



Lake Red Rock Project

MASTER PLAN

CHAPTER 6

Special Topics

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CHAPTER 6

SPECIAL TOPICS

6.1. COMPETING INTERESTS AFFECTING NATURAL RESOURCES

Lake Red Rock is a large multi-use project with three authorized purposes (flood control, recreation and fish and wildlife). Low flow augmentation benefit is gained from the conservation pool accommodated within the authority for a sedimentation reserve. The benefits stemming from these missions are critical to local and regional economies and are of great interest to the public at large. The interests of the various entities benefitting from Lake Red Rock are sometimes in conflict and become competing interests. To the extent possible within the constraints of the primary flood control mission, the Corps will endeavor to maximize the overall benefits of the project within existing authorities and missions.

6.2. PARTNERSHIPS

Throughout the Master Plan process we sought a high level of public involvement to help define Lake Red Rock's future. It is our partnerships that that will successfully fulfill this vision. Lake Red Rock has benefited from having an outstanding Cooperating Association with the Red Rock Lake Association (RRLA). The Corps and the RRLA have a solid history of partnering. The Association was formed in 1969 and helped provide some of the earliest recreation opportunities at the lake. It has remained active for over 40 years. Today it is the Corps' anchor partner and provides the base from which many of our other partnerships develop and thrive. The RRLA mission is:

“Be a partner with the US Army Corps of Engineers in managing recreation, development and stewardship of Lake Red Rock”



RRLA Board Meeting Early 1990s

Since its founding, the RRLA has worked closely with the Corps to promote the lake's recreational and environmental stewardship opportunities through marketing and special events. Examples include Family Days; Trailfest; Balloonfest; Cold Nose Ice Fishing Tournaments; and staffing State Fair and Sport Show booths.

It has also partnered on numerous recreation improvements or developments including South Overlook Fish Cleaning Station; Courtesy Docks; Visitor Center Overlook Deck; Wallashuck Fish Rearing Pond; and North Overlook Playscape. Its largest project to date was assisting with acquisition of the Hickory Ridge Wilderness Campground.

Partnerships anchored through the RRLA with local corporations, Vermeer Manufacturing, 3M and Central College have proved very successful using the Corps Challenge Partnership Agreement and Handshake Program. These companies and institutions can provide a large pool of volunteers, equipment, funds and support for a variety of initiatives like STEM (science, technology, engineering, math) education and expertise. An innovative new development, a playscape at North Overlook was accomplished through these public/private partnerships.



3M Presenting EcoGrant to RRLA

The RRLA has assisted in growing the large volunteer program at Lake Red Rock providing recognition dinners and awards for volunteer service.

The Corps also partners with the tourism leaders of Pella, Knoxville and Marion County Development Commission. Marion County's tourism related economy reached \$ 48 million in 2014. The impact and importance of our partnerships with area communities cannot be overstated.

Working in partnership with the other managing agencies at Lake Red Rock, Marion County Conservation Board and the Iowa DNR has resulted in development of significant recreation facilities to include the Volksweg paved trail and the large Elk Rock Ramp.

Marion County Conservation Board and the Iowa DNR provide information on the lake and its missions, interpretive programs, special events and recreation development.

