
MARK TWAIN LAKE MASTER PLAN

CLARENCE CANNON DAM AND MARK TWAIN LAKE MONROE CITY, MISSOURI

CHAPTER 3 RESOURCE OBJECTIVES

The purpose of this section is to define and prescribe a series of resource objectives for Clarence Cannon Dam and Mark Twain Lake. Resource objectives provide general guidance and direction for the use, development, and management of Project resources. The objectives listed below have been determined through study and analysis of regional needs, public input, and resource capabilities and potentials.

As stated in Chapter 1, the authorized purposes for Clarence Cannon Dam and Mark Twain Lake are flood control, hydropower generation, recreation, fish and wildlife conservation, water supply, and incidental navigation. Certain Project purposes by their nature can be in conflict. The development of sound resource objectives increases user satisfaction, and mitigates conflicts that are inherent to Project purposes.

Resource objectives applicable to the Project are presented below. They are formulated to provide general guidance and direction to the overall management and development of Clarence Cannon Dam and Mark Twain Lake resources. The objectives are grouped into three categories: General, Recreation, and Environmental Stewardship.

3.1. GENERAL

Administration and Management. Ensure administration and management of all Project lands, waters and other associated man-made and natural resources are consistent and thorough. Seek to continually increase efficiency, cost effectiveness, and innovation in projects while maintaining public use and enjoyment as a goal as well.

All Project administrative and management decisions/actions will comply with applicable laws, regulations, policies, and agreements. Consistent coordination, both internally and with other applicable federal, state, and local government agencies, private organizations and individuals, will be maintained.

All actions and/or plans will be implemented compatible with authorized Project purposes and all applicable social and environmental factors to insure maximum benefits. Compromise will be used to minimize conflicts in Project uses and development.

Regional Economic Growth. Develop and invest in partnerships with communities, agencies, groups, and individuals with the common goal of lake and regional tourism and economic development. The Mark Twain Lake region is nationally recognized as the birthplace and boyhood home of author Samuel Clemens. Promotion of the historical significance of the

region, and recreational opportunities available can be efficiently accomplished through the joint effort of the Corps and other groups, local communities, and individuals.

Current partnerships have successfully yielded increased visitation, facility development, and economic benefit to the region. Cooperative agreements with the Mark Twain Lake FOREST Council (Friends of Recreation and Environmental Stewardship), the Mark Twain Lake Visitors and Educational Resources Center Committee, and partnerships with other regional groups have demonstrated great benefit to the public through additional development of facilities and special events. Continued investment and advancement of partnership initiatives are imperative to regional vitality.

The use of volunteer services to assist with the operation and management of Project recreational and natural resource assets has yielded great benefit and efficiency. This program will continue to be fully implemented, and expanded when feasible and meeting the mission requirements of the Project. Furthermore, when appropriate, monetary, service, and resource contributions will be accepted under the Contributions Program or the Challenged Cost-Share Program to improve recreational and natural resource assets, and to support regional initiatives commensurate with Project mission.

3.2. RECREATION

ER 1130-2-550 states that programs and activities related to outdoor recreation have, as their design base, the following mission statement:

"The Army Corps of Engineers is the steward of the lands and waters at Corps water resources projects. Its Natural Resources Management Mission is to manage and conserve those natural resources, consistent with ecosystem management principles, while providing quality public outdoor recreation experiences to serve the needs of present and future generations.

In all aspects of natural and cultural resources management, the Corps promotes awareness of environmental values and adheres to sound environmental stewardship, protection, compliance, and restoration practices.

The Corps manages for long-term public access to, and use of, the natural resources in cooperation with other Federal, State, and local agencies as well as the private sector.

The Corps integrates the management of diverse natural resource components such as fish, wildlife, forests, wetlands, grasslands, soil, air, and water with the provision of public recreation opportunities. The Corps conserves natural resources and provides public recreation opportunities that contribute to the quality of American life."

Recreation Objectives

The national recreation program objectives are:

1. To provide a quality outdoor recreation experience, which includes an accessible, safe and healthful environment for a diverse population.
2. To increase the level of self sufficiency for the Corps recreation program.
3. To provide outdoor recreation opportunities on Corps of Engineers administered land and water on a sustained basis.

