

OUTDOOR RECREATION IN IOWA PLAN



2018-2023





Kim Reynolds
GOVERNOR

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DEAR OUTDOOR ENTHUSIAST:

As I travel the state working with and visiting Iowans, I've been fortunate to see firsthand the beauty and wonder of our rich natural resources. As our state changes from north to south and east to west, it offers a wide variety of experiences. If you want some of the best fishing in the Midwest, you don't have to go far to find a great lake or river. Or, if you seek peace and tranquility to unwind from the work week, the nearest park is waiting for you.

Participating in outdoor activities improves health and well-being. Iowa's network of trails offers wonderful opportunities for families to get outside and get active. To be our best, it's recommended we participate in at least two hours of physical activity each day. If we all make a commitment to two hours, Iowans could start reducing the rise in obesity, chronic diseases and depression and experience the beauty of our state in the process.

Outdoor spaces bring communities together. They provide meeting places for family reunions and weddings, and they are signature spots for community events and celebrations. These spaces are also where children learn new activities, understand what it means to work as a team and learn lessons in victory and defeat. These places are vitally important. They are vibrant and provide social and economic benefits improving the quality of life for all Iowans.

In developing this plan, we listened to Iowans about the outdoor recreation activities they enjoy, as well as the activities they'd like to see. The Outdoor Recreation in Iowa Plan is a guide book for moving Iowa toward a balance of outdoor recreation and natural resource protection - not just for today, but for future generations too. It's now up to city, county and state agencies to take recommendations introduced in this plan and act.



Handwritten signature of Kim Reynolds in cursive script.
Governor Kim Reynolds

TABLE OF CONTENTS

SECTION 1:

Outdoor Recreation in Iowa	4
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SECTION 2:

State of Iowa Profile	8
The Resource	8
The People	22
The Opportunity	24

SECTION 3:

5-Year Priorities for Natural Resource, Open Space and Outdoor Recreation	38
Priority 1	38
Priority 2	54
Priority 3	57

SECTION 4:

Doing Great Things	64
--------------------------	----

SECTION 5:

Funding and Grant Opportunities	69
---------------------------------------	----

SECTION 6:

Appendix A.....	72
Appendix B.....	76
Appendix C.....	87
Appendix D	362

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Specifically, thanks to Adam Shirley and Mike Cox representing Iowa's County Conservation Boards; John Anderson and J Wardell representing Iowa's City Park and Recreation Departments; Nicole Shalla with Iowa Department of Economic Development Authority; Sarah Taylor Watts with the Iowa Department of Public Health, Yvonne. Diller and Debra Arp with the Iowa Department of Transportation and Sherry Arntzen, Gabriele Edwards, Katy Reeder and Megan Wisecup with the Iowa Department of Natural Resources.

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Finally, thanks to Kati Bainter, Tammie Krausman, Alex Murphy and Monica Thelen for creating maps, editing and layout.

OUTDOOR RECREATION IN IOWA

The Statewide Outdoor Recreation Plan provides a framework for outdoor recreation priorities and plans that will enhance Iowa's natural resources while contributing to the well-being and enjoyment of all Iowans.

THE OUTDOOR RECREATION IN IOWA PLAN IS:

Comprehensive – all outdoor recreation opportunities are considered.

Informative – provides information about the supply of and demand for outdoor recreation in Iowa.

Integrated – this plan connects multiple plans across state government piloting a comprehensive look between natural resources and outdoor recreation.

Logical – priorities and goals all make sense and lead to growing outdoor recreation and conservation of natural resources in Iowa.

Transparent – Iowans understand the priorities and direction for outdoor recreation.

BENEFITS OF OUTDOOR RECREATION



Park and recreation areas are natural gathering places for people who like to spend time with family and enjoy the outdoors. Open spaces primarily offer protection for Iowa's plant and animal species through conservation or restoration of critical habitats, but also provide room for outdoor recreational pursuits. All areas contribute to environmental, physical, emotional and social well-being while bolstering local economies.

Environmental benefits: people with a greater connection to the outdoors also support conservation and preservation of natural resources, contributing to a healthier environment through daily choices and actions.

Physical benefits: Walking, hiking, biking and other outdoor recreation activities keep Iowans active and healthy throughout their life.

Emotional benefits: Spending time outdoors, disconnected from technology, work and everyday tasks reduces stress and re-energizes us to take on the tasks of the day.

Social benefits: Natural Resource, parks and outdoor recreation areas are natural draws for people to come together and spend time with family and friends. Many communities rely on these areas for festivals and events as hubs of social structure.

Economic benefits: People who participate in outdoor recreation contribute to their communities through local spending. Potential employees also make job choices based on the availability of close-to-home outdoor opportunities, such as Iowa's lakes, waterways and trails.

Conventional Outdoor Recreation: activities that require some level of intentional physical exertion and occur in natural environments, such as camping, hunting, canoeing or hiking.

Other Outdoor Recreation: activities that fall outside the conventional definition but are undertaken for pleasure and occur outdoor, such as playing field sports or visiting water parks.

Bureau of Economic Analysis, 2019



PRIORITIES OF THE 2018 OUTDOOR RECREATION PLAN

Outdoor Recreation in Iowa must support the needs of Iowans in outdoor recreation participation and conservation of natural resources. The 3 priorities of this plan align with the goals and performance measures of the Land & Water Conservation Fund as well as bolster state plans from the Departments of Natural Resources, Public Health and Transportation and local planning through city and county agencies.

Priorities of this plan are in no particular order of importance. To move in a positive direction during the next five years, equal focus has to be on all areas of this plan.

Priority 1: Availability and Diversity of Natural Resources, Parks and Outdoor Recreation Opportunities Enhance the Quality of Life of Iowans.

Priority 2: Natural Resources, Parks and Outdoor Recreation Opportunities are available to all Iowans.

Priority 3: The Right Opportunities. In the Right Place. Done the Right Way.



SECTION 2: LAND & WATER CONSERVATION FUND

In 1963, President Kennedy proposed legislation that established the Land & Water Conservation Fund (LWCF), carrying forward a recommendation made by the Outdoor Recreation Resources Review Commission in 1961. This fund was to assist states in planning, acquisition and development of recreation resources, as well as a guide to purchase new federal recreational areas.

After much debate and two years of discussions, bipartisan support was finally achieved and a Land & Water Conservation Fund bill was signed into law on September 3, 1964. This new act established funding for the creation of parks and open spaces, protection of wilderness, wetlands, and refuges, preservation of habitat, enhancement of recreational opportunities, and for matching grants to state and local governments for recreation planning and development. A condition of the Act for the dissemination of the matching grant funds was the development in each state of a Statewide Comprehensive Outdoor Recreation Plan (SCORP). These plans are developed, updated and submitted to the National Park Service every five years.

The funds received from the State and Local Assistance Program Fund are primarily oil and gas lease revenues acquired from leases on federal lands. By putting these revenues back into the hands of states the National Park Service is balancing the impact to the resource while providing additional close-to-home open space and recreational opportunities. States must match the federal grant funds with at least 50% of their own local resources or through donations. The sites must be available to all citizens into perpetuity. In 2017, the Land and Water Conservation Fund awarded \$94.3 million in grants nationwide, of which Iowa received \$1.2 million.

