native willows, and cottonwood, but lack mesquite.

Status of Riparian Vegetation	Trend
Good	Stable

Inventory, Assessment, Monitoring of Riparian Vegetation			
Acres in Unit	Acres Inventoried	Acres Possessing Object	Acres Monitored in FY16
44,859	Montane Riparian:40 Warm Desert Riparian:160 Riparian Wash:402	Montane Riparian:40 Warm Desert Riparian:160 Riparian Wash:402	Warm Desert Riparian:25 Riparian Wash:15

Stressors Affecting Ecological Resources

Native Upland Vegetation Communities: Wildfires, exotic invasive annuals, and predicted drought that benefits invasive species are the primary stressors affecting all upland vegetation communities. Mojave Desert shrublands, including mature blackbrush stands, in particular, have been most severely impacted, as species in this community are not fire adapted and will not re-establish for decades or generations. In the past decade, wild fires, fueled by exotic annual brome grasses, have burned or re-burned 25% of this community.

Montane Riparian, Warm Desert Riparian and Riparian Wash Vegetation: Riparian vegetation in the NCA along Quail and Leeds Creeks, the Virgin River, and ephemeral drainages is primarily being impacted by episodic flooding and exotic species infestations. Exotic salt cedar and Russian olive have invaded the riparian areas and compete with native species.

Wildlife: Threatened and Endangered Species

Because the NCA lies within a transition zone between three eco-regions, it provides a mosaic of habitats for diverse wildlife species, some at the extremes of their historic ranges. Such species tend to have less stable populations than those closer to the center of their range. The federally-listed threatened Mojave desert tortoise is known to occur in the NCA and data area collected annually on population trends and habitat conditions by BLM and UDWR. Two avian species, the Southwestern willow flycatcher and Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*), are currently listed under the protection of the Endangered Species Act and have the potential to occur in the NCA. The Virgin River chub (*Gila seminude*) and woundfin (*Plagopterus argentissimus*), both endangered native fish of the Virgin River system, are found in the reach of the river that flows through the NCA.

Mojave desert tortoise

The desert tortoise is a long-lived “indicator species” that is useful for evaluating the health of the Mojave Desert ecosystem. Over millions of years of evolution, the species has successfully adapted to changing environmental conditions and has been able to flourish, even in the highly variable and harsh environment of the Mojave Desert.

Status of Tortoise Critical Habitat	Trend
Fair to Good, depending upon location and fire history	Stable in unburned areas Declining in fire-impacted areas

Status of Tortoise Populations	Trend
Fair	Stable

Inventory, Assessment, Monitoring Table of Tortoise Critical Habitat			
Acres in Unit	Acres Inventoried	Acres Possessing Object	Acres Monitored in FY16
44,859	30,256	25,300	200

Stressors Affecting Mojave Desert Tortoise

Wild fires, exotic invasive annuals, and predicted drought that benefits invasive species are the primary stressors affecting critical the Mojave desert tortoise. The creosote-bursage community, which comprises a majority of the critical habitat, has not been damaged by recent wild fires, but remains at high risk because invasive brome grasses are present throughout this community. Late successional blackbrush formerly covered nearly 65% of the NCA land base. Over the past 20 years, wild fires fueled by exotic brome grasses have burned or re-burned a majority of this community; many re-burn areas have been converted to annual grasslands. Nutritional deficiencies impair the reproductive success of desert tortoises, while inadequate shade cover increases the potential for tortoise mortalities as a result of exposure to summer heat and predation.

Southwestern Willow Flycatcher and Western Yellow-billed Cuckoo

Both of these birds are currently listed under the Endangered Species Act and are riparian obligates that depend on healthy riparian areas with dense stands of willows and cottonwood trees for nesting and foraging. Suitable habitat for these species is present along the Virgin River, Quail and Leeds Creeks, and in some ephemeral washes in the NCA.

Status of Riparian Habitat for T&E Birds	Trend
Good	Stable

Status of Flycatcher and Cuckoo Bird Populations	Trend in NCA
Declining across range	Unknown

Inventory, Assessment, Monitoring Table: Riparian Habitat for T&E Birds			
Acres in Unit	Acres Inventoried	Acres Possessing Object	Acres Monitored in FY16
44,859	600	600	50

Stressors Affecting Southwestern Willow Flycatcher and Western Yellow-billed Cuckoo

Habitat loss to developments and infestations by invasive species, such as giant reed (*Arundo donax*) and tamarisk (*Tamarack spp.*) that degrade riparian areas are the principal stressors on these species. Prolonged droughts and predicted weather and drought scenarios could also impact the survival of willows and cottonwood trees that are important for nesting and foraging.