4. To optimize the use of leveraged resources to maintain and provide quality public experiences at Corps water resources projects.

General

- Provide outdoor recreation opportunities on Corps administered land and water on a sustained basis.
- Contribute to partnerships with agencies, groups, local communities, and individuals with the common goal of quality regional tourism and sustainable economic development with effective environmental protection.
- Provide a setting for schools to safely utilize Project lands and facilities for environmental education.
- Increase the level of self-sufficiency for the Corps recreation program.
- Accomplish the program objectives in cooperation with federal, state, regional government agencies, community organizations, and volunteers by optimizing the use of leveraged resources to provide quality public outdoor experiences.
- Evaluate the extent to which the Corps is competing with the private sector by offering marinas, and other commercial services.

Quality Recreational Experiences

- Provide quality outdoor recreation experiences, which include an accessible, safe and healthy environment for a diverse population of Project visitors/users.
- Seek to increase the quality of visitor's experience by maintaining and developing purposeful, functional recreation facilities and services that meet the needs of visitors, while maintaining the aesthetic and ecological integrity of Project lands and waters.
- Maintain as a top priority facility and asset rehabilitation efforts designed to stop environmental degradation, facility deterioration, and reduction of high pool elevation impacts.
- Provide public health and safety facilities and services, such as sanitary toilets, drinking water, trash collection, law enforcement, directional-regulatory signage, and vehicle parking.

Public Access Areas and Trails

- Provide facilities that will enhance the visitor's experience such as picnic areas, observation areas, and adequate resting areas for visitors commensurate with fiscal availability.
- Evaluate and monitor demand for improved public access to and on Project managed lands and water for walking, hiking, biking, boating/paddling, hunting, fishing, wildlife viewing, etc.
Evaluate and monitor demand for traditional public recreation facilities (campsites, picnic facilities, over looks, trails, boat ramps, interpretive signs/exhibits, and parking lots) commensurate with fiscal availability.
- Conduct comprehensive evaluation of public access on Project lands and waters and correct deficiencies in a manner that is responsive to public and agency needs while protecting and enhancing ecological values of the Project.
- Utilize partnership initiatives to pursue additional trail and recreational initiatives.

User Conflicts

- Measure current public visitation levels and evaluate impacts from overuse and crowding on recreational use and environmental quality. Implement a plan of action where necessary to reduce any identified impacts.
- Evaluate and monitor recreational use zoning and regulations for both consumptive and non-consumptive activities, such as hunting, trapping, fishing, camping, boating and wildlife viewing.
- Evaluate and monitor recreational use zoning and regulations for designated no-wake areas with emphasis on natural resource protection, quality recreational opportunities, and public safety concerns.
- Consider the physical and biological changes/impacts known to be associated with recreational use of the Project for all water based management activities and plans.

Facilities Management

- Maintain, develop and/or modify cost effective facilities in order to meet the changing and diverse use patterns of Project visitors.
- Provide Project visitors with the necessary facilities or services to support a diverse range of outdoor recreation activities, such as boating, picnicking, swimming, hunting, fishing, wildlife viewing and environmental education commensurate with fiscal availability.
- Evaluate and provide facilities that meet the needs of the visitors to the Project.
- As funds become available, renovate and upgrade recreation areas to improve available facilities and reduce maintenance costs.
- All developed recreation areas designated for recreation use are regularly evaluated for the presence of safety hazards and environmental compliance with the Environmental Review Guide for Operations (ERGO) guidelines. As any detrimental conditions are identified, they will be given priority for evaluating and implementing feasible corrective actions.
- The need for additional concession services including resort and marina developments have been identified through market feasibility studies and efforts will be made to meet this critical demand.

Barrier-Free Access

Increase outdoor recreational opportunities for disabled visitors by providing barrier free access by building, modifying, and redesigning areas to promote accessibility required by law. Development and modifications shall be considered while protecting environmental quality.

All persons must be given access to a wide range of outdoor recreation activities through careful and appropriate planning, design and program implementation. Accordingly, consideration is given to accessible facilities and services for disabled persons in the planning, design, and operations of existing recreation areas, and the development of future public use areas at the Project. Shoreline fishing access for the physically challenged and the elderly continues to be a need that warrants attention. Efforts to meet this need have been executed through the development of a small accessible lake in the Frank Russell Recreation Area. Additionally, proposals for the construction of accessible fishing piers in the North and South Spillway

Recreation Areas have been developed. Special hunts for the physically challenged are offered to enhance recreational opportunities for these needs.