IOWA'S LWCF FUNDING

LWCF has provided nearly \$60,000,000 in matching grants to the State of Iowa, its cities and counties since its initiation (Table 1 funding since last SCORP). All Iowa counties have benefited from funding through LWCF (Appendix A).

Iowa submitted the first Statewide Comprehensive Outdoor Recreation Plan (SCORP) in 1968, titled Outdoor Recreation in Iowa. This report was comprehensive in that it blended goals and strategies from the Land & Water Conservation Fund, the Bureau of Sport Fisheries and Wildlife Planning, and the State Historical Action Program into one document intended to replace the Iowa 25 Year Conservation Plan. The 2018 Outdoor Recreation Plan will go back to its roots bringing together the Wildlife Action Plan: Securing a Future for Fish and Wildlife, Iowa's Forests Today, the Wetland Program Plan for Iowa as well as the Iowa Department of Public Health's Healthy Iowans Plan and Iowa Department of Transportation's State Transportation Plan.

Table 1: LWCF Funding

Year	Competitive Grants	State Projects	Planning Grant	Total Allocation	Reapportionment & GOMESA* Funds Available
2013	\$356,437.00	\$262,360.00		\$523,460.00	\$1,260.00
2014	\$325,600.00	\$240,690.00		\$548,114.00	\$18,176.00
2015	\$295,250.00	\$263,256.00		\$547,114.00	\$10,392.00
2016	\$620,000.00	\$619,974.00		\$1,238,850.00	\$1,124.00
2017	\$636,800.00	\$671,767.74		\$1,227,870.00	\$4,047.00

*Gulf of Mexico Energy Security Act (GOMESA)

This plan, the 11th edition, brings together the best resources and information in order to create outdoor recreation experiences for all Iowans. Iowa has 877,349 acres open to public access where most outdoor recreation activities take place, which is 2.44% of the total 36,022,848 acres in Iowa, according to the Iowa DNR's Conservation Recreation Lands in Iowa dataset. It is essential that this plan considers where Iowans are, what they are looking for in experiences and balances those wants and needs with the conservation and protection of the resource. Data was gathered for this plan through national and statewide reports, state plans and a resident citizen survey of Iowa conducted in 2018. This provided the background for the Statewide Comprehensive Outdoor Plan Advisory Group to develop the new Outdoor Recreation Plan priorities. Before the plan was finalized, Iowans had the chance to comment on the direction and suggest changes or additions.

During the past 50 years, these plans have been primarily used by city, county and state agencies. Grants through programs such as the Resource Enhancement and Protection Fund, Iowa Department of Transportation State and National Trails Fund, and Land & Water Conservation Fund all require projects to reference back to the current SCORP plan and indicate how their potential projects accomplish goals set forth in the plan.



SECTION 1: STATE OF IOWA PROFILE

THE RESOURCE

The Iowa Department of Natural Resources houses both the Conservation & Recreation Division and the Environmental Services Division which offer a unique collaborative experience for the benefit of natural resources in Iowa. Iowa DNR is also responsible for planning and reporting to various federal government agencies such as the U.S. Fish & Wildlife Service, National Park Service, U.S. Department of Agriculture, and the Environmental Protection Agency. The natural resource component of this plan brings together the goals and strategies of multiple plans developed by DNR to meet these federal and state requirements. Reciprocally, the other plans, as updated, will include the outdoor recreation goals and strategies of this plan as their recreation component. In the future, this will synchronize plans, thus eliminating confusion within our agency, with user groups, stakeholders and grant writers. Entities writing grants for natural resource conservation, protection or recreation should consider the potential impacts of their projects and reference information in this material. For further detail, grantseekers would benefit from reading the plans referenced in this section.

Topography

Iowa is a state of 56,286 square miles (36,022,848 acres) bordered by the Mississippi River on the east, and the Missouri and Big Sioux Rivers on the west. Iowa has relatively low relief – elevations running from a high of 1,670 feet above mean sea level in Osceola County in northwestern Iowa to 480 feet above mean sea level in Lee County in the southeastern corner of the state (Figures 1 & 2)

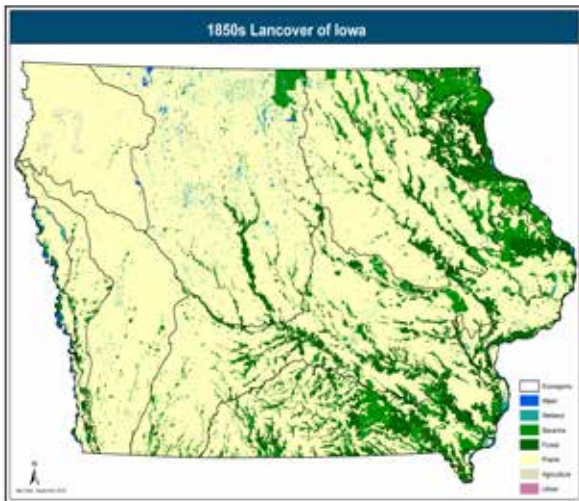


Figure 1 -Map based on Government Land Office original public land survey of Iowa.



Figure 2

Climate

Iowa's climate is classified as humid continental and is characterized by warm summers and cold winters. The average annual temperature is 47.6 F. Average temperature in the summer is 71.5 F. December to February winter temperatures average 21.2 F (NOAA 2015) with an average winter difference of 6.5 degrees between north and south. Temperature minimums of -25 F are not uncommon in northern Iowa.

Geology

Iowa's natural communities are as much a result of its recent geologic past as they are a result of climatic conditions (Prior 1991). The boundaries of the ecoregions that resulted from this geologic history coincide well with the boundaries of other habitat based classification systems (Figure 3).

Figure 3. Landforms of Iowa

STATUS OF FORESTS IN IOWA

Upon settlement Iowa was described as having 18% forested lands (6,700,000 acres), today there is about 8% remaining, most of which are located on steep slopes with sensitive soils or within riparian zones.

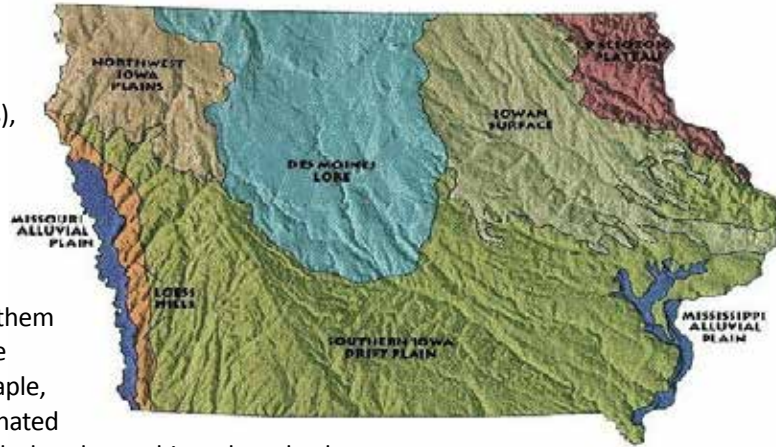
Historic Conditions

Closed-canopy mature forests as we know them today existed only on the floodplains where fire could not routinely penetrate. Silver maple, American elm, and swamp white oak dominated the wettest sites, with hickory, hackberry, black walnut, white ash, red oak, basswood and slippery elm on the lower slopes. Shrubs were not abundant and were primarily young silver maples and hackberry with catbriar, poison ivy and grape (Figure 4).

