

Prairie Fork

Conservation Area

Ten Year Area Plan

FY 2015-2024



Wildlife Division Chief

Date

Prairie Fork Conservation Area Area Plan

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OVERVIEW

Area Name & Number:

Prairie Fork Conservation Area, 9701

Year Established:

In 1997, Hilda P. Jones (Pat Jones) donated her 711 acre farm to the Department.

In 2002, she donated funds to the Missouri Prairie Foundation (MPF) to purchase 200 acres adjoining the area to the north. The donation was made to expand the land base and the conservation philosophy of the Prairie Fork Conservation Area (PFCA). It is the intent of MPF to restore the property to native pre-settlement prairie conditions. A cooperative agreement was signed with MPF to complete prairie restoration efforts together. After the agreement expires on December 6th, 2019, MPF will deed said property to MDC for its use and management.

Acreage:

911 Acres

County:

The area lies within Callaway County, occupying sections 5, 6, 29, 30, 31, and 32 in T48N and R7W.

Division with Administrative Responsibility:

Wildlife

Division with Maintenance Responsibility:

Wildlife

Statement of Primary Purpose:

Prairie Fork's three main goals are Restoration, Education, and Research.

Restoration will focus on returning the area to native pre-European settlement conditions and natural community management (Appendix E). Education and Research will be guided by the conservation philosophy outlined in the Prairie Fork Conservation Area Trust.

The area was donated by Pat Jones primarily to provide a natural laboratory to be available for teaching the public, especially small children, about wildlife habitat, soils and conservation. It is her hope that it will be a place where small children can experience the pleasures and excitement of, and stimulate their interest in, Missouri's wildlife, wildlife habitat and natural history. She wants innovative programs of research and teaching in the areas of natural history and conservation. She further hopes and intends for the University of Missouri (MU) faculty and students will participate in the research. Pat Jones wants

to ensure the work they have begun on their farm will continue and will be used to educate Missouri citizenry, especially its youth, in the needs and benefits of natural resources conservation.

Ted and Pat Jones have made natural resource conservation a lifetime commitment. This is evident by the conservation practices they used on their land as well as their support for conservation actions at the regional, state, and national levels. Along with donating her family farm in 1997, Pat Jones established the Prairie Fork Conservation Area Trust that same year. The purpose of the Trust is to provide funds to encourage and support the research and educational activities that are approved on PFCA.

Prairie Fork's unique mission, habitat diversity and location provides for and attracts a wide range of special uses including: conservation education, school programs, volunteer projects, conservation research projects, fishing, camping, hiking, bird watching, nature photography, target shooting, managed hunts, and trapping. Coordinating and regulating these uses are an important part of managing the area's resources for a sustained yield of fish and wildlife with a minimum of user conflicts.

Of highest priority is the protection of the existing soil, water, cultural, plant, and animal resources. Activities which reduce the quality of the natural systems will not be permitted. Managed hunts will be conducted on an as needed basis. Trapping will be allowed only under special use permit and must be within the constraints of the existing management objectives and Department policies.

Strategic Direction:

- Increase wildlife diversity by restoring and maintaining native local ecotype prairies.
- Restore and maintain diverse savanna, woodland, and forest communities.
- Protect and manage the aquatic resources of the area.
- Conduct habitat management practices for fish, forest, and wildlife that serve to help educate the public on the value of biological diversity and ecosystem management.
- Foster appropriate public use, involvement, and interest.

Federal Aid Purpose:

None known.

GENERAL INFORMATION AND CONDITIONS

Special Considerations:

Priority Areas:

None known.

Area Closed to General Public Use:

Upon donation, Pat Jones requested the property be used for conservation education and research, especially research on native plants, wildlife habitat and soils, including any program she may fund. Therefore, management of the property is expected to be labor intensive.

The area is closed to public use unless authorized by the area manager. Prairie Fork invites thousands of people to the area every year for non-consumptive uses, but each group must have a reservation.

Life Estate:

Prairie Fork is subject to the following reservations for Pat Jones:

- A life estate on the main residence, guest house (Prairie Fork Office & Meeting Room), and approximately one acre surrounding them.
- An easement for ingress and egress along the driveway from Highway D to the house and guest house.
- The right to keep horses in the horse barn and graze horses in the pasture on the north side of the driveway leading to the house, and to mow and harvest the hay in the pasture.
- The right to cut firewood from the property for her personal use.
- The right to access all parts of the property for personal use and for the use of her guests, including the right to mow foot paths and horse trails, laid out or approved by the Conservation Commission.

Prairie Fork Conservation Area Trust:

Trustees:

The trust was established by Pat Jones to provide funding for research and educational activities and is assigned to three (3) trustees:

1. Edward Jones Trust Company (the “Corporate Trustee”) which includes its successor by any merger, conversion or consolidation.
2. Representative of the School of Natural Resources in the College of Agriculture, Food and Natural Resources of MU, which shall be appointed by and serve at the pleasure of the Dean of the College of Agriculture, Food and Natural Resources of MU. Her hope, but not her directive, is that the person and its successors shall be someone active in research on or involving the PFC.
3. Representative of MDC. The Director of MDC shall appoint its successors, who she hopes, but do not require, will be the employee of the Department then in charge of the management of Prairie Fork.

Both representatives from MU and MDC are co-trustees, who are referred collectively herein as the “Trustee”.

Coordinating Committee:

In using the income from the Trust, the Trustee shall seek and consider, but shall not be bound by, the advice of a coordinating committee composed of: a faculty member appointed by the Director of the School of Natural Resources, or his successor, from each of its four programs (which are now Forestry; Fisheries and Wildlife; Parks, Recreation and Tourism; Soil, Environmental and Atmospheric Sciences); at least two

persons from MDC, to include the Prairie Fork area manager and a person from the Division of Natural History, or its successor, of MDC to be selected by the director of the division; a member of the Van Dyke family or an owner of land adjacent to PFCA (to be selected by the coordinating committee); Truman (Ty) Young, Pat Jones's nephew, and when a successor to Ty Young is required a biological scientist from outside the MU and MDC, for example someone from the Missouri Botanical Garden; and the Chief Field Biologist for the Nature Conservancy. Pat Jones shall be an ex-officio member of the Committee, without voting power. The Chair of the Committee will be one of the faculty representatives from the School of Natural Resources and shall be elected by the committee.

Use of Funds:

The income of the Trust shall be used to support faculty or student research and educational activities, including internship programs, on PFCA. A portion of the funds may be used to support faculty or student research and educational activities that are directly related to and coordinated with work being done on PFCA, but are not done on the area itself. Research on the area, however, shall have priority. Research and internship programs may include long-term research and educational objectives emphasizing holistic resources management; field biology; educational experiences for all citizens, especially youth; the restoration and maintenance of natural systems and how natural and anthropogenic factors effect these systems; development of techniques that promote wise use and sustainability of natural resources, and the involvement of MU students from diverse disciplines in the development and delivery of the above programs.

The uses and conditions of the expenditures are not strictly limited to the purposes listed above because Pat Jones recognizes that it is impossible to know what the needs and limitations of the future circumstances will be. She intends, however, that any other use shall be closely related to the uses listed above and that in all cases that as long as possible the uses must be on or directly related to PFCA. The Trustee shall accept any other property that Pat Jones may at any time add to the Trust and may accept any property that anyone else adds to the Trust.

Spend Only Income:

The Trustee shall only use income and shall not spend principal for the purposes of the Trust. All principal shall remain in the trust, except as necessary to comply with Section 4942 of the Internal Revenue Code. Capital gains shall be treated as principal and not as income.

Important Natural Features and Resources:

Species of Conservation Concern:

Yes, records kept in Natural Heritage Database.

Endangered Species:

None known.

Caves:

None known.

Springs:

None known.

Existing Infrastructure (Appendix L):

- Life Estate: 3 bedroom house, guest house (Prairie Fork Office & Meeting Room)
- Pavilion
- Soil Core wall, Cedar Kiosk, and Small wooden shed (MAPSS Soil Shed)
- Small wooden shed (Naturalist Shed)
- 1 Privy (disabled-accessible)
- 2 Machine Sheds (L-Shaped Barn)
- Small Metal Building (MU Fisheries Shed)
- Old Wooden Barn
- Metal Building w/ Concrete Floor (Education Building)
- Grain Bin
- Large Morton Building (MPF Seed Shed)
- 3 bedroom brick house (MPF Bunkhouse)
- Medium Machine Shed
- Pole Barn (Equipment Shed)
- 5 Pond dams (Quality Fisheries)
- 11 Pond dams (Herp Ponds)
- 22 Wetland Levees
- 7 Gravel parking lots
- 2 Designated camping areas
- 3.3 miles of interior, gravel roads

Area Restrictions or Limitations:

Deed Restrictions:

Pat Jones has a life estate on the main residence, guest house (Prairie Fork Office & Meeting Room), and approximately one acre surrounding them.