3.3 VISITOR ASSISTANCE

Visitor assistance is a management program designed to protect natural resources and government property, while assisting Project visitors. Park rangers serve as a regulation enforcer with full citation authority contained in Title 36, Part 327. Available use-of-force options include visual presence, verbal persuasion, and unarmed self-defense. States, counties, and other political subdivisions retain the statutory authority and inherent responsibility to enforce appropriate state and local laws. Contracts are administered with appropriate local (county or city) law enforcement agencies to provide these necessary services on public lands. The development of visitor services for information and recreation purposes facilitates a safe, expedient, and enjoyable experience in relation to the Project resources.

Visitor Assistance Objectives

- Provide opportunities for communication between agencies, special interest groups and the general public.
- Provide the stimulus for cooperation with local communities to develop strong linkages between them and the Project.
- Provide necessary directional information to enable visitors to easily find the Project facilities.
- Assist visitors with an understanding of other tourism facilities and attractions in the area.
- Establish uniform, clearly written fishing, hunting and boating regulations throughout the Project service area.
- Effectively inform recreational users about special concerns and regulations regarding the use of Project lands and waters.
- Increase public awareness that special use permits or other authorizations are required for bass tournaments and other organized special events and commercial activities on Project lands and waters.
- Establish a well coordinated process for collecting/utilizing data concerning boating accidents and other mishaps to improve visitor safety on Project lands and waters.

3.4 INTERPRETIVE SERVICES AND OUTREACH PROGRAM (ISOP)

ER 1130-2-550 states that an Interpretive Services and Outreach Program (ISOP) shall be implemented at each Corps-operated project. The type and magnitude of this program shall be determined by the District Commander and shall be commensurate with the type and size of the Project, Project visitation, funding, and personnel resources. In addition, all ISOP efforts shall provide for universal accessibility where practical.

The goal of the Mark Twain Lake Interpretive Service and Outreach Program is to enhance the visitors' understanding and appreciation of public lands and waters, communicate the Corps of Engineers' mission, instill visitors with a sense of proprietorship, and promote environmental stewardship to preserve the natural and cultural resources of the region for future generations. Through effective communication, education, and collaborative processes provided to internal and external audiences, the ISOP will seek the public's understanding of the resources managed, and to incorporate the Corps stakeholders and partners in managing those resources.

An effective interpretive program, serving diverse audiences, will be implemented to engage both on-site visitors, and community entities beyond the physical boundaries of Corps facilities on the natural resources and outdoor opportunities available at Mark Twain Lake. The National Environmental Policy Act encourages federal agencies to “enrich the understanding of the ecological systems and natural resources important to the Nation.” By virtue of the land and water resources under its administration, the Corps has a responsibility to take an active part in the process of creating a more knowledgeable public and educating the next generation about environmental and recreational resources relevant to the Project. This strategy is essential to sustaining project resources, perpetuating our relevance to the region, and proactively addressing impacts where visitor use dictates.

The Mark Twain Lake Interpretive Service and Outreach Program staff also provides the “Face of the Corps” to our regional constituency. Serving as the Project information conduit, the ISOP staff is responsible for daily interaction with regional visitors, community organizations, media outlets, and national and international tourists. Furthermore, it will be the strategy of the Mark Twain Lake ISOP to actively contribute to regional tourism through community collaboration, and managing the M.W. Boudreaux Visitor Center as a progressive tourism asset providing visitors an interactive experience, enhancing their connection to the region, and stimulating the regional economy.

Special Events hosted at Mark Twain Lake are valued by the region, and serve the mission of the Corps and promote regional economic benefit. Community collaboration, partner engagement, and available funding resources will provide the path forward to implement engaging and informative Special Events. Events such as “Mark Twain Lake Waterfest”, Pirate Day, GO Day, National Water Safety Week, and the “Women in the Outdoors” will be conducted to promote public safety. Events, such as “Primitive Artifacts Weekend”, “An Adventure in Astronomy”, and the “Salt River Folklife Festival” will be hosted to promote public awareness about scientific discovery, the regional cultural heritage, and the historical perspective of the area. Regional tourism and economic benefit will be promoted by supporting the “Mark Twain Lake Rodeo”, and annual event that attracts approximately 20,000 visitors annually.