Most of the initial forest clearing in Iowa was done to allow conversion of the land to agriculture. Iowa's native hardwoods did not prove valuable as building materials. Most of the lumber that eventually built the farm homes, barns and livestock dwellings that dotted the countryside came from the great pine forests of Minnesota and Wisconsin. Starting in the 1850s, however, railroad expansion and the discovery of coal in southern Iowa fueled a demand for oak ties and mine timbers that would last into the early 20th century. By 1875, just one-third of the original 6.7 million acres of primitive forest remained, most on rough land or in floodplains either too steep or too wet to plow.

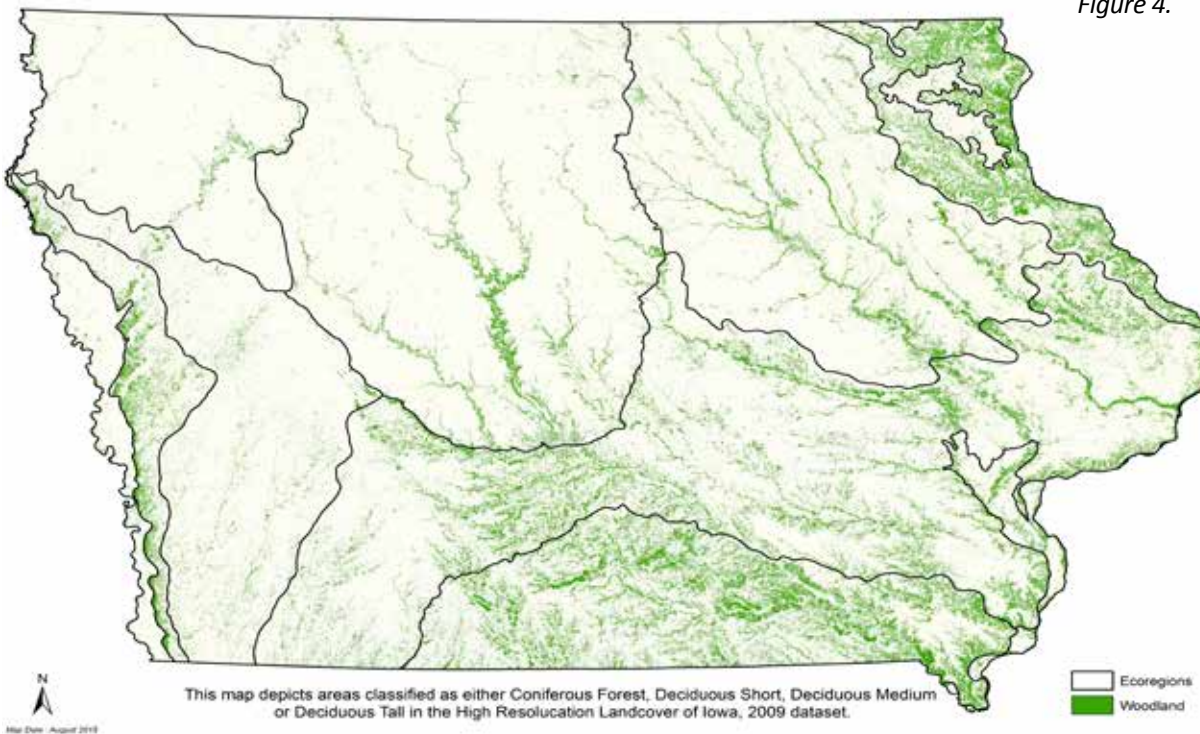
Current Conditions

The largest contiguous tracts of forested communities reside in Iowa's four major State Forests (Loess Hills, Shimek, Stephens, and Yellow River) and six minor State Forests (Backbone, White Pine Hollow, Holst, Barkely, Pilot Mound and Gifford). There are also forested lands on much of Iowa's State Parks and Wildlife Areas. County Conservation Boards, City Parks and Tree Communities make up the other public lands with forested acres. Much of our major forested lands, however, fall under private ownership.



High Resolution Landcover of Iowa, 2009 - Woodland Classes

Figure 4.



Proper woodland and community tree care plays a critical role in creating healthy rural and urban community forests. Management of rural woodlands, including ensuring an appropriate number of trees per acre and maintaining species diversity, are the best insurance against native and exotic invasive woodland and tree threats. The best plan of action for communities is to inventory tree resources and work to create a diverse community of forest that does not have more than 10 percent of any one species..

Iowa's three million acres of forest land provide environmental benefits to all Iowans in terms of soil erosion control, air quality and water quality. In 2013, more than 6.5 million trees died. Within those trees there were more than 125 million board feet of wood, compared to 98 million board feet of wood harvested. This level of mortality is the highest level reported from US Forest Service inventories in twenty years. This is disturbing when considering more than 18,000 Iowans are employed in the wood products and manufacturing industry, generating nearly \$4 billion an annual sales, more than \$900 million in annual payroll and more than \$25 million to private woodland owners annually from the sale of timber.

Iowa's forests are facing an unprecedented level of native and invasive pests that threaten to create a new wave of mortality unseen since the arrival of Dutch elm disease. The 2013 *Iowa Forest Health Highlights* five key pests were described that have emerged as a severe threat to Iowa's native woodland and community (full report at: <http://www.iowadnr.gov/eab> and select the *Forest Health Highlights* tab). The key pests identified include gypsy moth, emerald ash borer, bur oak blight, thousand cankers disease of black walnut and Asian longhorned beetle. The economic loss caused by these five key pests and diseases is an estimated \$1.4 billion over twenty years for forest landowners and wood products businesses and over \$20 billion in urban tree removal.

The forests provide a wide range of uses for people today, just as they did during settlement. Trees provide multiple benefits for wildlife, shade, windbreaks, beauty, recreation, clean air, clean water and wood products to everyone living in Iowa. Natural resources have helped Iowa grow a strong manufacturing base to complement the agriculture industry, which has provided a diversity of job opportunities in both rural and urban areas.

Importance to Wildlife

There are two primary aspects of wildlife habitat: food and shelter. Many animals rely on trees for habitat, and the



usefulness of a tree or group of trees depends on factors such as size, condition and spacing. Generally speaking, a tree's value to wildlife is proportional to its size, since trees that are relatively large are able to provide more food and more opportunities for shelter than trees that are relatively small. Trees that produce fine hardwood products are usually valuable for wildlife because they produce acorns and nuts; as these trees age, they may also develop cavities that birds and animals can use for shelter. Other tree species of value to wildlife include aspen (buds used for food), silver maple (mostly shelter), serviceberry (food and shelter), pines (shelter and roosting sites), red cedar (food and shelter), hawthorn (shelter) and crabapple (food). A large variety of shrubs such as wild plum, ninebark, dogwood, hazelnut, elderberry, arrow wood, nannyberry and common choke cherry can also provide food and shelter for wildlife.

Historically speaking, most of Iowa's forests have existed along river corridors; these areas have shrunk in size as a result of agricultural growth, which has had a huge impact on water quality and habitat availability. Forested river corridors are important to terrestrial and aquatic wildlife because they provide connectivity to larger tracts of forest and shade water from hot sun rays in the summer.