Federal Interest:

None

Easements:

- Pat Jones holds an easement for ingress and egress along the driveway from Highway D to the house and guest house as part of the life estate.
- Callaway County Road and Bridge owns a right-of-way which runs along Highway D through the west portion of the area.
- Callaway Electric Cooperative holds 40-foot wide easements along all power lines.

Cultural Resources:

Yes, records kept with MDC Environmental Compliance Specialist. Managers should follow Best Management Practices for Cultural Resources found in the MDC Resource Policy Manual.

Hazards and Hazardous wastes:

There are no known hazards or hazardous waste sites on the area.

Boundary Issues:

Establishing accurate and identifiable boundary markers is a priority for this property.

MANAGEMENT CONSIDERATIONS

Desired Future Condition:

The desired future condition of Prairie Fork Creek Conservation Area is a prairie/savanna/woodland matrix complex that protects the Prairie Fork Creek watershed. The natural communities, extant and in current restoration phase, should provide essential quality habitat for grassland birds and other upland wildlife species.

The prairie habitats will be restored to the highest value of biological diversity which will greatly enhance the ecological integrity of the area. The woodland and savanna habitats will be restored to highly diverse natural communities with a canopy of trees ranging from 10 to 80 percent closure with a sparse understory (or midstory) and a dense ground flora rich in forbs, grasses, and sedges. The forest communities will have multi-layered sub canopies and diverse groundcover, with optimal stocking rates to provide adequate regeneration of oak and other important mast producing trees vital to several wildlife species. All crop fields, old fields, and field borders will offer additional cover and food sources for wildlife. The area's bottomland forests and riparian habitats will have adequate buffers along Prairie Fork Creek to enhance hydrology, filtration, and streambank stabilization. The fishable ponds are managed to provide sustainable, recreational fisheries including bass, bluegill, and channel catfish. Public use includes activities such as conservation education, school programs, volunteer projects, conservation research projects, fishing, camping, hiking, bird watching, target shooting, managed hunts, and trapping.

I. Terrestrial Resource Management Considerations

Challenges and Opportunities

1. Maintain and reconstruct prairie natural communities on Prairie Fork CA.
2. Control invasive species (sericea lespedeza, bush honeysuckle, autumn olive, fescue, honey locust, black locust, Johnson grass, multiflora rose, eastern red cedar, sugar maple).
3. Maintain and reconstruct savanna and woodland habitats on appropriate sites.
4. Reducing excessive tree stocking rates in forest, woodland, and savanna habitats.
5. Enhancing degraded forest/woodland groundcover as a result of excessive historic grazing.
6. Incorporate fire across the upland portions of the landscape to ensure that fire-dependent natural communities remain healthy and diverse.

Management Objective 1:

Plant prairie mixes on sites that historically supported prairies, savannas and woodlands, utilizing native local ecotype seed as practical.

Strategy 1:

Manage openland fields for annual crops using permittee farming to control invasive species.

Strategy 2:

Continue harvesting local ecotype seed from Tucker Prairie and other sources within a 50 mile radius of PFCA.

Strategy 3:

Plant prairie in manageable units (40 acres), so as to establish quality reconstructions.

Strategy 4:

Implement a prescribed burning program that enhances native prairie flora and reduces fescue.

Management Objective 2:

Control invasive species in openland and forested habitats.

Strategy 1:

Monitor the area for sericea lespedeza, autumn olive, bush honeysuckle, tall fescue, Johnson grass, and any other potential invasive species.

Strategy 2:

Apply appropriate herbicides to herbaceous and woody invasive species.

Management Objective 3:

Reconstruct savanna and woodland natural communities on appropriate sites (Appendix E).

Strategy 1:

Plant tree species in planted prairie units where savanna and woodland habitats existed before European settlement.

Strategy 2:

Alter current fire regimes to allow newly planted tree species to establish.

Management Objective 4:

Improve and maintain healthy forest, woodland and savanna natural communities for the purpose of ecological integrity and public demonstration.

Strategy 1:

Conduct forest inventory by compartment with an estimated reentry time of 15 years or as needed.

Strategy 2:

Implement silvicultural practices as prescribed by the detailed forest inventory process.

Strategy 3:

Utilize BMP's to maintain soil, water, and visual integrity.

Strategy 4:

Conduct prescribed burns after thinning to reduce re-sprouting and to maintain desired basal area. In addition, burn on a 1-5 year rotation to reduce the midstory canopy and promote native forbs and grasses.

Strategy 5:

Evaluate the need for tree regeneration and recruitment into the overstory in the woodland and savanna natural communities. When new tree recruitment into the overstory is needed, implement strategies that will accomplish this goal including fire free intervals.

Strategy 6:

Interpret management practices by using appropriate signage and by including managed areas in tours and programs on the area.

II. Aquatic Resource Management Considerations**Stream (Lotic) Resources:**

Prairie Fork Conservation Area lies within and drains the southeastern margin of the Dissected Till Plains in association with the Prairie Faunal Region. Pennsylvanian shales and thin sandstones are the principal bedrocks over much of the region. Outcroppings of Mississippian limestones are occasionally found along the lower Missouri River. Generally speaking, there is a transition from north to south and from west to east in stream conditions, with streams to the north and west being less clear and with a greater

proportion of sand and silt substrates. Those to the south and east tend to be clearer and often have extensive exposures of bedrock, cobble and gravel in their channels. Most of the streams originate on level uplands underlain by shales and descend into rolling to hilly terrain underlain by limestones. This transition can be seen to some extent on area streams. Some unnamed first order tributaries and the very upper portion of Prairie Fork Creek have substrates composed of shale, sand, and silt while the lower portion of Prairie Fork Creek is primarily cobble, gravel and some bedrock.

Area streams flow through fairly wide, shallow valleys and have moderate gradients that range from 64 to 210 feet per mile. There are a total of 2.95 stream miles on the area representing seven different unnamed streams (ArcMap, NAIP 12, Callaway.sid). Of these drainages, six are 1st order intermittent streams (1.9 miles) and one is a 2nd order permanent stream (Prairie Fork Creek, 1.05 miles). Prairie Fork Creek, a direct tributary of the Loutre River, is the largest stream on the area. Its watershed at the point where it leaves the area (stream mile 10.9) is approximately 1,166 acres (1.8 square miles) in size. Prairie Fork Creek has an average gradient on the area of 64 feet/mile which is fairly typical for headwater streams.

Prairie Fork Creek appears to be a “losing stream” at some locations on the area; however, it does maintain several permanent pools. These permanent pools support what seems to be a limited, yet fairly diverse fish community. Tributaries to Prairie Fork Creek on the area have gradients that range from 120 to 210 feet/mile. Accurate measurements of land use practices within Prairie Fork Creek’s watershed are lacking, however, use appears to be similar to that in Callaway County as a whole (Timber Resources of Missouri, Hahn, J.T. and J.S. Spencer, Jr. 1989 and Timber Resource of Missouri’s Prairie, Ostrom, A. J. 1991). Approximately 20 to 25% of the watershed is forested with the remaining area principally devoted to row cropping and pasture.

Prairie Fork Creek and its tributaries have good forested riparian corridors along most of the reaches on the area. There are a few sites, however, where the riparian corridors need to be widened to meet Forest Land Management Guidelines (Missouri Department of Conservation 1986) and Fisheries Guidelines for Stream Side Management Zones (MDC 1997). There are no serious stream degradation problems on the area. In fact, area stream health is excellent compared to most other streams in the region. This quality habitat is probably responsible for Prairie Fork Creek being able to support the blacknose shiner which is a species of conservation concern (Missouri Species and Communities of Conservation Concern 2014). Blacknose shiners were first sampled in Prairie Fork Creek by MDC Ichthyologist William L. Pflieger in 1961 (Pflieger, W. L. 1971). Recent sampling done by MDC staff in 1992 (Pflieger, W. L. 1997), 1994, and 1995 revealed a rapid decline in the range of the blacknose shiner in Missouri. Loss of suitable habitat is thought to be the predominant reason for their decline. The last remaining strongholds for this rare species in Missouri are the headwater streams of Auxvasse Creek and Loutre River. Therefore it’s essential that area management include protection of the blacknose shiner. This will help ensure its continued existence in Missouri. Other local streams where blacknose shiners have been collected in the past include Whetstone Creek (1961, 1977, 1992, 1997), Fonso Branch (1961), and Dry Fork Creek (1962, 1992).