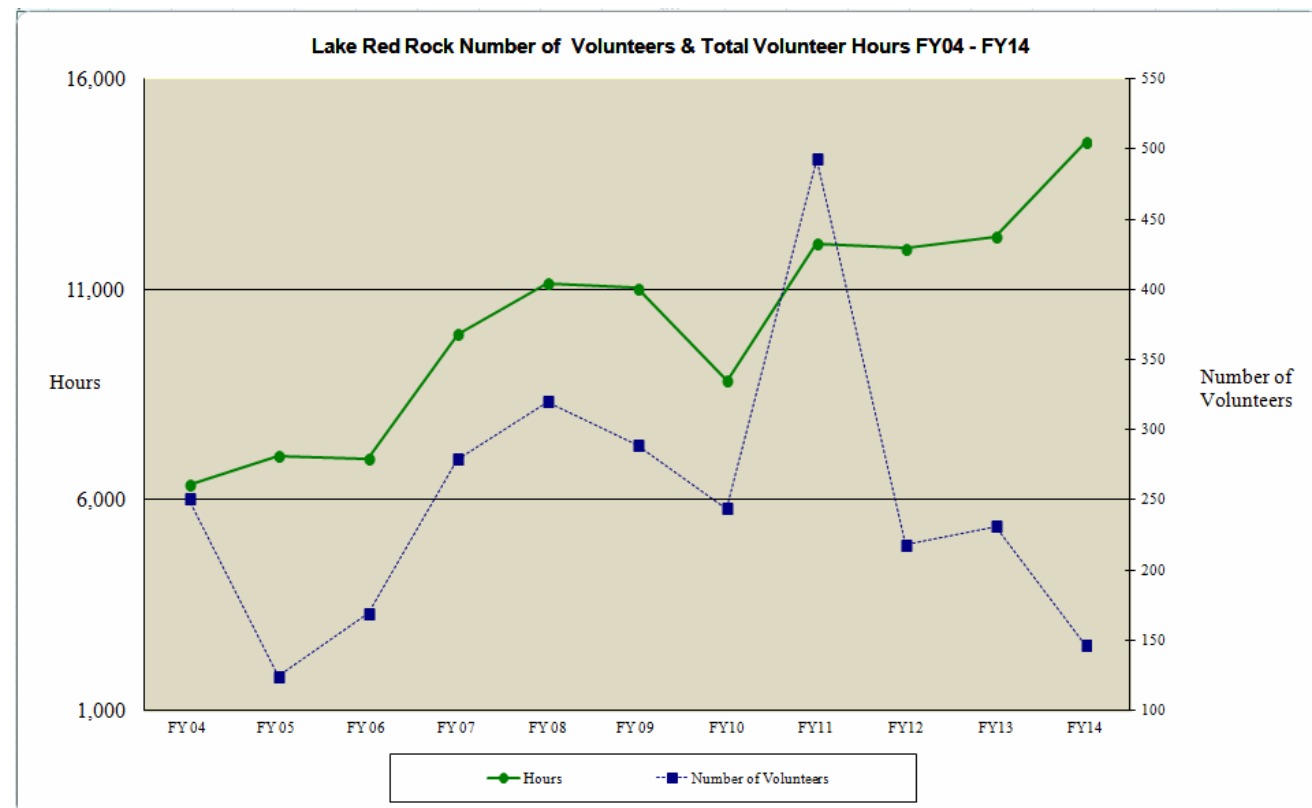


Partnering helps to pool scarce resources; promote coordinated, focused, and consistent mutual efforts to resolve common problems and missions; and to avoid unnecessary duplication of effort. Lake Red Rock has embraced the ideals of partnering and should continue to explore the potential development of new public-private partnerships. In FY 2014, Lake Red Rock partnered with fourteen different entities for a combined partnering value of over \$390,000.