Interpretive Services & Outreach Program Objectives

- Provide environmental education to foster public stewardship of natural and cultural resources through community education and outreach opportunities.
- To improve public awareness of the Corps’ civil works and military missions through effective, proactive communication.
- To improve availability of public lands for use as an outdoor classroom and provide educational opportunities that help develop science, technology, engineering, and math skills.
- Implement educational and research programs. Topics should include water quality and quantity, history, culture, safety, recreation, nature and ecology.
- To partner with multiple agencies and organizations to leverage financial and staff resources.
- Encourage partnerships and sponsorships that will promote the interpretation of local values and a sense of proprietorship by local communities.
- Establish a network among local, state and federal conservation agencies concerning exchange of related information for public education and management purposes.

- Enhance the visitors' experience and enjoyment by anticipating their needs and providing interpretive resources to meet those needs.
- Improve visitor and employee safety using interpretive techniques.
- Utilize the resources provided by the through the Mark Twain Lake Visitors and Educational Resource Center Committee Cooperative Association, a 501c3 partner, to further ISOP activities and events.

3.5 ENVIRONMENTAL COMPLIANCE

ER 200-2-3 establishes the policy for the management of environmental compliance-related operations and maintenance (O&M) activities for the U.S. Army Corps of Engineers (USACE).

USACE shall fully comply with all applicable Federal, State, and local environmental laws and regulations, Executive Orders (EOs) and policies. The ER affirms the USACE commitment to environmental compliance (EC) and establishes additional environmental protection policies and practices pertaining to O&M activities at Civil Works projects, facilities (including out-grants), and USACE owned facilities as appropriate. USACE fully recognizes the importance of environmental protection and strives to comply with environmental laws and regulations, and to achieve sustainable operations by incorporating the prevention of pollution and other sound environmental management practices in all environmentally significant mission activities, products, and services.

USACE Real Estate shall execute acquisition, out-grant and disposal transactions at Civil Works projects in compliance with applicable Federal, state, and local environmental laws and regulations, including performance of environmental due diligence. This regulation establishes USACE requirements for compliance with CERCLA in the acquisition, out-grant and disposal of real property in support of O&M activities at Civil Works projects and facilities.

USACE Environmental Operating Principles (EOPs), as specified in ER 200-1-5, are incorporated by reference into this ER. The EOPs shall be incorporated in all environmentally significant USACE business. USACE shall ensure that this policy is communicated to, and implemented by, all affected staff, contractors and grantees, and that all relevant activities are overseen by qualified USACE personnel at all USACE facilities, projects, and associated lands and waters. This policy will be implemented at out-granted facilities and in all contract actions for work on the water resources projects to the extent provided by law, regulation, and executive order.

The Corps audits its operations and work place through an Environmental Review of Government Operations (ERGO). This is a comprehensive internal inspection of our facilities and management practices aimed at assuring compliance with all applicable laws and regulations. This audit is applicable not only to Corps operated and maintained facilities and lands, but also to those that are operated and maintained through outgrants (lease, license, easement, etc.). Real Estate Division will review the final report for these areas and will transmit the findings to the appropriate representative for development of a Corrective Action Plan. The formal ERGO inspection is performed every 5 years with an internal audit accomplished on an annual basis.

Any Corps maintenance activities performed on or near the water must comply with the same regulatory permit process as the general public or private enterprise requiring the proper Section 404 permit and Section 10 permit, if applicable, from the St. Louis District Corps of Engineers

Regulatory Division. In addition, if applicable, the Corps must secure the proper Section 401 Water Quality Certification from EPA.

Environmental Compliance Objectives

General

- Maintain an overall quality environment on Project lands.
- Give equal consideration to economic, environmental and social impacts associated with all plans.
- Improve cooperation between city, state and federal agencies to resolve and mitigate environmental problems.
- Stop unauthorized uses of public lands, such as agricultural trespass, timber theft, structures, clearing of vegetation, unauthorized roadways, off-road vehicle (ORV) use, trash dumping, poaching, and placement of advertising signs that create negative environmental impacts.
- Assess and manage all human activities on Project managed lands and waters.
- Ensure that all activities, developments and other management actions comply with National Environmental Policy Act requirements.
- Ensure all activities occurring on Project lands fully comply with federal, state and local laws, regulations, ordinances and other environmental protection requirements.