Virgin River Chub and Woundfin

Native fish of the Virgin River system are generally at risk, due to declining populations and loss of habitat. Both fish are found in the approximately 6 mile reach of the Virgin River that flows through the NCA. This reach is protected by downstream fish barriers that prevent non-native fish from moving up the stream channel.



Status of Critical Habitat for T&E Fish	Trend
Good	Stable

Status of Virgin River chub and Woundfin Populations	Trend
Good	Stable in NCA

Inventory, Assessment, Monitoring Table of Critical Fish Habitat in Virgin River			
Acres in Unit	River miles inventoried	River Miles Possessing Object	Miles Monitored in FY16
44,859	6	6	6

Stressors Affecting Virgin River Chub and Woundfin

Threats to both native fish include competition with non-native fish and habitat degradation, resulting from dams or diversions that have been constructed on the Virgin River in the past, outside of the boundaries of the NCA, that elevate water temperatures beyond the tolerance of the fish. There are no non-native fish in the reach of the river that crosses the NCA and no dams or diversions. Prolonged droughts and predicted weather scenarios that result in increased ambient temperatures would be expected to negatively impact these native fish, as water temperatures in the river would likely rise beyond the tolerance of both species.

Native Plants: Threatened and Endangered Species

Shiwits Milkvetch (*Astragalus ampullariodes*)

This small native plant is found only in Washington County and has been listed as an

endangered species since 2006. Six plant populations are known, two of which are located within the NCA. Shivwits milkvetch has very specific habitat requirements, growing only in the purple-hued, gypsum rich soils, within the boundaries of the Red Cliffs Recreation Area. All areas that support Shivwits milkvetch populations in the NCA are fenced to protect the plants and their habitat.

Status of Shivwits Milkvetch	Trend
Good	Stable

Inventory, Assessment, Monitoring of Shivwits Milkvetch			
Acres in Unit	Acres Inventoried	Acres Possessing Object	Acres Monitored in FY16
44,859	3,000	422	422

Stressors Affecting Shivwits Milkvetch

Exotic invasive annuals and predicted drought are the primary stressors on Shivwits milkvetch and its designated critical habitat in the NCA. This habitat is primarily located in the creosote-bursage community and is at some risk of impacts from wildfires because invasive annual brome grasses are present, but not abundant, throughout this community. Recent modeling scenarios conducted for nearby Zion National Park indicated that predicated increases in ambient air temperature could impact the survival of the Shivwits milkvetch and other endemic native plant species whose habitats are localized to specific soil types with limited geographical distributions.

Scientific Resources: Geological and Paleontological Resources; Cave and Karst Values

To date, inventories conducted in NCA have identified 46 scientifically significant paleontological localities. A majority of the localities are dinosaur tracks and trackways, including swim tracks with claw marks, fossilized skeletal remains, and coprolites. These localities are in the Triassic Chinle Formation, Triassic-Jurassic Moenave Formation, and the Jurassic Kayenta Formation, all of which are considered to be high potential for scientifically significant paleontological resources. Localities with fossilized plant remains have also been identified that are of scientific interest. There is a potential for the Quaternary and Tertiary Formations to include vertebrate fossils in cave/alcoves and unconsolidated fill.

Vertebrate trace fossils have been found in the Jurassic-age Navajo, Kayenta, and Moenave Formations in the NCA. Particularly well-preserved and numerous dinosaur tracks have been identified in the Babylon/East Reef area.

Fossilized bones have been reported from the Chinle Formation, Moenave Formation, and Springdale Member of the Kayenta Formation in the NCA. Bones from phytosaurs (long-snouted crocodile-like reptiles) and metoposaurs (large crocodile-like amphibians) have been found in the Chinle Formation. Bones and scales from fossil freshwater fish fauna, including shark, lungfish, and coelacanth, have been identified from the Whitmore Point Member of the Moenave Formation.

Silicified or “petrified” wood is found in many areas of the NCA. Although some petrified wood has been found in the Triassic Moenkopi Formation, the Springdale Member of the Kayenta Formation, and the Cretaceous Iron Springs Formation, the greatest concentration of the petrified wood is present in the Triassic Chinle Formation.

Status of Paleontological Resources	Trend
Good	Stable

Inventory, Assessment, Monitoring of Paleontological Resources			
Total Acres of Unit	Acres Inventoried through Potential Fossil Yield Evaluations	Localities Recorded in FY16	Localities Monitored in FY16
44,859	200	46	15

While the geologic formations of the Red Cliffs NCA are not those that typically erode into cave and karst values, there are large natural rock arches and alcoves that provide habitat for bats and that contain evidence use by prehistoric and historic period human groups. In some cases, abandoned mine adits in the White and East Reef areas of the NCA that today are occupied or uses by diverse bat species. All appropriate, these geologic features are documented through the Cave and Karst Management Program and monitored for impacts on resources values.