6.3. VOLUNTEERS

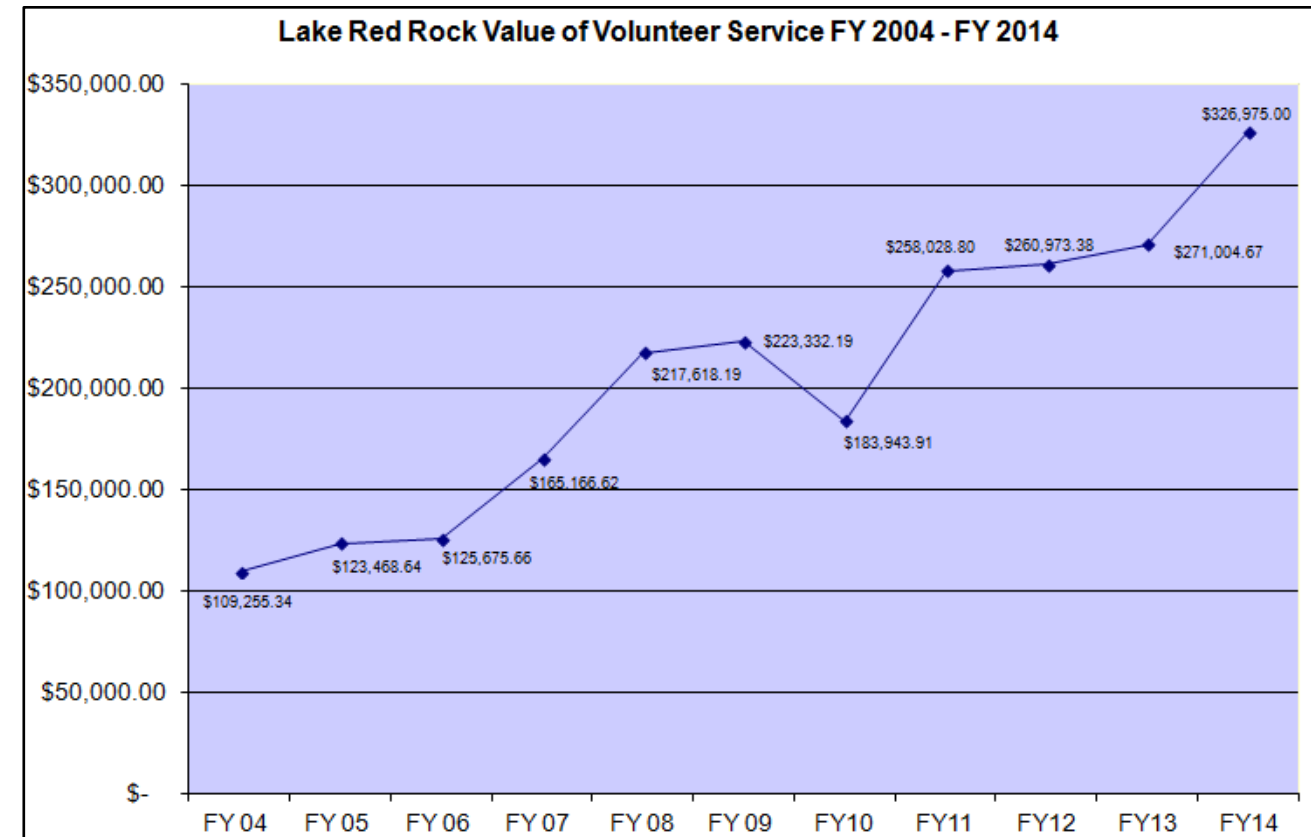
The Corps has an extensive volunteer program nationwide, with the unique ability to attract retired individuals to recreational areas because it provides outstanding camping facilities at locations all over the United States. These senior citizens often live in their recreational vehicles year round and are nicknamed “workampers”. They seek opportunities to volunteer in campgrounds and other recreation areas as hosts, fee attendants, custodians and more. As a primary face of the Corps to recreation visitors, volunteers provide outstanding customer service. Additionally, volunteers are essential tools that allow the Corps to effectively manage environmental resources. In 2014, the Corps at Lake Red Rock recruited, trained, and managed 48 workamper volunteers to provide recreation and environmental stewardship services.

Lake Red Rock’s volunteer program has significantly expanded over the past decade. Although the number of volunteers fluctuates from year to year, as shown in the following chart, the hours worked per volunteer has steadily increased since 2004. The strategic emphasis on longer term workamper volunteers reduces training and other start up costs resulting in higher benefit.



The economic value that volunteers contribute to a project is calculated by multiplying the number of hours worked by the national dollar value provided by Corps Headquarters. From 2004 to FY2014, Red Rock volunteers have contributed the equivalent of \$2.2 million dollars of labor.

The following chart shows the value of volunteer service for each year during the last decade.



The Corps utilizes volunteers to perform custodial services, mowing, fee collection, and hosting in a majority of its recreation areas. Volunteers also staff the Red Rock Visitor Center and assist with interpretive programming. These services have been successfully converted to performance by volunteers. Most workamper volunteers live on-site at a full service campsite while they are volunteering.