Prairie Fork Creek's fish community appears to be characteristic of prairie headwater streams having diverse habitat and good water quality. Fish sampling by MDC staff during 1999 in Prairie Fork Creek yielded 18 fish species (Appendix K).

Challenges and Opportunities

1. Maintain and enhance the forested riparian corridor along all streams on the area.
2. Protect, enhance and maintain area stream resources to support diverse aquatic biota.

Management Objective 1:

Manage fish populations to enhance diversity and quality of all lotic aquatic resources.

Strategy 1:

Use periodic sampling (every 3 years or as needed) by backpack electrofishing, seining, or snorkeling to assess the fish populations including blacknose shiners.

Management Objective 2:

Establish and maintain a riparian corridor of trees along all stream drainages.

Strategy 1:

Plant native bottomland tree species or use natural regeneration along streams where needed to widen the existing riparian corridor to a more functional and protective width. A minimum riparian corridor width of 50 feet on each side of the stream will be established on 1st and 2nd order streams.

Management Objective 3:

Manage stream resources to maintain and enhance their water quality and diverse stream fauna.

Strategy 1:

Consider inventory and monitoring biotic and abiotic data for all stream resources.

Strategy 2:

Be prepared to develop and implement management recommendations for area streams with erosion and nutrient loading problems if they are discovered.

Strategy 3:

Maintain and improve stream crossings on Prairie Fork Creek.

Strategy 4:

Consider monitoring stream health, particularly with respect to point and non-point pollution sources (sewage treatment systems, agriculture, road chemicals, pipelines, sedimentation, etc.)

Strategy 5:

Consider monitor chemical data for stream water quality assessment.

Strategy 6:

Consider upgrading Prairie Fork Creek's NPDES waters of the state status to outstanding.

Pond and Wetland (Lentic) Resources:

There are 16 ponds and 22 wetlands on the area (Appendix I). Most of the ponds are less than 1 acre; however there are five ponds (P8, P9, P10, P12 and P16) which range in size from ½ to 4 acres that are the most suitable for establishing and maintaining quality fisheries (Appendix J). As a result, future management efforts will be directed toward these ponds.

Total acreage for all area impoundments is approximately 23 acres. All area ponds were built or physically renovated sometime after 1955 (personal communication with Mrs. Jones). Most of the larger ponds have been built fairly recently. Teal Pond (P12) and Lotus Pond (P16) were constructed in 1995; Pond (P5) was built in 1991; Woods Pond (P8) and Duckweed Pond (P10) were constructed in the early 1980s; and Crow Pond (P9) was built during the early 1960s. All area ponds, with the exception of a few smaller ones, were stocked with fish. Largemouth bass, bluegill, and channel catfish combinations were stocked in most ponds; however, a few ponds also received redear sunfish and hybrid sunfish. Duckweed Pond (P10) was originally maintained as a channel catfish only pond until it had to be stocked with largemouth bass and bluegill to control excessive catfish recruitment. Crow Pond (P9) was stocked on a fairly frequent basis with channel catfish and hybrid sunfish. Very little fish community information has been collected for some of the ponds so their status is yet to be determined. As a result, inventory work will be a high priority for University and MDC staffs. Some fish sampling has been done by University students in a few area ponds but results have not been verified or summarized. Most of the ponds sampled by the students contained at least one or more of the following species: largemouth bass, bluegill, channel catfish, green sunfish, and hybrid sunfish. A more thorough sampling of all area ponds may reveal the presence of additional species.

The area is closed to public use unless authorized by the area manager; however, special user groups and educational events such as kid's fishing clinics, Conservation Careers Academy (Conservation Honors Program), school and University of Missouri classes, etc. are allowed by reservation. Four fishing ponds (P8, P10, P12, and P16) are designated to provide some angling for events and/or special user groups. Crow Pond (P9) is closed to fishing because it is used for research studies by MU's Fisheries Techniques class. The current fishing regulations at the ponds for approved events are statewide regulations. These regulations include a 12 to 15" protected slot length limit for largemouth bass, and a daily creel limit of six bass, four channel catfish in the aggregate, thirty crappie, and all other fish twenty in the aggregate. Under the protected slot length limit, bass from 12 to 15" must be released unharmed immediately after being caught.

Three of the 22 wetland units (W2, W18, and W20), totaling 8 acres, have stop log structures and will be managed for moist soil communities. All other wetlands will be maintained as ephemeral wetlands to provide habitat for amphibians and other wetland flora and fauna. Wetland 18 (W18) located southwest of the pavilion, was built in 2001. Ted's Wetland is located just northeast of the soil core wall near Prairie Fork Creek. This wetland was constructed sometime during the 1980s.

Challenges and Opportunities

1. Manage fish populations in five ponds on the area (P8, P9, P10, P12, and P16).
2. Maintain all other area ponds for wildlife watering and semi-aquatic wildlife use.
3. Control nuisance aquatic plants in ponds designated for fishing.
4. Minimize impacts of area impoundments on Prairie Fork Creek.
5. Protect, enhance and maintain area wetland resources.

Management Objective 1:

Manage fish populations and provide fishing opportunities in designated ponds to support fishing.

Strategy 1:

Use periodic sampling by boat or backpack electroshocker, seine, gill net, hoop net, or trap net to assess the fish communities.

Strategy 2:

Inventory and monitor biotic and abiotic data for fishing ponds on the area.

Strategy 3:

Monitor chemical data for pond water quality assessment.

Strategy 4:

Maintain fish habitat structures in fishing ponds to enhance the fishery and fishing.

Strategy 5:

Maintain public access to fishing ponds thru terrestrial vegetation management around ponds.

Strategy 6:

Provide periodic stocking of 8-12" channel catfish to maintain the channel catfish population densities.

Management Objective 2:

Manage all fishless ponds on the area for amphibian and wildlife benefits.

Strategy 1:

Ponds incapable of supporting quality fisheries or that pose a threat to streams supporting blacknose shiners will be chemically renovated and maintained fishless for amphibians, reptiles, and other wildlife.

Management Objective 3:

Treat nuisance aquatic plants in fishing ponds as needed.

Strategy 1:

Appropriate chemical, biological, or mechanical methods will be used depending on the plant coverage and species being controlled.

Management Objective 4:

Minimize impacts of area impoundments on Prairie Fork Creek.

Strategy 1:

Maintain and improve fishless ponds and ephemeral wetlands to allow for more natural hydrology instead of conventional silt basins or ponds.

Management Objective 5:

Manage ephemeral and shallow water wetlands (W2, W18, and W20) for amphibian and wildlife benefits.

Strategy 1:

Maintain these waters fishless for amphibian benefits and to provide quality blacknose shiner habitat in Prairie Fork Creek.

Strategy 2:

Use existing stop log structures in shallow water wetlands to manipulate water levels that encourage moist soil communities.

Strategy 3:

Control nuisance aquatic plants that threaten the integrity or function of the wetlands.

III. Outreach & Education Considerations

The outreach and education goal of Prairie Fork Conservation Area (PFCA) is to increase environmental and conservation awareness and understanding among Missouri citizens. This will be accomplished by developing educational programs that will give students and teachers hands on experiences in conservation. Prairie Fork interpretive programs are also intended to show the uniqueness of the area and its emphasis on natural communities.

The theme of Prairie Fork Conservation Area's outreach and educational programs is "Natural Communities, Their Processes, and Their Functions." Through active participation, visitors can learn about mid-Missouri's natural communities, the issues affecting ecosystem management, and how healthy natural communities are beneficial to all Missourians. The area offers educational facilities and program opportunities throughout the year to any school or group interested in pursuing outdoor conservation education. It is our goal to raise the awareness and knowledge of the need for conservation among students of Missouri. Public use is limited to appointment only.

Our programs are developed in conjunction with Discover Nature Schools and Missouri's Science Frameworks. The focus of our educational programs is to encourage people to investigate science outdoors, or as Pat Jones says, "Learn, get dirty, and have fun."

Challenges and Opportunities

1. Provide opportunities for conservation education activities.
2. Provide facilities for area users to learn about environmental education.
3. Develop tools that will promote educational uses on the area.
4. Coordinate and develop interpretive opportunities that encourage the exploration of the area's natural communities.