Status of Cave, Karst, Adits, and Rock Shelter Values	Trend
Good	Stable

Inventory, Assessment, Monitoring of Cave, Karst, Adits, and Rock Shelter Values				
Total Acres of Unit	Acres Previously Inventoried	Acres Inventoried in FY 16	New Caves Recorded in FY16	Caves Monitored in FY16
44,859	200	20	0	2

Cultural and Historical Resources

The NCA land base has been occupied and used by many cultural groups over the broad expanse of human history. Evidence of this is preserved in prehistoric and

historic period archeological sites and as Traditional Cultural Properties, Native American Sacred Sites, and cultural landscapes. The material culture of ancient Native American cultures, including the Archaic peoples, Formative Period Ancestral Puebloans and later Ancestral Numic-speaking groups, is found in campsites, rock shelters, and occupation sites. Modern Southern Paiute people also lived here and used this area, hunting and collecting native plants and cultivating crops along perennial streams, including Quail and Leeds Creeks and some reaches of the Virgin River. As only a very small percentage of the NCA has been inventoried to identify archeological and historic period resources, many more undocumented sites are likely to exist and will be of significant scientific value.

The NCA preserves some of the agrarian fields and the ruins of residences from the mid-19th century failed pioneer Mormon settlement of Harrisburg. The Orson B. Adams house and farmstead, the ruins of the Willard McMullin farmstead, rock walls, ditches, wagon roads, and agricultural fields are visible in the White Reef area of the NCA.

Miner’s prospects, adits, shafts, cabins, and wagon roads affiliated with the late 19th century Harrisburg-Silver Reef mining district are abundant in the White Reef and East Reef areas of the NCA. In FY 16, researchers from Western Rock Art Research were conducting an inventory of rock art sites in the East Reef area, when they documented an 1875 U.S. silver coin (25 cent piece) in association with historic period sites near the Stormont Mill, an stamp mill that processed silver ores from the Harrisburg-Silver Reef mines during the last decades of the 19th century.

Status of Cultural and Historical Values	Trend
Good	Stable

Inventory, Assessment, Monitoring of Cultural and Historical Resources			
Total Acres of Unit	Acres Inventoried	Acres Inventoried in FY 16	Sites Monitored in FY16
44,859	8,000	100	25

Stressors Affecting Cultural and Historical Resources

Stressors on cultural and historical resources include natural processes, such as wind and water erosion and human-caused impacts, such as vandalism and theft of artifacts. Wildfires can destroy historic wooden structures or features while the loss of vegetative cover can accelerate soil erosion that also damages site integrity.

Recreation Resources

The mild climate of southwestern Utah allows for enjoyable outdoor recreation opportunities in the NCA during all but the hottest months of summer. The NCA is literally within the “backyards” of residential subdivisions in Ivins, Santa Clara, St. George, and Washington City and receives intensive local community recreation uses. With 81 trails and routes of varying length and difficulty, hiking, mountain biking, and horseback riding are popular activities in the NCA. Because federal, state, municipal, county, and private lands are all encompassed within the boundaries of the NCA, trails cross jurisdictional boundaries. Almost all the trails, with the exception of those in designated wilderness, have been signed, and all major roads leading into the NCA have portal signs. There are 35 trailheads where visitors can enter the NCA and park a vehicle. Trailheads typically include vault toilets, kiosks, interpretive panels, directional signs, and fences.

Within the boundaries of the NCA is the Red Cliffs Recreation Area, a fee site that includes a developed campground, day use area, a non-motorized trail system, and interpreted public use sites, including an Ancestral Puebloan habitation site, dinosaur trackways, the 1863 Orson B. Adams House, a historic structure that has been rehabilitated to Secretary of the Interior Standards for adaptive re-use as an interpretive site, and the partial standing walls of a 1950’s era Hollywood movie set.

Recreational opportunities are locally well known and the NCA does attract visitors from outside the region; however, a majority of the recreational use is by local residents. Visitor use has increased in concert with regional population growth: in FY16, visits totaled 50,000 and the estimated number of visitor days was approximately 10,000.