Iowa's woodlands benefit a variety of wildlife including birds, mammals, reptiles, amphibians, butterflies and snails. Water corridors that meander under tree canopies have less extreme temperature fluctuations than those that don't, and therefore provide superior habitat for many aquatic species as well.

Forest Plans

The Iowa Association of Naturalists developed a useful overview of Iowa Woodlands as part of their "Iowa's Communities Series." To download this booklet, visit their natural resource publications page at:

http://www.iowanaturalists.org/resource_booklets.htm

Iowa's Forests Today: An Assessment of the Issues and Strategies for Conserving and Maintaining Iowa's Forests

Iowa's Forest Action Plan was published in 2010 as a requirement of the 2008 Farm Bill in order to assess the condition of Iowa's rural and urban forest resources and provide a framework or strategy for how all Iowans might move forward to better care for these resources. These plans are developed on a 10 year cycle and a revision of the plan is currently underway. Iowa's Forests Today can be accessed at the following webpage:

<http://www.iowadnr.gov/Conservation/Forestry>

Iowa Wildlife Action Plan

The Iowa Wildlife Action Plan (IWAP) is a ten-year, comprehensive conservation strategy for wildlife in all habitat types, including forests. The IWAP identifies several rare and sensitive ecological communities as land protection and management priorities, including two forest community types: algalic talus slopes and oak savanna. The IWAP also identifies rare and declining fish and wildlife species that are in need of some type of conservation effort. These are identified as Species of Greatest Conservation need.

In addition to providing habitat for many common wildlife species, forests also provide habitat for a large number of species in need of conservation. Specifically, forests provide habitat to nearly 75 SGCN:

8 species of amphibians (e.g., frogs and toads)	10 species of reptiles (e.g., turtles and snakes)
30 species of birds (e.g., songbirds, owls, hawks, grouse and quail)	17 species of butterflies (e.g., swallowtails, hairstreaks, checkerspot, skippers)
5 species of Terrestrial Snails (e.g., Pleistocene snails)	14 species of mammals (e.g., bats, flying squirrel, gray fox)

The IWAP can be accessed at the following webpage: <http://www.iowadnr.gov/Conservation/Iowa-Wildlife/Iowa-Wildlife-Action-Plan>

Forest Conservation Priorities

Forest and woodland conservation should prioritize the issues and strategies identified in the Iowa Forest Action Plan (Rural Forest, Urban and Forest Legacy priorities are found in Appendix B), such as loss of forest ecosystem diversity, forest fragmentation, lack of active forest management, lack of tree species diversity in communities, decline of oak-hickory woodlands, and loss of early successional forest habitat.

Efforts to increase outdoor recreational opportunities that aren't reliant on natural areas (e.g., development of playgrounds, trails, cabins, or other recreational infrastructure within a woodland) can also contribute to healthy ecosystem functioning and aesthetics by incorporating native tree species and by using forestry best practices to maintain woodland health.

With reduced resources available, the pressure from recreationalists on these areas can be high. Due to high erodibility of some of these areas, the impact left by users can have detrimental and long lasting effects. Erosion from trail use can easily get into rivers and streams and degrade water quality and the accompanying plant and animal life found there. The uplands from which the erosion started can continue to develop into gullies and washes which can impact upland resources and degrade the recreational enjoyment of the place. Recreation opportunities need to be sited so they can be maintained easily and to lessen the impact to the ecosystem and provide a positive experience for the user.

Forest Based Recreation

There are numerous opportunities for outdoor recreation on forested lands. Forested lands allow you to get away from the hustle and bustle of life and not a mile in on a trail the noises of vehicles and people fade away as does cellular reception. On public lands, forested areas allow for camping, picnicking, hiking, mountain biking, horseback riding, bird watching, hunting and fishing. There are currently 544 miles of trails through state forests and state parks alone, most of which flow through forested areas.

References

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T.Feeley. 2017. Iowa's 2017 Forest Health Highlights. Iowa Department of Natural Resources, Des Moines, Iowa, USA.

STATUS OF WETLANDS IN IOWA

The Emergency Wetlands Resources Act of 1986 requires that State Comprehensive Statewide Outdoor Recreation Plans shall specifically address wetlands within each State as an important outdoor recreation resource. The following section provides an overview of the status of Iowa's wetlands, identifies several wetland conservation resources, and briefly outlines the importance of wetlands to wildlife and outdoor recreationists.

Historic Conditions

Historically, around 4 million acres of prairie pothole marshes dotted north-central and northwest Iowa. Another million acres of backwaters, sloughs and flooded oxbows were found in the floodplains of the Mississippi, Missouri and larger inland rivers.