Management Objective 1:

Provide unique experiences in conservation education that utilize active learning strategies.

Strategy 1:

Coordinate and develop education programs and opportunities for teachers, student interns, youth leaders, school groups, youth organizations and volunteers, including workshops, training sessions and continuing education credit courses.

Strategy 2:

Provide a field experience destination for Discover Nature Schools (DNS) participants.

Strategy 3:

Maintain 5 area trails, including an interpretive trail around Crow Pond.

Management Objective 2:

Provide facilities for Missouri citizens to actively learn about conservation, and environmental awareness in their natural communities.

Strategy 1:

Manage the online reservation system that coordinates area users.

Strategy 2:

Connect ongoing research and educational opportunities on the area.

Strategy 3:

Maintain informational resources relating to the Prairie Fork Conservation Area Trust and our partnership activities.

Management Objective 3:

Develop promotional tools to assist users with knowledge of the area.

Strategy 1:

Update area brochure which will guide visitors to the unique natural communities.

Strategy 2:

Expand teacher packets to include pre- and post-visit materials to further help teachers use the area for educational experiences.

Strategy 3:

Enhance the Prairie Fork website, located on the University of Missouri's server, which is maintained by the Prairie Fork Conservation Area Trust.

Management Objective 4:

Develop interpretive opportunities that showcase the uniqueness of the area and encourage the exploration of natural communities.

Strategy 1:

Improve the outdoor classroom area and include a Nature Explore Area.

Strategy 2:

Develop interpretive signs for all trails and unique locations on site.

Strategy 3:

Improve one of the designated camping areas by adding an orienteering trail.

Strategy 4:

Maintain trails and conduct maintenance mowing, erosion control.

IV. Research & Monitoring Considerations

The long-term goals on Prairie Fork Conservation Area are to reestablish and maintain natural communities across the entire landscape and to serve as an outdoor laboratory that engages students in active learning. To further these goals, the Prairie Fork Conservation Area Trust was established.

Prairie Fork's research mission is to provide a place to conduct innovative research that will further our understanding of the natural resources, their processes, and our management effects on those resources. The Trust supports "innovative programs of research and teaching in the areas of natural history and conservation." Funds are awarded to projects that influence the management and education goals of Prairie Fork. The Trust is administered by two trustees, one representing the MU School of Natural Resources and one representing MDC. Trustees are advised by a coordinating committee consisting of faculty from the School of Natural Resources at MU, research and management staff from MDC and an ecological scientist outside of MU.

Use of Funds:

Grants from the Trust will be used to support faculty and student research and education programs on PFCA. The involvement of students from diverse disciplines in the development and delivery of projects is strongly encouraged. Research supported is either conducted on site or has closely established relevance to Prairie Fork programs. Projects may emphasize:

1. Hydrology and Water Quality - these studies should further our understanding of stream hydrology and water quality issues, especially in response to land management activities.
2. Soil Quality and Microbiology - these studies should further our understanding of microbial characteristics and the soil history at Prairie Fork Conservation Area.
3. Conservation Education – these education and interpretive projects should be innovative approaches to engage teaching and research activities, especially for youth, in educational programs at Prairie Fork Conservation Area.

4. Exotic Species Control - studies that further our understanding of how to control and eliminate exotic species, especially exotic plant species. Most of the work on Prairie Fork Conservation Area is aimed at controlling exotic species in preparation of restoration management activities. However, all studies that look at management and control of exotic species are encouraged.
5. Restoration Ecology - these studies should be designed to help us understand how to be more effective in our natural community restoration management. They should also be designed to help us understand how to be most successful in our natural community restoration and reconstruction efforts. Although projects that focus on the natural communities of Prairie Fork are of highest priority, project that will examine management and conservation of other natural communities are also encouraged.
6. Response to Management - studies that are designed to help us understand how specific plant and animal species and/or communities respond to specific management activities. These studies should further our understanding of how to better manage and conserve species and groups of species.

V. Public Use Management Considerations

Challenges and Opportunities

1. Area users must have prior approval to visit the area.
2. Enhance and maintain area habitats and facilities that support educational and research activities.
3. Conduct managed hunts or trapping clinics (when available and/or needed).
4. Opportunities for multiple use activities.

Management Objective 1:

Maintain effective communication between all area user groups.

Strategy 1:

Monitor area use and document reported conflicts or concerns with other area users.

Strategy 2:

Facilitate coordination between area researchers to avoid project conflicts.

Management Objective 2:

Provide quality hunting or trapping clinic experiences for all special event participants.

Strategy 1:

Monitor game species by conducting density surveys.

Strategy 2:

Select harvest strategies that strive to balance the local wildlife populations with hunter satisfaction.

Strategy 3:

Conduct managed hunts for deer, turkey, dove, or quail for youth, disabled, or first time hunters when available.

Management Objective 3:

Provide area users compatible and inviting multiple use opportunities for education, recreation, and information.

Strategy 1:

Maintain accurate area information and regulations through the Prairie Fork website, Atlas database, area brochures, posted information, and staff contacts with area users.

Strategy 2:

Promote compatible, safe uses of conservation education, school programs, volunteer projects, conservation research projects, fishing, camping, hiking, birding, nature photography, target shooting, managed hunts, and trapping

Strategy 3:

Monitor and document area use conflicts or concerns. Identify potential timing/seasonal use conflicts and modify approved use dates as needed to minimize concerns.

VI. Administrative Considerations

Challenges and Opportunities

1. Aging infrastructure.
2. Approved public use, though highly desirable, can result in abuse such as littering, ATV trespass, vegetation damage, vandalism, etc.

Management Objective 1:

Repair and renovate area office and buildings as appropriate.

Strategy 1:

Review problem and solutions with Design and Development Division (D&D).

Strategy 2:

Budget and implement as able.

Management Objective 2:

Reduce the impact of detrimental public use on the area.

Strategy 1:

Maintain good communication with neighbors and district Wildlife staff including: Resource Forester, Private Lands Conservationist, Fisheries staff, and Conservation

Agents to ensure that nefarious public activities are noted and necessary steps are taken to remedy and eliminate them.

Lands proposed for acquisition:

When available, inholdings may be considered for acquisition from willing sellers. Tracts that improve area access, provide public use opportunities, contain unique natural communities and/or species of conservation concern, or meet other Department priorities as identified in the annual Department land acquisition priorities may be considered.

VII. MANAGEMENT TIMETABLE

	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24
Terrestrial Resource Management										
Objective 1	Plant local ecotype prairie									
Permittee Crop	Ongoing									
Harvest Ecotype	Ongoing									
Plant Prairie	Ongoing									
Rx Burn	Ongoing									
Objective 2	Control invasive species									
Monitor	Ongoing									
Apply Herbicide	Ongoing									
Objective 3	Reconstruct savannas and woodlands									
Plant Trees	Ongoing									
Alter Fire Regime	Ongoing									
Objective 4	Woodland & savanna thinning									
Inventory			x							
Thinning	Ongoing									
BMP's	Ongoing									
Rx Burn	Ongoing									
Evaluate Tree Regeneration Needs			x							

MANAGEMENT TIMETABLE CONTINUED

	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24
Aquatic Resource Management										
Objective 1	Manage fish populations in all streams									
Fish Sampling				x			x			x
Objective 2	Riparian corridor management									
Plant/Regen	Ongoing									
Objective 3	Manage stream resources									
Inventory	Ongoing									
Fix Erosion	Ongoing									
Crossings	Ongoing									
Stream Health	Ongoing									
Chemical Data	Ongoing									
Upgrade NPDES	Ongoing									
Objective 1	Manage fish populations for special use pond fishing									
Fish Sampling						x			x	
Inventory	Ongoing									
Chemical Data	Ongoing									
Fish Habitat				x			x			x
Public Access	Ongoing									
Stock Catfish	Ongoing									
Objective 2	Manage fishless ponds									
Renovate	Ongoing									
Objective 3	Treat nuisance aquatic plants									
Chemical	Ongoing									
Objective 4	Minimize impacts of area impoundments									
Hydrology	Ongoing									
Objective 5	Manage wetlands for herp and wildlife benefits									
Fishless	Ongoing									
Draw Down	Ongoing									
Control Plants	Ongoing									
Outreach & Education Considerations										
Objective 1	Provide unique experiences in conservation education									
Educ. Programs	Ongoing									
DNS Location	Ongoing									
Maintain Trails	Ongoing									
Objective 2	Provide facilities to actively learn about conservation									
Online system	Ongoing									