Status of Recreation Resources	Trend
Good	Stable

Inventory, Assessment, Monitoring of Recreation Resources			
Acres in Unit	Acres Inventoried	Acres Possessing Object	Acres Monitored in FY16
44,859	44,859	44,859	44,859

Stressors Affecting Recreation Resources

Recreational resources and opportunities may be affected by any of the stressors that impact other resource values, as visitors to the NCA typically expect to see healthy native vegetation, diverse wildlife, and unspoiled scenic vistas. Unmanaged recreational uses can not only impact natural and cultural resources but can also result in damage to developed recreation facilities and impair the quality of visitor experiences.

Naturalness

Designated Wilderness

In 2009, through OPLMA, Title 1, Subtitle O, at sec.1972, the Cottonwood Canyon and Red Mountain Wilderness areas were added to the National Wilderness Preservation System and the Secretary of the Interior, through BLM, directed to administer each area in accordance with the Wilderness Act (16 U.S.C. 1131 et seq.). Approximately 19, 989 acres of the two designated wilderness areas are within the boundaries of the NCA. The characteristics of wilderness, including size, naturalness, outstanding opportunities of solitude and outstanding opportunities to primitive and unconfined recreation, are present in each of these areas.

Status of Designated Wilderness	Trend
Good	Stable

Inventory, Assessment, and Monitoring of Designated Wilderness
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Acres in Unit	Acres Inventoried	Acres Possessing Object	Acres Monitored in FY16
44,859	44,859	19,989	19,989

Lands with Wilderness Characteristics

The naturalness of the NCA outside of designated wilderness can be inferred from the results of inventories completed by BLM for the presence or absence of wilderness characteristics. These characteristics include size, naturalness, outstanding opportunities of solitude and outstanding opportunities to primitive and unconfined recreation. Between 2012 and 2014, NCA staff completed inventories for lands with wilderness characteristics in the NCA and found that three areas, totaling 1,586 acres, possessed those characteristics.

Status of Lands with Wilderness Characteristics	Trend
Good	Stable

Inventory, Assessment, and Monitoring of Lands with Wilderness Characteristics			
Acres in Unit	Acres Inventoried	Acres Possessing Object	Acres Monitored in FY15
44,859	44,859	1,586	1,586

Stressors Affecting Naturalness

Wild fires, exotic invasive annuals, and predicted drought that benefits invasive species are the primary stressors that have the potential to impact the naturalness of the NCA. Increasing recreational uses, particularly if not properly managed, would also have the potential to impact its natural qualities, if these uses damage resource values and degrade the quality of visitor experiences.

Scenic Resources

The Red Cliffs NCA sits astride a transition zone between two major physiographic provinces, the Great Basin section of the Basin and Range Province and the Colorado Plateau, where geological processes have created a highly scenic area that, for most visitors, typifies the rugged and beautiful American Southwest. The landscapes of the east and south sides of the NCA are visible from Interstate I-15, beginning near Leeds and extending through downtown St. George, a scenic 14 mile stretch. These are landscapes of dramatic contrasts, with jet-black basalt flows ending abruptly against deep red Navajo sandstone cliffs. The western boundary of the NCA is formed by the 1,800 foot high red sandstone cliffs of the Red Mountain Wilderness, creating a spectacular backdrop for the cities of Ivins and Santa Clara. The natural character of the NCA landscapes contrast sharply with the highly modified human environment just outside its boundaries.

The pristine quality of the visual resources in many portions of the NCA is reflective of its rugged and relatively undeveloped nature. There are however, some areas of disturbance and development that can be found inside its boundaries. Cottonwood Road is one of the primary roadways through the heart of the NCA and is paralleled and crossed by power transmission lines; a substation and other utility infrastructure are also visible from the roadway. These intrusions into the landscape give this area an industrial feel that seems strangely out of place in a generally natural and undeveloped landscape. A Visual Resource Inventory was completed by BLM for the NCA that rated the scenic qualities of the NCA, according the four classes used by BLM’s Visual Resource Management System.

Status of Scenic Resources	Trend
Good	Stable

Inventory, Assessment, Monitoring of Scenic Resources			
Acres in Unit	Acres Inventoried	Acres Possessing Object Based on VRI Inventory	Acres Monitored in FY16

44,859	44,859	VRM Class I-20,766 VRM Class II-8,971 VRM Class III-14,977 VRM 4 Class IV-145	44,859
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Stressors Affecting Scenic Resources

Wild fires, exotic invasive annuals, and predicted drought that benefits invasive species are the primary stressors that directly affect the scenic qualities of the NCA. In 2005-2006, catastrophic fires burned or re-burned nearly 25% of the central and northern portions of the NCA. As Mojave Desert shrubs are not fire-adapted species, the fire scars will remain visible for decades. A number of power transmission lines of various capacities cross the NCA, generally paralleling Cottonwood Road, the only major roadway that traverses north-south through the mid-section of the NCA. Should some of these transmission lines be upgraded to larger pole sizes or additional lines be authorized, power transmission facilities would negatively impact the scenic qualities of the core land base of the NCA.