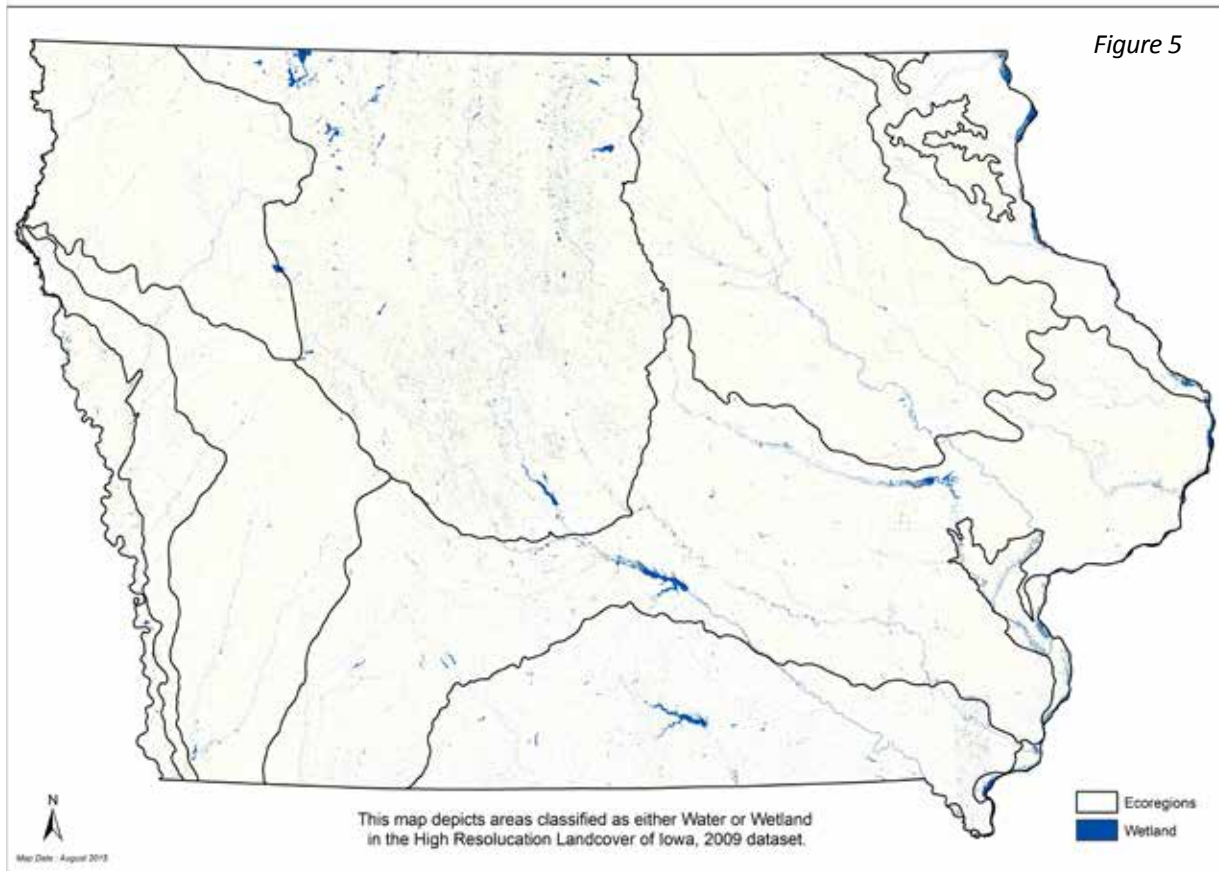
Current Conditions

The 2009 High Resolution Land Cover (Figure 5) indicates that wetlands occur on about 258,000 acres, or 1% of Iowa's landscape.



Since the mid-1980s, several wetland restoration programs have been implemented, most of them funded for the purposes of improving habitat for waterfowl and other migratory birds. It has been hoped that these added wetland acres, in combination with federal wetland protection gained through the Clean Water Act and the Swampbuster provision of the Farm Bill, would result in a no-net-loss of wetlands. Continued wetland loss

High Resolution Landcover of Iowa, 2009 - Wetland Classes



requires wetland restoration efforts in order to meet a no-net-loss goal. Evaluations of wetland trends in the Prairie Pothole Region (PPR) of Iowa illustrate this. Since 1970, Iowa partners have increased the area of PPR wetlands by about 125,000 acres (about 2500 acres per year). However, an analysis by Dahl (2014) found that between 1997-2009, Iowa's Prairie Pothole Region lost 14% of its remaining wetland basins, nearly all of which were temporary wetlands.

Importance of Wetlands to Iowa Wildlife

Due to its position in the continent and its historically lush, productive ecosystems, Iowa is a place of international importance for North America's migratory birds. The PPR is an area of global importance as nesting habitat for migratory birds. This portion of Iowa encompasses approximately 7.7 million acres and 21 percent of the state. The combination of tallgrass prairies and wetlands created some of the richest, most productive soils in North America. This is the wettest portion of the PPR, receiving 30 to 35 inches of precipitation annually.

By 1980, more than 95 percent of the prairie wetlands in Iowa's portion of the PPR had been drained, along with more than 99 percent of the native tallgrass prairie grasslands associated with them. The few remaining wetlands contain some of the richest, most diverse plant and animal communities in the entire PPR. They continue to provide critical habitat for many migratory birds including ducks, geese, shorebirds, and numerous grassland birds. The densities of waterfowl using these wetlands during the breeding season equal or exceed densities in other parts of the PPR. The critical importance of these southern PPR wetlands to wetland-dependent species like scaup during their spring migrations is just beginning to be appreciated.

Wetland Plans

The Iowa Association of Naturalists developed a useful overview of Iowa Wetlands as part of their “Iowa’s Communities Series.” To download this booklet, visit their natural resource publications page at: http://www.iowanaturalists.org/resource_booklets.htm

Iowa Wetland Conservation Plans and Priorities

Wetland Action Plan for Iowa

The first comprehensive state wetland plan was led by the Iowa Department of Agriculture and Land Stewardship and was completed in 1998. It is this plan, and its successor which was led by the Iowa DNR’s Geological and Water Survey Bureau and completed in 2010 that establishes the multiple societal benefits and objectives for wetland conservation in Iowa. These plans set the goals and objectives for working across government programs and in partnership with private interests, landowners and concerned citizens.

Wetland Program Plan

In 2005, the Iowa Department of Natural Resources Water Quality Monitoring and Assessment Section began its wetland monitoring program in the prairie pothole wetlands located in north-central Iowa, through grant funds provided by the U.S. Environmental Protection Agency. Since this initial project, a statewide monitoring program has been developed to assess wetlands types throughout Iowa. The results from this monitoring will enable the Iowa DNR to determine the ecological condition of Iowa’s wetlands. The Wetland Program is engaged in implementing its Plan for 2016-2020. The Wetland Program Plan is focused on the following core elements of the wetlands program: monitoring and assessment, voluntary restoration and protection, wetlands regulatory program, water quality standards, and education.

Both the Wetland Action Plan for Iowa and the DNR’s Wetland Program Plan can be accessed at the following webpage: <http://www.iowadnr.gov/Environmental-Protection/Water-Quality/Water-Monitoring/Wetlands>

Prairie Pothole Joint Venture - Iowa State Tactical Plan

As a supplement to the 2017 Prairie Pothole Joint Venture Implementation Plan, Iowa developed a 5-year tactical plan (Johnson 2017). This plan identifies six goals including restoration and protection of 40,500 acres of wetland and grassland with public access for hunting and non-consumptive wildlife recreation.

The Tactical Plan can be accessed at the following webpage: <http://ppjv.org/resources/implementation-plan/2017-implementation-plan>

Iowa Wildlife Action Plan

The Iowa Wildlife Action Plan (IWAP) is a ten-year, comprehensive conservation strategy for wildlife in all habitat types, including wetlands. The IWAP identifies several rare and sensitive ecological communities as land protection and management priorities, including two wetland community types: Fens and Prairie Potholes. The IWAP also identifies rare and declining fish and wildlife species that are in need of some type of conservation effort. These are identified as Species of Greatest Conservation need.

In addition to providing habitat for many common wildlife species, wetlands also provide habitat for a large number of species in need of conservation. Specifically, wetlands provide habitat to nearly 100 SGCN:

8 species of amphibians (e.g., frogs, toads, salamanders)	13 species of reptiles (e.g., turtles and snakes)
47 species of birds (e.g., ducks, herons, rails, sandpipers, terns)	13 species of butterflies (e.g., fritillaries, checkerspot, skippers)
At least 1 species of crayfish	8 species of dragonflies and damselflies (e.g., spreadwings, bluets, darners)
2 species of fish (including the endangered Topeka Shiner)	6 species of mammals (e.g., shrews and weasels)

The IWAP can be accessed at the following webpage:

<http://www.iowadnr.gov/Conservation/lowas-Wildlife/Iowa-Wildlife-Action-Plan>

Wetland Conservation Priorities

Wetland priority projects are those that demonstrate multiple benefits. Specific wetland attributes that produce favorable results include: presence/restoration of an adequate upland buffer; moderate (not extreme) surface water to watershed ratios; inclusion of water control structures that facilitate management favoring emergent and other rooted aquatic vegetation; and fish exclusion structures that prevent entry of carp and other undesirable fish species. Further, building wetland complexes either adjacent to or within the watershed of existing lakes and large marshes and as part of larger river corridor projects improves the recreational capacity of these investments as well as the ecological functions of the wetland habitats.