Additional volunteer efforts come from civic groups, schools, colleges and individuals that contribute hundreds of hours to trash pick-up and other tasks each year.

6.4. PERMANENT RAISE IN RED ROCK CONSERVATION POOL

Sediment accumulating in the conservation pool (normal lake pool) is the primary threat to future water based recreation at Lake Red Rock and upstream in the Des Moines River. Concerns with sediment filling the conservation pool have prompted several permanent raises in the normal lake level. These raises were based on concern for maintaining an adequate volume of water for low flow augmentation of the Des Moines River. The original conservation pool was established at elevation 725, and provided an adequate amount of storage for low flow augmentation and sediment. However, the drought of 1977 prompted a raise in the lake pool to 728, due to a loss of storage from sedimentation eight years after the reservoir started operations. Ongoing sedimentation prompted another raise in the conservation pool to 734 in 1988, with an understanding that an additional raise to 742 would be needed to ensure future low flow at Ottumwa. The final raise was accomplished in 1992. The Corps foresaw the need to raise the conservation pool due to sedimentation over the life of the reservoir. However, the final raise to 742 was made sooner than originally planned at the request of the State of Iowa.



6.5. ACQUISITION OF FLOWAGE EASEMENT LANDS IN FEE TITLE

The real estate acquisition program for the Lake Red Rock Project acquired lands in fee title up to elevation 760. Flowage easements were purchased on lands between 760 and 783 elevation and granted the right for temporary flood storage.

Public Law 99-190, December 1985 directed the acquisition of fee simple title interest in flowage easement lands from willing sellers. Acquisition of flowage easement lands was initiated in August 1989. By 1996 approximately 3,200 acres of the estimated 29,000 acres of flowage easement encumbered lands had been acquired in fee title. No additional acquisition has occurred due to lack of funding.

Because lands were acquired only from willing sellers many of the lands acquired are noncontiguous and have limited to no access. In some cases the only access is by permission across private land. This makes it difficult to manage the resources and/or provide public access. Due to the method of acquiring the flowage easement lands in fee title along elevation lines, irregular boundary lines exist making management difficult.

In those areas where acquired lands adjoin existing project lands, the increase in public land meant increased public use opportunities and reduced habitat fragmentation.

6.6. ACQUISITION OF HICKORY RIDGE IN FEE TITLE

Lake Red Rock Master Plan Design Memorandum No 24b, Supplement 1 - Donation, Acceptance, Acquisition, Classification and Development of a 47 acre tract of land called Hickory Ridge (DACW25-9-09-4017) was the only supplement to the 1976 plan. The Environmental Assessment and the requisite Finding of No Significant Impact was signed on January 10, 2011 and classified Hickory Ridge as Multiple Resource Management - Recreation Low-Density. This supplement also reclassified the adjoining Corps land as Multiple Resource Management - Recreation Low-Density.

Hickory Ridge is located about 4 miles northeast of Knoxville, IA off of 160th Avenue. The parcel is located on the Competine Creek arm of the lake, and the Iowa Natural Heritage Foundation (INHF) to donated the parcel to the Corps.

In 2009, the INHF purchased the land recognizing its unique habitat and position on the lake. The RRLA and numerous private individuals made donation of this unique tract of land to the Corps possible.

Approximately three quarters of the property is upland and with beautiful oak and hickory. The land was spared from intensive agricultural practices, as shown in 1930's and 1950's aerial photos. A species of note is the Oval ladies-tresses (*Spiranthes ovalis*), a state threatened species, has been found on the property. A time-share campground was operated at Hickory Ridge from the 1970s through the 1990s. There were remaining primitive roads, parking areas, and a structurally sound picnic shelter when INHF purchased the property in 2009. The INHF and the Iowa DNR built a paddler access area, trail, and campsites before donating the property to the Corps in 2011.