MANAGEMENT TIMETABLE CONTINUED

	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24
Connect	Ongoing									
Maintain Info	Ongoing									
Objective 3	Develop promotional tools to assist area users									
Update Broch	Ongoing									
Teacher Packet	Ongoing									
PF Website	Ongoing									
Objective 4	Develop interpretive opportunities that showcase the area									
Outdoor Class	Ongoing									
Interpretive	Ongoing									
Orienteering	Ongoing									
Maintain Trails	Ongoing									
Public Use Mgmt Considerations										
Objective 1	Maintain effective communication between all area user groups									
Monitor Use	Ongoing									
Coordination	Ongoing									
Objective 2	Provide quality hunting and trapping clinic experiences for all special events									
Game Surveys	Ongoing									
Harvst strategy	When Available									
Managed Hunt	When Available									
Objective 3	Provide area users with multiple use opportunities									
Accurate Info	Ongoing									
Safe Uses	Ongoing									
Mitigat Conflict	Ongoing									
Administrative Considerations										
Objective 1	Repair and renovate area office and buildings									
Review		x			x			x		
Implement		x			x			x		
Objective 2	Reduce impact of detrimental public use									
Maintain	Ongoing									

Appendix A:

Area Background

Prior to settlement, the land area of what is today Prairie Fork CA, had tallgrass prairie, savanna, woodland, forest and a good example of an “Ozark Border” stream within its boundaries. This diversity supported a cross section of Missouri’s native wildlife that was attractive to Native Americans and the settlers who followed. Prairie Fork lies at the southern border of what was once the Grand Prairie, in an area known as Nine-Mile Prairie. The original prairie was quite large and was transected by wooded draws along drainages and streams. The southern portion of Prairie Fork is included in the Ozark Border Region, an area with large expanses of oak-hickory woodlands broken only by small prairie and savanna openings.

In 1816-17, field surveyors from the U.S. General Land Office surveyed Callaway County; and in 1818-19, the land was offered for sale at the St. Louis Land Office. The first settler of PFCA was Turner Crump, who bought a portion of the southeast area of PFCA in 1819. Other original settlers of PFCA included James Thompson, Enoch Fruit, James Callaway Anderson, William Dyson, James Crump, and Dick Crump.

One of the most well-known landowners of the 1800’s was James Callaway Anderson who was the nephew of Sara Callaway Anderson, the granddaughter of Colonel William Callaway (Callaway County acquired its name from Colonel William Callaway). For a number of years, James C. Anderson owned a great deal of land in Township 48, including land in Sections 26, 28, 33, and 36. In 1832, James C. Anderson bought land in Sections 30 and 31, and by 1840, he owned more than two-thirds of PFCA.

During the 1920’s and the early years of the Depression, the land comprising PFCA passed through many different hands. In 1928, Eugene W. Sloan of St. Louis, Missouri owned approximately 2038 acres in the area including the land making up PFCA. Mr. Sloan leased the land to Keith McCause, State Game and Fish Commissioner, through an Auxillary State Game Refuge Agreement on February 14, 1928. The lease for was a period of 10 years, and it established the land as a State Game Refuge for the protection and propagation of game and to maintain public hunting grounds. By the early 1930’s the federal land bank owned all the land comprising PFCA.

Edward D. Jones, Sr. was in the brokerage business and became interested in buying a farm. He had learned that Federal Land Bank bonds could be bought equivalent to the debt on a particular farm and then be traded to the land bank for the farm. On October 3, 1932, Edward D. Jones, Sr. and his wife Ursula G. Jones purchased the 742.8 acres from the St. Louis Joint Stock Land Bank for \$6,000 by this method. In 1939 Edward D. Jones, Sr. sold approximately 28 acres, more or less, to his neighbor, Jacob R. VanDyke.

Ted and Pat Jones were both interested in owning their own farm, and Ted loved his father’s farm. On September 24, 1952, Edward (Ted) D. Jones, Jr. and Hilda P. Jones bought the farm from Ted’s parents for \$1.00.

Appendix B:
Current Land and Water Types

Land/Water Type	Acres	Miles	% of Area
Prairie (Reconstructed)	323		35
Savanna/Woodland	187		21
Cropland	128		14
Grassland (Field Borders)	115		13
Bottomland/Riparian Forest	64		7
Old Fields/Upland Fields	29		3
Infrastructure	23		2.5
Impounded Water	23		2.5
Wetland	19		2
TOTAL	911		100
Stream Frontage (Prairie Fork Creek)		1.05	

Appendix C:

References:

Missouri Department of Conservation. 1998. Prairie Fork Creek Conservation Area, Area Plan. Missouri Department of Conservation, Jefferson City, Missouri.

Missouri Natural Areas Committee. 1996. Directory of Missouri natural areas. Missouri Natural Areas Committee, Jefferson City, Missouri.

Nelson, P.W. 2005. The terrestrial natural communities of Missouri. Third edition. Missouri Natural Areas Committee. Missouri Department of Natural Resources, Jefferson City, Missouri.

Nigh, T.A. and W.A. Schroeder. 2002. Atlas of Missouri ecoregions. Missouri Department of Conservation, Jefferson City, Missouri.

Nigh, T.A., K. Steele, J. Kabrick, A. Marshaus, D. Meinert, F. Young, J. Villwock. 2010. Ecological landtypes of Missouri, the ozark border, October 2010 Draft. Missouri Department of Conservation, Jefferson City, Missouri.

Fisheries Guidelines for Stream Side Management Zones. 1997. Guidelines for recommending stream side management zones on private land. Fisheries Division, Missouri Department of Conservation. Memorandum from Norm Stucky, April 30, 1997.

Hahn, J.T. and J.S. Spencer, Jr. 1991. Timber resources of Missouri, statistical report, 1989. Resource Bull. NC-119, USDA, Forest Service, North Central Forest Experiment Station, St. Paul, MN.

Hayward, R.S. and Noltie, D.B. 1996. Characterization of Aquatic Resources of the Jones Farm/Prairie Fork Conservation Area. University of Missouri, Columbia.

Johnson, T.R. 1994. Amphibian and Reptile Management on Conservation Department Impoundments. Missouri Department of Conservation, Jefferson City, MO.

Johnson, T.R. 1997. The Amphibians and Reptiles of Missouri. Missouri Department of Conservation, Jefferson City, MO.

Johnson, T.R. 1998. Amphibian and Reptile Management Guidelines. Missouri Department of Conservation, Jefferson City, MO.

Missouri Department of Conservation. 1986. Forest Land Management Guidelines. Missouri Department of Conservation, Jefferson City, MO.

Missouri Department of Conservation. 2014. Missouri Species and Communities of Conservation Concern. Missouri Department of Conservation, Jefferson City, MO.

Ostrom, A. J. 1991. Timber Resource of Missouri's Prairie. United States Department of Agriculture, Forest Service, North Central Forest Experiment Station, Resource Bulletin NC-117, St. Paul, Minnesota.