Iowa's highest wetland priority remains restoration of palustrine-emergent wetlands in the PPR. With emphasis on 100 focal landscapes where historic wetland densities were highest, chances of successful restoration are greatest, and production of row crops has been the most challenging. Priority is also given to floodplain areas most affected by both damaging (often where farming is facilitated by agricultural levees) and chronic flooding (such as along the Cedar and Wapsipinicon Rivers where relatively few structural controls have been installed and a large number of near-stream forested and palustrine wetlands still exist). Corridor projects along the interior rivers (e.g., Iowa, Skunk, Chariton, Raccoon, Des Moines, Little Sioux) where several significant and successful projects have been completed (e.g., Chichaqua Bottoms Greenbelt, Iowa River Corridor, Sedan Bottoms) continue to be the most popular wetland conservation efforts. (Appendix B)

Wetland-Based Recreation

Wetlands provide hunters, bird watchers and other nature enthusiasts with much appreciated rich and diverse natural environments to explore. Wetlands also contribute to the growing interest in citizen science, which is a form of recreation with the added benefit of contributing to scientific knowledge. For example, every year since 1991, at wetlands across the state, dedicated volunteers have been listening and collecting data on what frogs and toads are singing. These volunteers are a part of the Iowa Department of Natural Resources' Frog and Toad Call Survey. This survey is coordinated by the DNR's Wildlife Diversity program and our survey is one of the longest running in the country. In its long history, over 13,000 call surveys have been done on more than 1200 wetland sites in 82 of Iowa's 99 counties. Amphibians are currently in global decline and face many environmental stressors.

Information about the Iowa Frog and Toad Call Survey can be accessed at:

<http://www.iowadnr.gov/Conservation/lowas-Wildlife/Volunteer-Wildlife-Monitoring>

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STATUS OF LAKES AND RIVERS IN IOWA

Swimmable, fishable, drinkable water is what Iowans want. Efforts have been made at federal, state, county and city levels over the years to improve the quality of our waters, not just Iowa's waters but also those that our systems feed into, most prominently the Gulf of Mexico. What happens in Iowa affects other wildlife populations and other commercial and recreational users downstream. The 2018 Legislative session passed Senate File 512 and Governor Kim Reynolds signed into law a bill that puts \$282 million to work for water quality spread over multiple years. This bill, with funding funneling through the Iowa Department of Agriculture, will be used to help landowners place more wetlands, buffers, terraces and grassed waterways on the landscape and it creates a revolving loan fund for water quality initiatives for cities and utilities. All of this will add to the efforts already underway to protect lakes, rivers and streams.

Historic Conditions

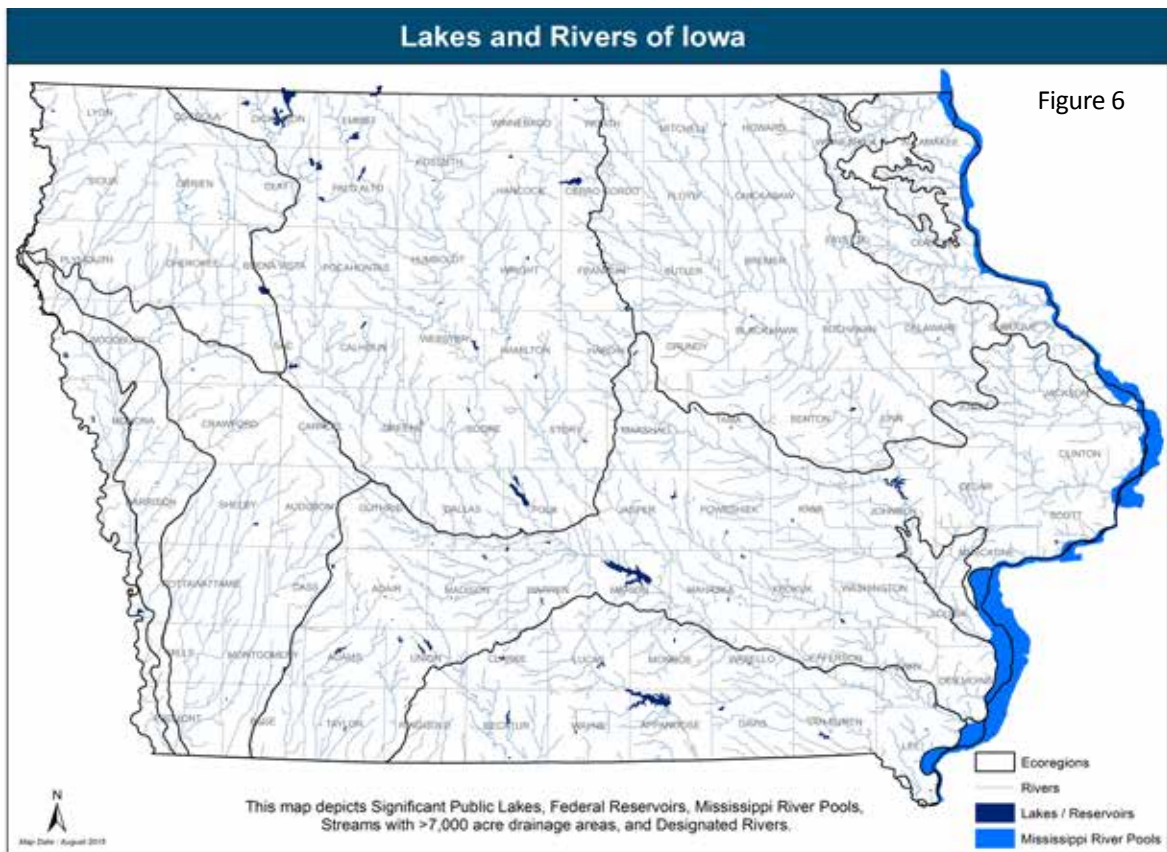
The State of Iowa drains into either one of two of the United States longest rivers, the Missouri and Mississippi which also frame the eastern and western borders of our state. These bodies of water as well as interior rivers streams and natural lakes served as navigational routes, corridors, meeting locations and were a life source for animals, tribal nations and pioneer settlers. Upon settlement Iowa listed 14 meandered sovereign rivers and 70 sovereign lakes, meaning those rivers which, at the time of the original federal government surveys, were surveyed as navigable and important water bodies and were transferred to the states upon their admission to the union to be transferred or retained by the public in accordance with the laws of the respective states upon their admission to the union.

Over time as more people settled, communities established along the banks and shores and transportation and commerce expanded. Rivers were used to transport timber, coal and grains, to power industry, provide drinking water and dispose of refuse. Eventually as land use changed, streams were straightened, shallow water lakes were drained to help improve and grow agricultural practices, speed transportation, and assist industry. These changes, although incremental at the time, started some of the largest water quality issues in Iowa today.

Current Conditions

There are 19,176 miles of interior rivers and streams in Iowa and 199 natural and created lakes (Figure 6). Alterations made to the resources overtime have changed in-stream flow, habitats and has led to increased sediment loads and decreased water quality in many of our waterbodies. This greatly affects the plant and animal communities that live within these resources as well as how Iowans live, work and play.