Hickory Ridge is the first paddle in campground in the State of Iowa and serves as an important amenity along the Lake Red Rock water trail. The southern portion of Hickory Ridge may adequately provide for a future primitive youth group camp.



Hickory Ridge Wilderness Camp Dedication

6.7. HYDROPOWER DEVELOPMENT

The Red Rock Dam Hydroelectric Project (RRHP) is under construction by Missouri River Energy Services (MRES). Construction began in 2014 with the project planned to be operational by 2018. Once operational, RRHP will be the second largest hydropower generating facility in the State of Iowa.

MRES provides wholesale electric service and other energy services to 61 communities in Iowa, Minnesota, North Dakota, and South Dakota. The RRHP is licensed at 36.4 megawatts (MW) of electricity, or enough energy to meet the needs of about 18,000 homes. When water is elevated it will be capable of generating up to 55 MW. The peak flow of water thru the Red Rock Dam typically occurs between March and August, which coincides with the highest demand for electricity for MRES and its members.

The Corps will continue water management on the Des Moines River and operation of the Red Rock Dam while MRES will operate the RRHP.

To reduce impacts to recreation users during hydropower development, MRES constructed: additional fish cleaning, shelter, playground, and parking in South Tailwater; extension of the paved trail from Fifield to the north end of Robert's Creek Dam and trailhead amenities; and a large pavilion shelter in Cordova Park. Additionally, MRES will repair damages that occur during construction to the environment and recreation features. A fishing access will be built along the North Tailwater outlet as part of the hydropower project.



6.8. ADJACENT DEVELOPMENT

Seventeen housing developments adjoin public lands at Lake Red Rock with the primary developments north of the dam and along G-28. Smaller developments exist on the southside of the lake. Currently, there are approximately 540 homes in these developments.

There are no known plans for establishing new housing developments in the lake area. Demand is being met by turnover in existing housing and/or there are approximately 150 remaining lots available for house construction. The majority of current housing is not within the viewscape of visitors at Lake Red Rock and does not pose a significant impact to the natural aesthetics of the project.

The primary potential threats from adjacent housing are encroachment from private use of public lands (i.e. vegetation removal, mowing) and septic system encroachment on public lands.

The Lake Red Rock Project public lands and recreation facilities are often mentioned as important quality of life assets for residents in adjoining developments. Many residents have direct access to miles of paved trails leading to a variety of recreation facilities.

6.9. PROJECT ACCESS

It is vital that leaders at all levels of local, state and federal government work together to maintain and improve access to lands at Lake Red Rock.

It is also important that access is maintained and improved for the public as well as managing agencies. In the past, some roads were closed and access granted only to the managing agency, not the general public. When this occurs, it can be cost prohibitive to gain access easements for the public. In practicality, this can mean that large blocks of land become closed to public use.

The Corps and Marion County have worked together to identify important existing roads for agency and public access. They are in the process of establishing easements and other tools that will assure future generation's access to Lake Red Rock public lands.

6.10. MODERNIZATION OF RECREATION FACILITIES

Lake Red Rock offers a very good mix of recreation facilities from primitive campgrounds to modern cabins. The mix of local, state and federal managing agencies provides a broad range of resource expertise and amenities for lake visitors.

The primary need at Lake Red Rock is to modernize or construct new recreation facilities in areas that still have the original buildings and amenities. Some of these buildings are approximately 30–40 years old. This includes replacement of shower houses, restrooms, dump stations, and picnic shelters.

There are also a limited number of facilities that need to be relocated or redesigned to allow visitor use at high lake elevations. Many facilities have already been reconstructed to allow multi-lake elevation use to include the Whitebreast Boat Ramp, South Elk Rock Boat Ramp and the North Overlook Beach.

Modernization and other needs will be specifically addressed in the Corps' Operational Management Plan (OMP). The OMP is a five year plan for environmental and recreation work tasks that implement the Project Master Plan.