6 Summary of Performance Measure

The Congressionally-defined purposes for designation of the NCA, as stated in P.L.111-11 at Title I, Subtitle O at section 1974 are:

(1)To conserve, protect and enhance for the benefit and enjoyment of present and future generations the ecological, scenic, wildlife, recreational, cultural, historical, natural, educational, and scientific resources of the National Conservation Area.

To protect each species that is located in the National Conservation Area; and listed as threatened or endangered...under the Endangered Species Act of 1973

As benchmarks have not yet been established through a Science Plan, the following assessment focuses only on those ecological values currently being monitored in the NCA.

Summary Table*		
Resource, Object, or Value	Status	Trend
Ecological/Natural	Fair to Good	Stable
Threatened or Endangered Species (Wildlife and Plants)	Fair to Good	Stable
Geological/Paleontological	Good	Stable
Cultural/Historical	Good	Stable
Recreational	Good	Stable
Naturalness	Good	Stable
Scenic	Good	Stable

7

Manager's Letter

Dear Friends of the Red Cliffs NCA;

The Manager's Annual Report highlights just a few of the activities and projects that we completed this year to conserve and protect resource values in the Red Cliffs NCA. Our efforts were furthered by contributions from many dedicated volunteers, community partners, researchers, and members of the public who support the purposes for which this NCA was designated by Congress in 2009.

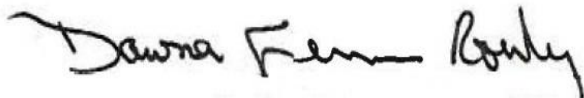
We were particularly pleased to be able to release the Proposed Resource Management Plan (RMP) for the Red Cliffs NCA/Final EIS for public review, after reviewing nearly 6,500 comments submitted by the public, other Federal and State agencies, and the Cooperating Agencies to this planning process. This input has helped us to develop comprehensive long term goals, objectives, and management actions that will have significant positive impacts on the natural and cultural resources of the NCA. We look forward to having a Record of Decision signed that approves a new RMP for the NCA by the end of 2016.

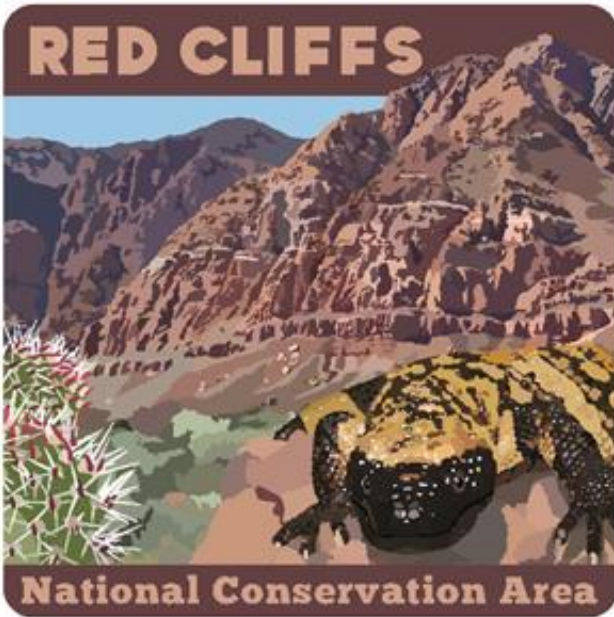
In the next year, our focus will also be on the following:

- Developing an Implementation Strategy for the approved Red Cliffs NCA RMP;
- Engaging the public and soliciting input from all affected parties on the Draft Comprehensive Travel and Transportation Management Plan for Washington County that will be released in 2017;
- Initiating the planting phase of the large scale fire damaged habitat restoration project;
- Supporting SUNCLF in its efforts to increase public awareness and provide opportunities for volunteers to assist with projects and programs that further the purposes of the NCA;
- Developing new partnerships with local schools and academic institutions, like University of Nevada-Las Vegas and Dixie State University, to engage faculty and students in NCA restoration projects and research studies; and
- Fostering new opportunities for volunteers of all ages to help us further the conservation purpose of the NCA.

We thank you for your interest in and support of the Red Cliffs NCA.

Sincerely,





**Bureau of Land Management-Utah
St. George Field Office
Public Lands Information Center
345 E. Riverside Drive
St. George, UT 84790
Phone: (435)-688-3200**

January 20, 2017



**NATIONAL
CONSERVATION
LANDS**

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