In 1972 congress expanded previous federal law, added amendments and passed the Clean Water Act (CWA). CWA was established for the purposes of regulating the discharge of pollutants into the waters of the US and regulating quality standards for surface waters. States are required to analyze their rivers, streams and lakes and submit a list of waters for which effluent limits will not be sufficient to meet all state water quality standards. Failure to meet water quality standards might be due to an individual pollutant, multiple pollutants, "pollution," or unknown cause of impairment. It includes waters impaired by point sources (single source - smoke stack, pipe, ditch, tunnel, or conduit) or non-point source (multiple diffuse sources). As of 2016 Iowa submitted the list of 608



waterbodies with a total of 768 impairments. The Department of Natural Resources is also watching an additional 476 waterbodies with 531 potential impairments that need further investigation.

Iowans value their water resources. Multiple state and federal agencies (Natural Resources, Department of Agriculture, Natural Resource Conservation Service), local governments (county conservation boards, city councils and park & recreation) and non-governmental organizations have worked tirelessly on public lands and with private landowners to improve the quality of rivers, streams and lakes. In 2006, the Iowa Legislature passed funding for the Lake Restoration Program. This program uses a science-based approach to achieve lake water quality improvements. In 2015, a large group representing federal, state, county and non-governmental organizations came together to draft a plan for aligning river restoration programs in order to develop goals and measurable improvements for river restoration efforts. Since 2006, \$100 million has been allocated for lake restoration efforts with \$88 million spent to date and the Iowa Stream Mitigation Method and River Restoration Toolbox have been created. With these improvements and improvements through other state and federal government programs (319 Watershed Improvement, Conservation Reserve Program, Wetland Reserve Program), although slowly, the pendulum should start to swing to better quality water, drinkable, fishable, play which improves diversity of species and quality of life for Iowans.

Importance to Wildlife

Engineering along the border rivers with the creation of locks and dams and straightened systems changed the plant and animal communities that lived there. Our rivers haven't recovered from the over harvest of species like mussels in the Mississippi River, used to make pearl buttons in the late 1800s and early 1900s. Fish communities changed dwindling in some locations to a fraction of their former abundance.

In the interior rivers, because Iowa has productive and therefore intensively cultivated soils, the rivers which run through and drain these areas are subjected to large and sometimes sudden fluctuations. Draining heavily cultivated lands also results in silt loads, leading to sedimentation. This has changed the fish community assemblage, especially in lower, more turbid reaches of streams where the remaining species tend to be tolerant of lower water quality.

Additionally, many low-head dams were constructed across the state, usually for milling or water supply uses. By 1870, more than 1000 low-head dams dotted the state's interior rivers, restricting seasonal movement of fish species, as well as mussel species dependent upon their fish-hosts for dispersal.

With the implementation of the Lake Restoration Program and with tools such as the Stream Mitigation Model and the River Restoration Toolbox and other federal and state programs, habitat improvements are key to helping maintain populations and hopefully grow reduced populations. For example dam restoration efforts on some interior streams have allowed for the return of seasonal fish flow and streambank restoration efforts have improved habitats for amphibians and the return of native trout species.

Described above are impacts on wildlife that have come from years of alterations to habitats. Today we are also fighting an insurgence of aquatic invasive species, a new threat that can have just as detrimental effects, albeit a lot faster, than what's been described. Aquatic invasive species include both plants and animals. They are species that have been introduced and have adapted to living in the new environments sometimes to the detriment that they invade and eliminate the native species to their benefit. One of the best ways to control invasive is to stop the spread by recreational users cleaning and drying their recreational equipment prior to exiting a body of water and inspecting it again prior to using in a new body of water. The Department of Natural Resources has an Aquatic Nuisance Species Program that helps track, monitor and control the spread across Iowa.

Lake and Rivers Plans

Lake Restoration Program

Since 2006, annual plans and reports have been developed for this program. Initially 127 of Iowa's major public lakes were ranked for lake restoration consideration based upon a number of socio-economic, water quality, and watershed factors. Commitment of local communities, partners and landowners also plays a significant role moving forward with a restoration effort. Annual plans for this program can be accessed at the following webpage: <http://www.iowadnr.gov/Environmental-Protection/Water-Quality/Lake-Restoration>

River Restoration – Aligning DNR River Programs

In 2015 a group representing federal, state, county and non-government organizations got together to determine what current river programs did, how they interacted with other programs and most importantly what were the gaps and opportunities to better align what all of the programs did ultimately improving communication and offerings. Iowa’s Stream Mitigation Model and the River Restoration Toolbox were two large efforts that came out of this new alignment. This plan will be under review fall of 2018 to determine next steps and to define additional opportunities. You can find the plan and information on the two tools at the following webpage: <http://www.iowadnr.gov/Environmental-Protection/Water-Quality/River-Restoration>

The Iowa Association of Naturalists developed a useful overview of Iowa Waterways as part of their “Iowa’s Communities Series.” To download this booklet, visit their natural resource publications page at: http://www.iowanaturalists.org/resource_booklets.htm

Iowa Wildlife Action Plan

The Iowa Wildlife Action Plan (IWAP) is a ten-year, comprehensive conservation strategy for wildlife in all habitat types, including lakes, rivers, and streams. The IWAP identifies rare and declining fish and wildlife species that are in need of some type of conservation effort. These are identified as Species of Greatest Conservation need. In addition to providing habitat for many common wildlife species, lakes and rivers also provide habitat for a large number of species in need of conservation. Specifically, lakes and rivers provide habitat to nearly 200 SGCN:

6 species of amphibians (e.g., frogs, salamanders)	18 species of reptiles (e.g., turtles and snakes)
36 species of birds (e.g., ducks, herons, rails, sandpipers, pelicans)	5 species of butterflies (e.g., harvester, hairstreaks, scallopwing)
5 species of crayfish	20 species of dragonflies and damselflies (e.g., spreadwings, bluets, darners)
66 species of fish (e.g., sturgeon, paddlefish, eel, Topeka Shiner)	43 species of mussels (e.g., pocketbook, higgins’ eye, wartyback)

The IWAP can be accessed at the following webpage: <http://www.iowadnr.gov/Conservation/lowas-Wildlife/Iowa-Wildlife-Action-Plan>

Lakes and Rivers Conservation Priorities

Lake, river and stream priorities fall under many plans throughout the agency. The lake restoration plan works with the 127 waterbodies originally evaluated and initiates action accordingly after feasibility studies, watershed efforts and community partnerships have been established and can be sustained after the restoration has been concluded. Specifically, project goals are to:

- Ensure a cost effective, positive return on investment of the citizens of Iowa
- Ensure local community commitment to lake and watershed protection
- Ensure significant improvement in water clarity, safety, and quality of Iowa lakes
- Provide for a sustainable, healthy, functioning lake system
- Result in the removal of the lake from the impaired waters list

An annual plan and report is available to download on the website and includes information on the lakes in the assessment phase as well as those in restoration phase.

Direction and priorities on rivers and streams come from the 303(d) impaired waters list, dam mitigation projects, the wildlife action plan, nutrient reduction plan, etc. The Wildlife Action Plan’s general strategies for prioritization of habitat protection tend to focus on enlarging the size of natural or open spaces, reducing fragmentation, and increasing connectivity between larger natural areas. Protection of natural areas provides not only habitat for wildlife and recreational opportunities for people, but also offers opportunities to maintain and restore ecosystem

functions such as water filtration, flood abatement, carbon storage, etc. Intact ecosystems tend to provide more benefits and are more resilient to outside stressors. Therefore land protection efforts in Iowa should continue to focus on the following principles:

- Development of functional landscapes – adding parcels to existing protected areas to create core areas of fish and wildlife habitat and outdoor recreational opportunities
- Decreasing fragmentation – using land protection to decrease the number of edges between habitat and non-habitat areas
- Increasing connectivity – protecting and/or managing for wildlife use areas between existing core natural areas to facilitate movement between these areas
- Protection of native sod – protecting and/or managing for other areas which have not been previously plowed

River and stream work is challenging due to the multiple issues and agency offerings but even simple changes and improvements are highly beneficial to wildlife and the recreational users.