6.11. MAJOR UTILITY CORRIDOR CONSIDERATIONS

Increased development surrounding Lake Red Rock results in requests for utility and other easements on Corps owned land. By granting these requests, Corps lands may suffer negative impacts of fragmentation, erosion, wildlife, and aesthetic quality decline.

Non-recreational outgrant requests for use of Corps lands or waters will only be considered if: 1) there is no viable alternative to the activity or structure being located on Corps lands or waters, or 2) the outgrant results in a direct benefit to the government. Requests will identify potential impacts and alternatives to minimize impacts. Mitigation will be required for both temporary and permanent resource degradation.

6.12. ENERGY CONSERVATION/SUSTAINABILITY

The Corps Environmental Operating Principles guide the agency to integrate sustainability practices into operations in an effort to recycle, reduce waste and meet or exceed energy efficiency goals.

Lake Red Rock Project will incorporate sustainability practices into decision making, materials and equipment purchases, and policy development where feasible. A new administrative office incorporating sustainable features has been proposed to reduce energy use and modernize operations. New technology and innovative ways of doing business will be utilized to maximize sustainability benefits.

6.13. BORROW AREAS

There are currently two primary borrow areas environmentally cleared and utilized on the project.

The primary source of quality topsoil is borrowed from a site off Kennedy Street on the south side of the project. While the quality of the soil is good, the site is at a low elevation. Access to the site and ability to borrow is impacted by flood storage. Approximately 85% of available borrow at this site has been used.

The primary source of soil used for fill is borrowed from a site behind the North Overlook Beach. Access to this site is good. About 75%-80% of available borrow at this site has been used.

There is a need to identify new borrow sites for topsoil and fill soil. Ideally borrow sites should have good access at all lake elevations and have significant quantity of targeted material. Environmental, recreation, and aesthetic impacts need to be carefully considered in site selection.

6.14. REDUCE HABITAT FRAGMENTATION

One of the objectives of Neal Smith National Wildlife Refuge (NWR) Comprehensive Conservation Plan, Chapter 4 was to work with partners to establish wildlife habitat corridors between the Refuge, Lake Red Rock, and Chichaqua Bottoms Greenbelt.



The following passages are from the Neal Smith NWR Comprehensive Conservation Plan:

Over 99 percent of the historic tallgrass prairie ecosystem has been lost to agricultural and urban development, and pressure on remaining wildlife habitat is increasing as the city and suburbs expand. Protected areas such as Neal Smith NWR, Lake Red Rock, and Chichaqua Bottoms Greenbelt are isolated islands of conservation surrounded primarily by croplands. As a result, the ability of many wildlife species to move across the landscape is limited.

Neal Smith NWR, Lake Red Rock, and Chichaqua Bottoms Greenbelt lie within the Lower Des Moines River Corridor, a primary focus area of the Partners Program in Iowa. This focus area was established to help improve connectivity between Iowa's major habitat units.

Ultimately, restoring ecological functions and values in the tallgrass prairie ecosystem in central Iowa will require conservation and restoration of both public and private lands. Neal Smith NWR, Chichaqua Bottoms Greenbelt, and Lake Red Rock would serve as core areas of permanently protected and restored habitat connected by a matrix of public and private conservation lands.

6.15. DES MOINES RECREATIONAL RIVER AND GREENBELT

The Des Moines Recreational River and Greenbelt was established by Public Law 99-88, 1985 to create a partnership between local, state and Federal government and private interests in developing ecosystem improvements and recreational opportunities in the Des Moines River corridor. The greenbelt boundaries are essentially Fort Dodge to Pella, Iowa encompassing 410,000 acres, including large Federal tracts of land at Saylorville Lake, Lake Red Rock and the Neal Smith NWR. The Corps was the agency directed to implement the Greenbelt Program.

Projects at Lake Red Rock completed with greenbelt funding include the majority of the paved Volksweg Trail and planning for the Cordova Project. The Marion County Conservation Board, Marion County Development Commission, Iowa DNR and local leaders have been very active partners with the Corps in the Greenbelt Program at Lake Red Rock.

Des Moines Recreational River and Greenbelt