Water Resources

- Coordinate with partner agencies and customer to manage water resources to sustain healthy fish and wildlife populations, habitat conditions, recreation opportunities, public health and mitigate impacts to public water supply.
- Seek ways to coordinate with the NRCS and other affiliated agencies to contribute to the watershed system serving the Mark Twain Lake Area.
- Coordinate with local units of government to find ways to improve sewage and sanitation standards for public and private developments within the Project watershed.

Rare and Endangered Species

- Complete inventories and identify existing populations of federal and state endangered and threatened plant and animal species and develop and implement recovery actions in cooperation with the USFWS and state agencies.
- Aggressively seek and/or develop management techniques and strategies where populations of endangered species exist to enhance these populations while permitting other compatible management activities to occur.

Unique or Endangered Habitats

- Inventory Project lands and waters to identify and protect unique or endangered habitats in cooperation with the USFWS and state agencies.
- Implement techniques to protect and maintain unique or endangered habitats wherever they are found. (Examples of habitats types of concern are limestone bluffs, hill prairies, unique bottomland forest communities, and fisheries.)

Environmentally Sound Public Use Areas

- Provide a quality experience for visitors and enhance ecological integrity by continually monitoring, maintaining and improving the aesthetic and environmental quality of Project resources.
- Upgrade existing public use facilities that do not meet required minimum health and safety standards.
- Evaluate existing, and future public use needs to develop strategies to avoid resource degradation, and sustain and/or increase current levels of recreation/open space opportunities.
- Develop Project facilities and opportunities utilizing sustainable methods and sound environmental standards. Use aesthetic site designs, site impact hardening, vegetative buffers, natural landscaping and other practices to accomplish this objective.
- Monitor site deterioration and take actions through the ERGO process to prevent or rehabilitate areas before site impacts have any negative effects on visitor's experiences, public health and safety, or the environment.

Outgrants

- Only outgrants that are compatible with the Project missions should be pursued.
- Conduct periodic inspections of outgrants to ensure full environmental, safety, and administrative compliance with all applicable leases, licenses, permits, regulations and federal, state and local laws. Changes in existing uses of outgranted areas may be warranted when the general public's needs are not being met, and the land is needed for higher public purposes.

3.6 ENVIRONMENTAL STEWARDSHIP

ER 1130-2-540 states that programs and activities related to environmental stewardship and the management of natural resources shall implement and be consistent with the Corps' Environmental Stewardship mission statement.

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In all aspects of natural and cultural resources management, the Corps promotes awareness of environmental values and adheres to sound environmental stewardship, protection, compliance, and restoration practices.

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The Corps integrates the management of diverse natural resource components such as fish, wildlife, forests, wetlands, grasslands, soil, air, and water with the provision of public recreation opportunities. The Corps conserves natural resources and provides public recreation opportunities that contribute to the quality of American life."

The Mark Twain Lake Environmental Stewardship Program is chartered through laws and regulations to manage public lands under its jurisdiction in such a manner which “conserves

fish and wildlife,” “benefits wetlands,” and “provides a safe and healthy environment for visitors.” The stewardship authorities afforded through the National Environmental Policy Act of 1969 (PL 91-190), Water Resource Development Acts, Forest Cover Act, and numerous engineering regulations offer natural resource managers several methods to accomplish their role.

National Environmental Stewardship Program Objectives

(1) To manage natural resources on Corps of Engineers administered land and water in accordance with ecosystem management principles, to ensure their continued availability.

(2) To provide a safe and healthful environment for Project visitors.

General Environmental Stewardship Management Objectives

- Protect and enhance threatened and endangered species habitat.
- In order to provide the opportunity for a quality recreational experience, it is essential to consider the aesthetic impact of planned improvements as well as the economic and functional requirements. Plan and design all management actions and activities with consideration to visual enhancement, impacts, and aesthetics. Each design, construction or maintenance action will be considered according to its visual impact to the environment.
- Develop and maintain partnerships with Federal and State agencies, wildlife support groups, community organizations, and volunteers to collaborate on management goals for terrestrial and aquatic resources.