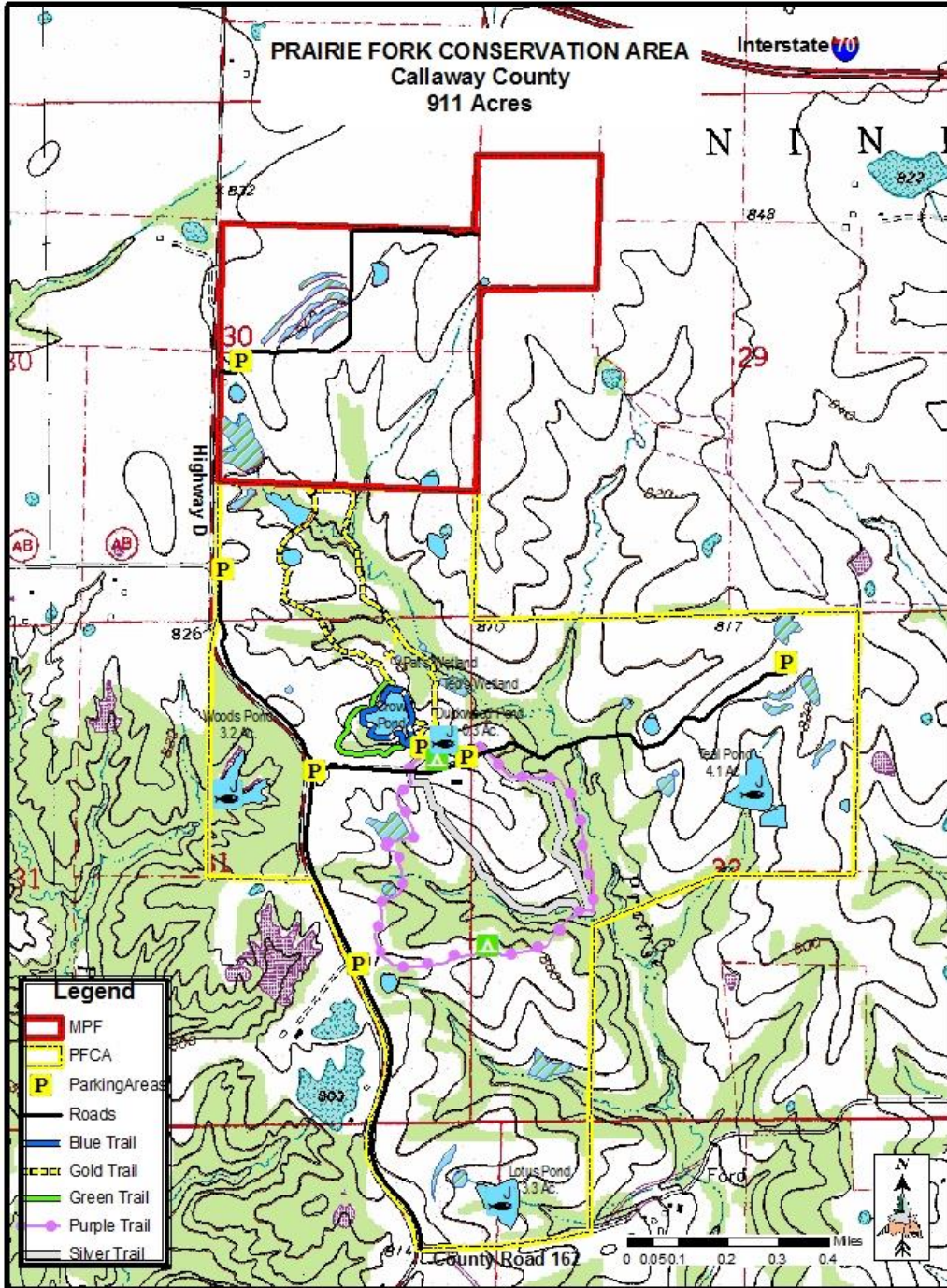
Pflieger, W. L. 1971. A distributional study of Missouri fishes. University of Kansas Publications, Museum of Natural History. Volume 20, Number 3. Pages 225-570.

Pflieger, W. L. 1975. The fishes of Missouri. Missouri Department of Conservation, Jefferson City, Missouri.

Pflieger, W. L. 1997. The fishes of Missouri, revised edition. Missouri Department of Conservation. Jefferson City, Missouri.

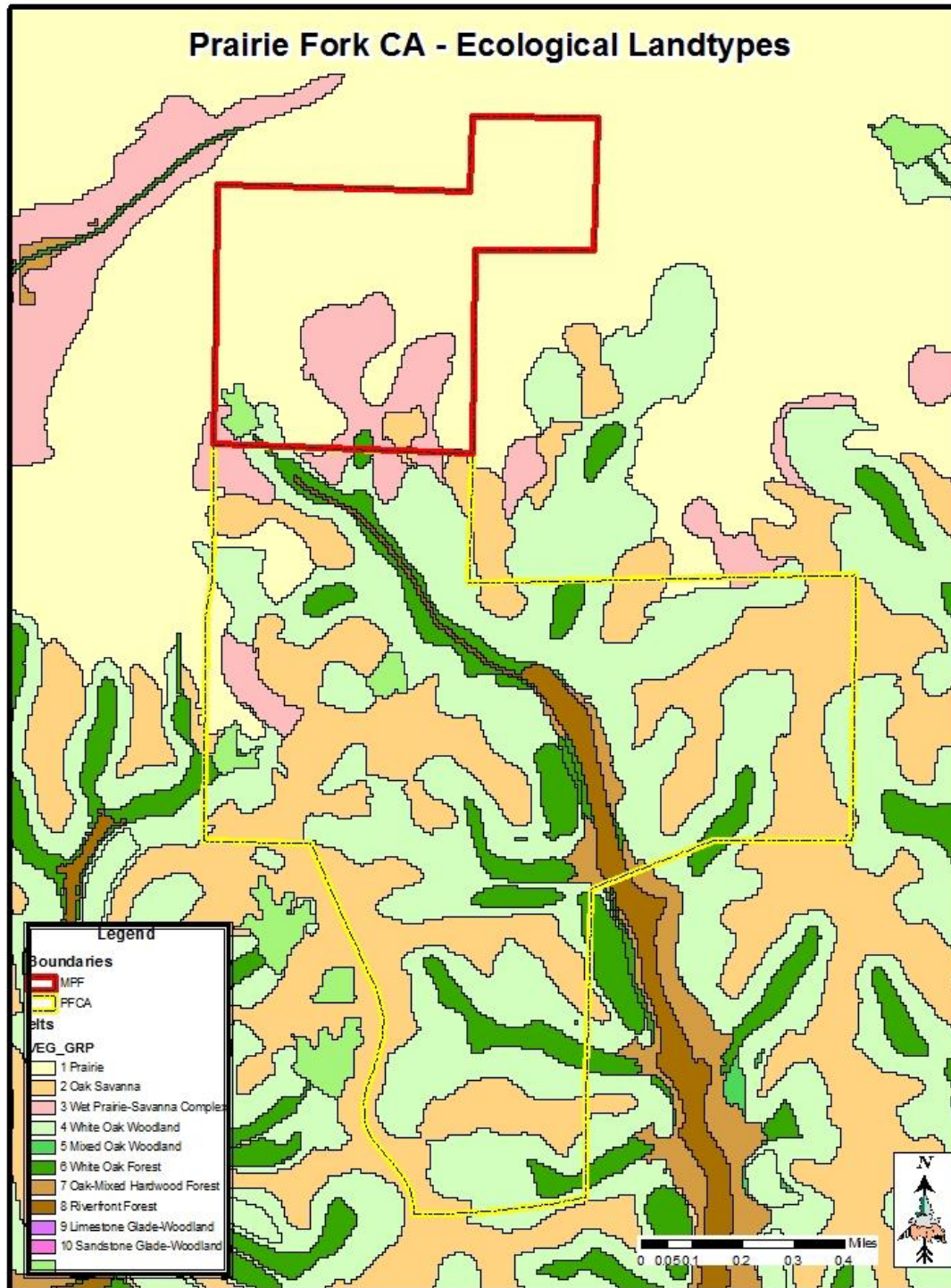
Appendix D:

Area Map



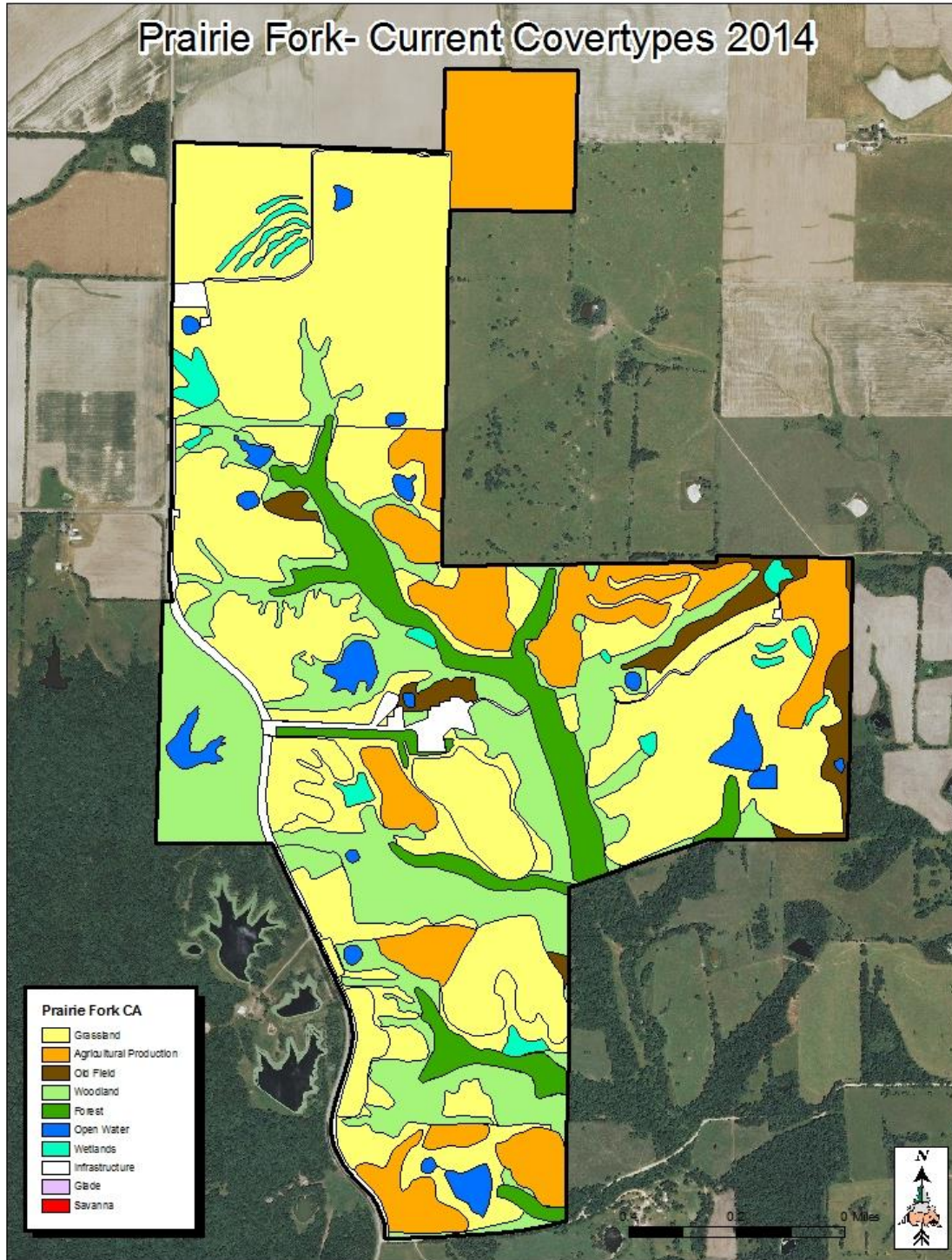
Appendix E:

Ecological Landtypes



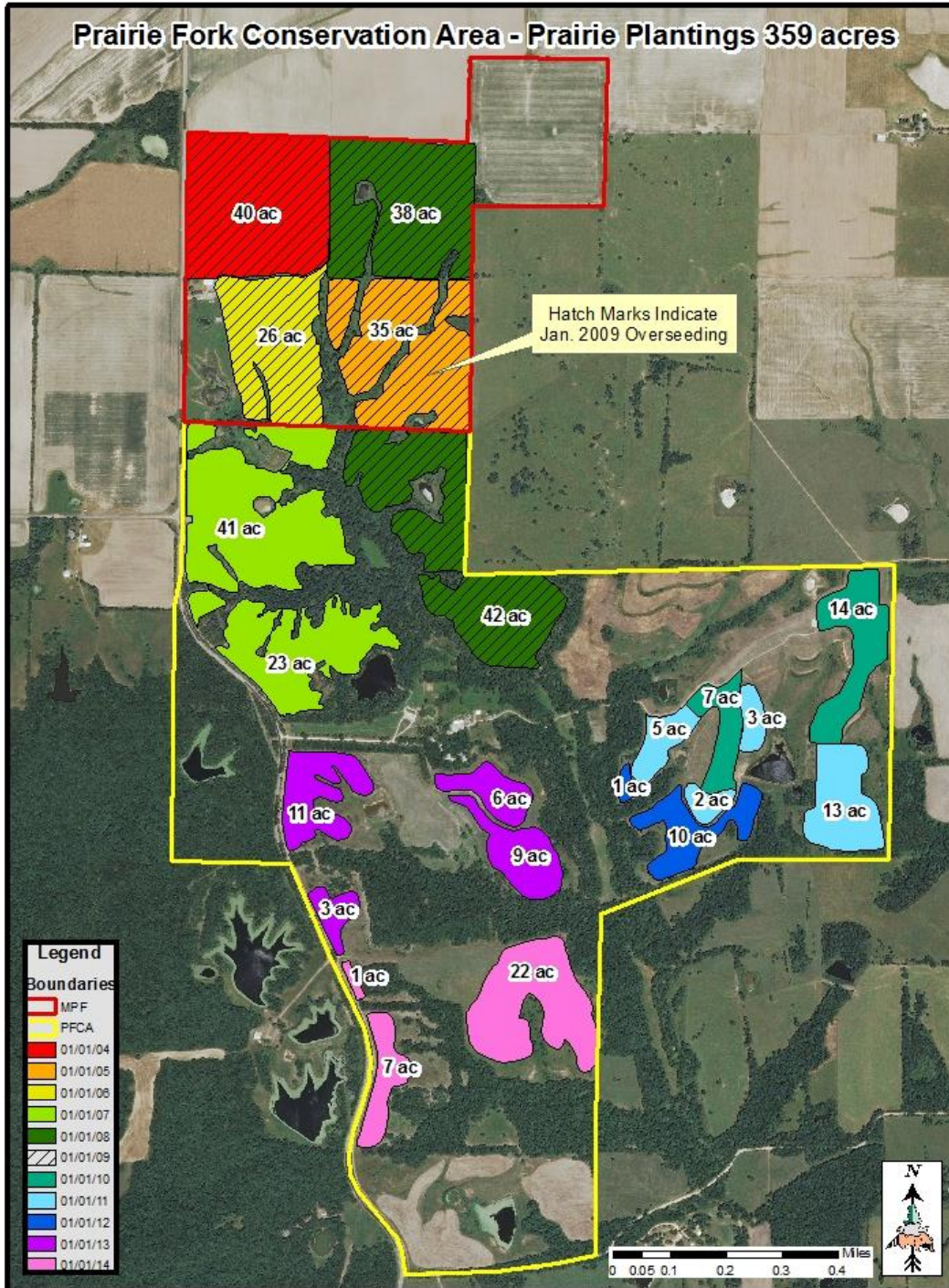
Appendix F:

Area Covertypes



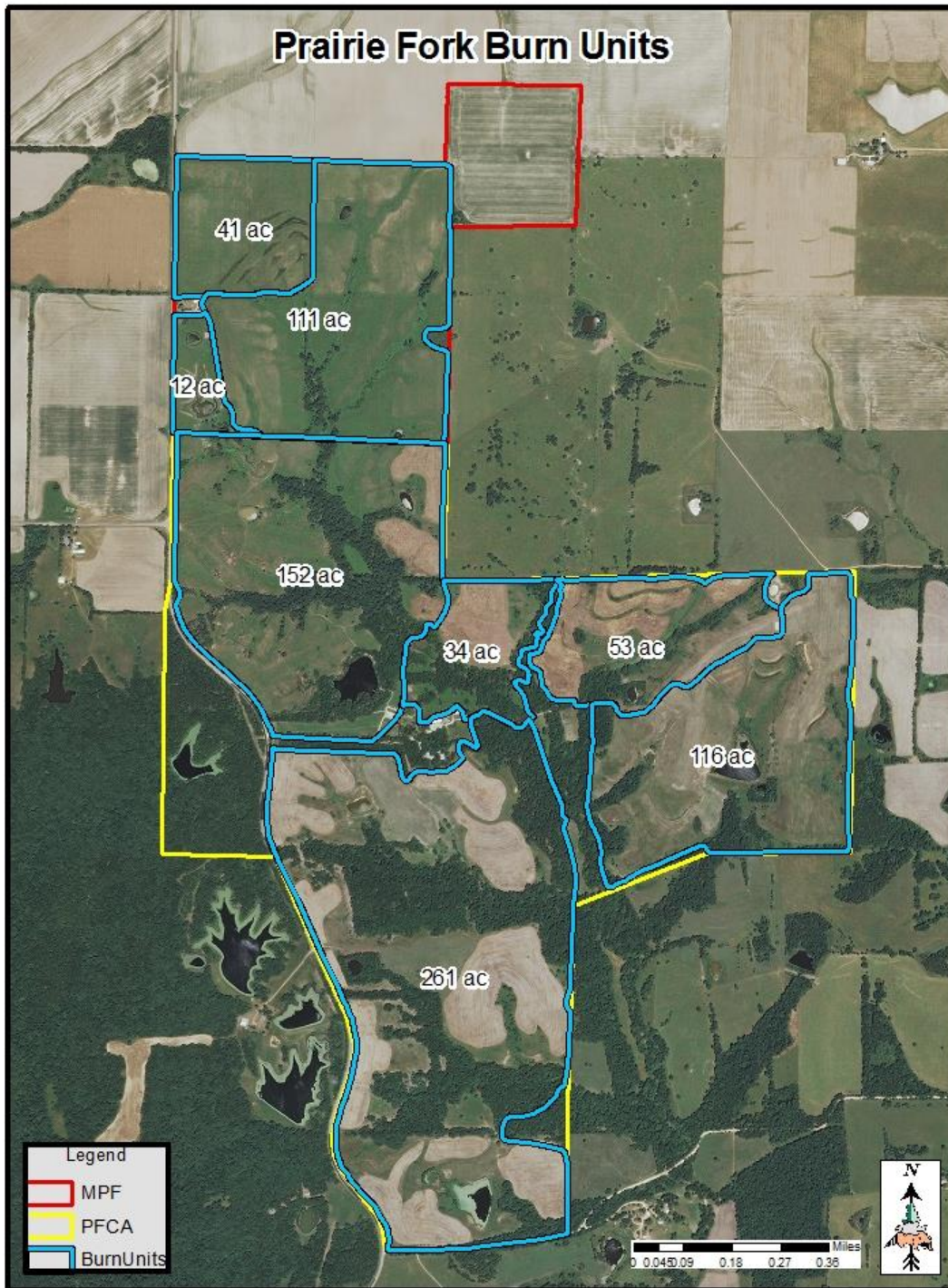
Appendix G:

Prairie Reconstruction Map



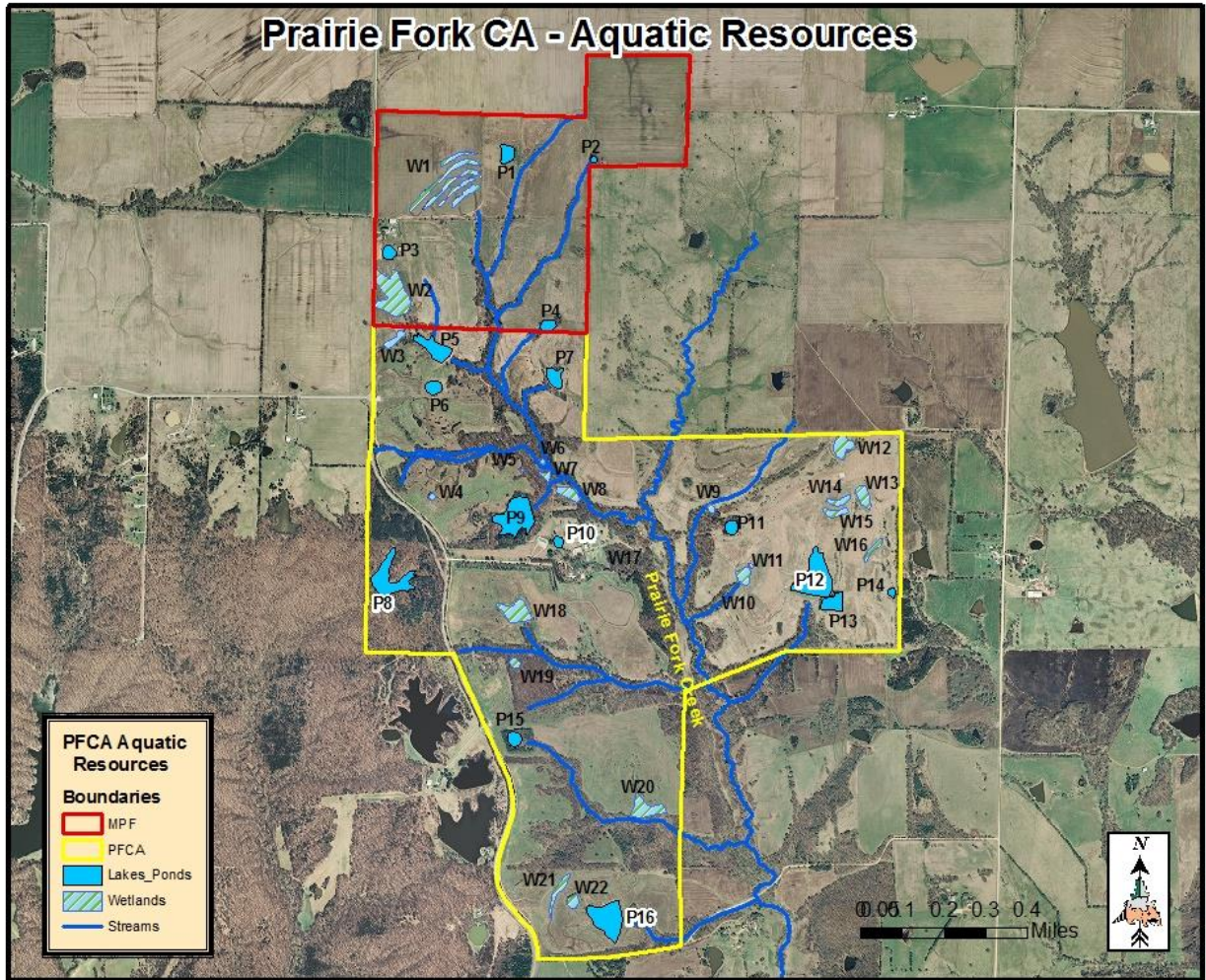
Appendix H:

Area Burn Units



Appendix I:

Aquatic Resources Map



Appendix J:

Aquatic Resources Inventory

Area Fisheries Features				
Feature Item	Name	Count	Size	Comments
Fishing Lake or Ponds (Quality Fisheries)	Woods, Duckweed, Teal, and Lotus Ponds	4	11 acres	Woods (P8), Duckweed (P10), Teal (P12), and Lotus (P16) Ponds are managed and open for fishing by special use groups.
Research Pond (Quality Fisheries)	Crow Pond	1	4 acres	Crow Pond (P9) is managed for quality fisheries but closed for fishing.
Fishless Ponds	P1 – P7, P11, P13 – P15	11	8 acres	Managed for amphibians
Wetlands (Stop Log Structures)	W2, W18, W20	3	8 acres	Managed for moist soil communities
Wetlands	W1, W3 – W6, Pat's Wetland (W7), Ted's Wetland (W8), W9 – W17, W19, W21, W22	19	11 acres	Managed as ephemeral wetlands
Streams - Intermittent		1	0.15 miles	1 st Order
Streams - Intermittent		1	0.25 miles	1 st Order
Streams - Intermittent		1	0.18 miles	1 st Order
Streams - Intermittent		1	0.19 miles	1 st Order
Streams - Intermittent		1	0.51 miles	1 st Order
Streams - Intermittent		1	0.62 miles	1 st Order
Streams - Permanent	Prairie Fork Creek	1	1.05 miles	2 nd Order – species of conservation concern blacknose shiner present

Appendix K:

Fish Inventory 1999

Table 3. Fish species sampled in Prairie Fork Creek during 1999.			
Common Name		Scientific Name	Year Sampled
			1999
1.	Black Bullhead	<i>Ameiurus melas</i>	
2.	Blacknose Shiner	<i>Notropis heterolepis</i>	x
3.	Bluegill	<i>Lepomis macrochirus</i>	x
4.	Bluegill x Green Sunfish Hybrid	<i>Lepomis macrochirus</i> x <i>Lepomis cyanellus</i>	x
5.	Central Stoneroller	<i>Campostoma pullum</i>	x
6.	Creek Chub	<i>Semotilus atromaculatus</i>	x
7.	Green Sunfish	<i>Lepomis cyanellus</i>	x
8.	Johnny Darter	<i>Etheostoma nigrum</i>	x
9.	Largemouth Bass	<i>Micropterus salmoides</i>	x
10.	Longear Sunfish	<i>Lepomis megalotis</i>	x
11.	Northern Orangethroat Darter	<i>Etheostoma spectabile</i>	x
12.	Orangespotted Sunfish	<i>Lepomis humilis</i>	x
13.	Red Shiner	<i>Cyprinella lutrensis</i>	x
14.	Southern Redbelly Dace	<i>Phoxinus erythrogaster</i>	x
15.	Stippled Darter	<i>Etheostoma punctulatum</i>	x
16.	Western Redfin Shiner	<i>Lythrurus u. umbratilis</i>	x
17.	White Sucker	<i>Catostomus commersoni</i>	x
18.	Yellow Bullhead	<i>Ameiurus natalis</i>	x

Appendix L:

Area Infrastructure Map