Wildlife Management Objectives

Based on the concept of sustaining and enhancing ecosystems, the objectives of the wildlife management program is to manage public lands for the provision of vegetative habitat to encourage optimal utilization of a diversity of game and non-game wildlife species. Management strategies will be in accordance with the authorized project purposes. The methodologies used will consider public use demands, environmental conditions, regional need and applicable state and federal laws. They will be implemented with accepted management techniques.

- Non-consumptive uses of wildlife, such as hiking and photography will receive equal consideration with consumptive uses, such as hunting and fishing
- The concept of ecosystem management or landscape management will be employed to manage wildlife communities, promote regional environmental values, and sustain or enhance habitats.
- Forest management will be applied to develop, maintain, protect, and/or improve vegetative conditions for wildlife and recreation uses.
- Special status wildlife species and wildlife species specified by laws and national focus plans/agreements, such as Endangered Species Act and the North American Waterfowl Plan will receive special emphasis.

- Proactive and beneficial management techniques will be implemented whenever the opportunity exists to promote openland, grasslands and prairie communities utilizing current applicable scientific and professional standards and practice.
- The outdoor recreational opportunities will consider the needs of the physically challenged community. Mark Twain Lake will conduct, in cooperation with community volunteers, physically challenged special events (Fall Deer Hunt and Spring Turkey Hunt) in the Indian Creek Recreation Area.

Forest Resources Objectives

Forest resources at Mark Twain Lake will be managed in accordance with Public Law 86-717, the Forest Cover Act. The objectives of the forest resource management program will encourage, promote, and assure fully adequate and dependable future resources of readily available timber through sustained yield programs. Goals will be accomplished to the extent practicable and compatible with other uses of the Project.

- Forest management will be founded in sustained yield management, providing for diversity in all age groups and species composition.
- Use scientifically sound silvicultural practices to enhance forest health.
- Maintain forest cover for its scenic, recreational, water quality, fishery, and wildlife values.

Cultural Resources Objectives

The cultural resource management objects of Mark Twain Lake are to preserve significant archaeological and historical sites occurring on Project lands in accordance with the Historic Properties Management Plan, and applicable Federal and State laws.

- Implement established procedures for inadvertent discoveries of Native American burials.
- Preserve and protect the Crigler Mounds Complex, listed on the National Register of Historic Places.
- Implement Historic Properties Management Plan to identify, evaluate, mitigate, and manage cultural significant sites and resources for future generations.

Soil Resource Objectives

All land management activities will be based on suitable soil types, soil characteristics and land use capabilities.

- Minimize effects of wind, water, and mechanical erosion through sound conservation practices.
- Develop sedimentation management strategies to preserve water quality.
- Collaborate with Federal and State agencies to coordinate suitable management practices commensurate with regional initiatives.

Wetland Resource Objectives

Establish, maintain, and protect high quality wetlands to improve water quality and provide habitat for wetland flora and fauna.

- Develop and/or restore high quality wetland habitat, and establish wetland vegetation in degraded moist soil units to support a diversity of wildlife species.
- Develop and manage opportunistic wetlands in reservoir area where conditions support this habitat.
- Manage the Middle Fork and Elk Fork Waterfowl Refuge as a seasonal resting and feeding resource for migratory waterfowl.

Fisheries Resource Objectives

The objectives of the fisheries management program will be accomplished using practices that will be in concurrence with the authorized project purposes. Methodologies shall improve the quantity, function, sustainable productivity, and distribution of aquatic resources for increased recreational fishing opportunities to the extent permitted by law, and in compliance with State and Federal laws. Coordination efforts and management objectives will focus on optimizing a quality fishery and fishing success.

- Foster sound aquatic conservation and restoration endeavors to benefit recreational fisheries.
- Coordinate and collaborate with the Missouri Department of Conservation (MDC) on the management of a viable and productive fishery population. Cooperate with MDC as studies continue to increase understanding of biotic and abiotic variables and population dynamics associated with gizzard shad, crappie, largemouth bass, and blue catfish.
- Coordinate fisheries management requirements with external partners and stakeholders in compliance with the Mark Twain Lake Water Control Plan.
- Provide supplemental sport fish for the ponds of the Mark Twain Lake project through the management and maintenance of a nursery pond.

Grassland Resources Objectives

Grassland management objectives will maintain and enhance diverse openland habitats, promoting diversity in composition that support wildlife management initiatives, improving stabilization of soil, and providing water quality benefits.

- Manage native grass and forb communities to closely reflect historic prairie ecosystems.
- Manage openland ecosystems to provide optimal wildlife habitat.

Resource Protection Objectives

The objectives of the Resource Protection Program are to monitor Project resources to ensure protection against fire, overuse, abuse, insect and disease infestation, encroachments, and trespasses. Corrective actions will be implemented to resolve problems.

- Strive to achieve environmental sustainability and recognize the interdependence of life and the physical environment.

- Seek balance between facility development activities and natural systems by designing economic and environmental solutions that support and reinforce one another.
- Accept corporate responsibility and accountability under the law for activities and decisions under our control that impact human health and welfare and the continued viability of natural systems.
- Seek ways and means to assess and mitigate cumulative impacts to the environment.
- Build and share an integrated scientific, economic, and social knowledge base that supports a greater understanding of the environment and impacts of our work.
- Respect the views of individuals and groups interested in Corps activities and our projects. Listen to them actively and learn from their perspective in the search to find innovative solutions to the problems that also protect and enhance the environment.
- Foster partnerships toward resolving water resources and erosion problems in the Salt River watershed.

Fire Management Objective

Fire is a critical natural process of the ecosystem. Many natural resource values can be enhanced by allowing fire to play its natural role where safe and applicable, providing for the protection of private property and social values. The wildland fire management program at Mark Twain Lake will be consistent with the needs of the public and the management objectives of the Project. Wildland fire management will comply with guidance supplied in ER 1130-2-540, EP 1130-2-540 and the 2001 Federal Wildland Fire Management Policy. The following are the tenets of the fire management activities executed at Mark Twain Lake:

- Fire Management and Ecosystem Sustainability – Wildland fires and prescribed fires management policies will be implemented to achieve ecosystem sustainability, including its interrelated ecological and social components.
- Protection Priorities – Fire fighter and public safety is the first priority in every fire management activity.
- Planning – Fire management plans are developed to define a program to manage wildland and prescribed fires based on the land management objectives.
- Science – Fire management will be based on a foundation of sound, current science.
- Preparedness – The Mark Twain Lake staff will ensure their capability to provide safe, cost-effective fire management programs in support of land and resource management plans through appropriate planning, staffing, training, equipment, and management oversight.
- Suppression – Wildfires will be suppressed or contained immediately and safely, considering fire fighter and public safety, benefits, and values to be protected, consistent with resource objectives.
- Prevention – Mark Twain Lake personnel will work with other agencies and affected groups to prevent unauthorized ignition of wildland fires.

- Cooperation and Coordination – Fire management planning, preparedness, prevention, suppression, prescribed burn application, and education will be conducted with involvement of cooperating agencies.

Wildfire Management

All wildfires upon Project lands shall be suppressed or contained immediately in a manner that provides for the safety of the fire fighter, protection of the public, protection of public facilities, and protection of private property. A fire protection plan that will serve as a guide for the prevention and suppression of wildfires at Mark Twain Lake is contained in the OMP. The objective of the fire protection plan is three-fold: Fire Prevention, Pre-suppression, and Suppression. These objectives should be based on the following guidelines:

- Fire Prevention – Reduce the number of man-caused fires. Fire problem areas must be determined, and prevention programs must be established to create public awareness of the destruction caused by wildfires.
- Pre-suppression – Pre-suppression planning will establish an efficient fire control organization utilizing Project personnel and equipment. This fire fighting force will operate in close coordination with similar units provided by local fire protection agencies and personnel from the State of Missouri.
- Suppression – Established procedures are outlined in detail in the OMP.

Prescribed Fire Management

Prescribed fire management is used to approximate the natural vegetative disturbance of periodic fire occurrence. This vegetative management tool is used to maintain fire dependent ecosystems and restore ecosystems that are outside their natural balance. It is also used to reduce hazardous fuel loads and for preparation for other management practices. Extensive planning and preparation is necessary to successfully and safely execute prescribed fires. Details of specific prescribed fire management practices are contained in the OMP.