Lake, River and Stream Based Recreation

Water is a draw for people. In a recent survey completed by Iowa State University it was found that six out of 10 Iowans visit Iowa lakes multiple times a year and spend \$1.2 billion annually in their pursuit of recreation. Iowans, when asked in the most recent recreation survey (Responsive Management, 2018) about their recreational activities, boating and fishing had some of the highest rates of current participation and fishing had one of the highest rates for interest. In locations where there are completed restoration efforts, lake, river or dam, you will see an upsurge of recreational use. This is good for local economies, and it is good for Iowans health and wellbeing.

On any given weekend it is not unusual to see boats dotting our lakes and rivers. Some are fishing, some are tubing and others are just people who want to get away and de-stress. There has also been a rise in kayaking and paddle boarding over the last 10 years and again, on a Saturday in the summer, you can see SUP yoga at Gray's Lake in Des Moines or on some of Iowa's state park lakes. Fishing tournaments on Iowa waters are also a big draw as our state boasts some of the best fishing in the Midwest. But we also have opportunities in our systems as indicated by a relatively new event, the fly-a-thon which combines a trail run with fly fishing.

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STATUS OF GRASSLANDS IN IOWA

Upon settlement Iowa was described as being 65% (23,300,000 acres) grassland. Today there are about 7,640,000 acres of grassland remaining, including roadsides, pasture, lawns, as well as natural areas and prairies. Most Iowa grassland is "tame" grass such as pasture or road ditches; native prairies now only occur on about 47,000 acres.

Historic Conditions

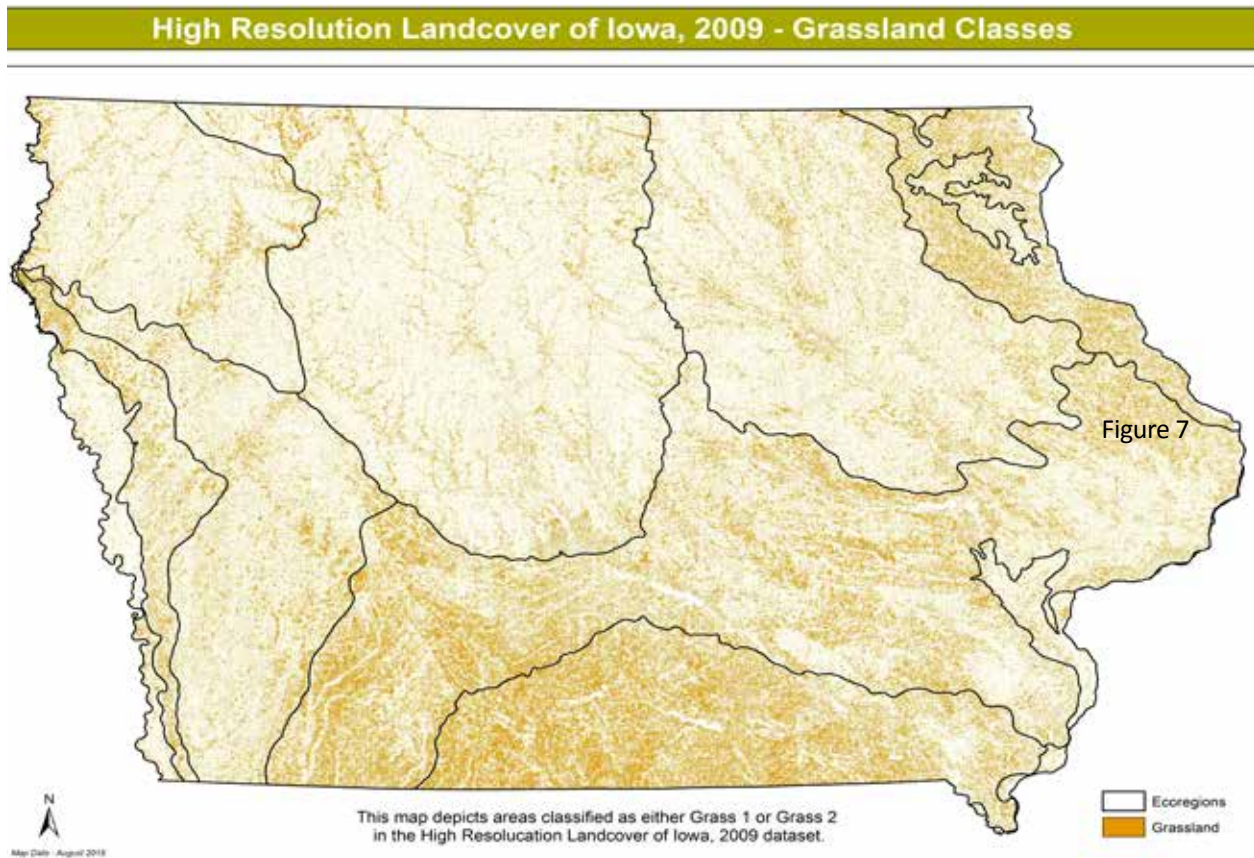
Prairie was historically the dominant plant community in Iowa. It was sometimes described as a sea of grass, but it was much more diverse and varied than that. Prairie plants are adapted to subtle changes in moisture and soils that occur along a gradient from lowlands to drier prairie ridges. Drought, fire and grazing combined to make

Iowa's prairie-wetland-forest communities dynamic ecosystems. Elk and bison grazed, sparrows, meadowlarks, and prairie chickens nested, and butterflies and bees sipped nectar from the flowers in the ever-shifting prairie landscape of Iowa.

The effect of settlement on our extensive prairies and prairie-wetland complexes was devastating. Starting in the 1850s, Iowa lost nearly 2 percent of its 25 million acres of native prairie a year, 3 million acres a decade, until less than 30,000 acres (0.1%) remained after 80 years.

Current Conditions

Grasslands of all types, both tame and natural, together make up about 21% of Iowa's acreage. Grassland is distributed unevenly across the state, with the greatest density occurring in the south-central portion of the state and important areas of remnant (unplowed) prairie persisting in the Loess Hills landform in far western Iowa. The 2009 High Resolution Land Cover indicates that grasslands occur on about 7,639,000 acres, or 21% of Iowa's landscape (Figure 7).



Importance to Wildlife

Grasslands provide habitat to a variety of wildlife. They are home to game species like pheasants, rabbits, and doves, as well as a diverse suite of songbirds, raptors, small mammals, turtles, and pollinators like bees, butterflies, and moths.

Due to habitat loss and degradation, grassland-dependent wildlife are in need of continued conservation efforts. Grassland birds are facing steep, long-term declines, more so than any other group of birds. For example, according to the U.S. Breeding Bird Survey the population trends since 1970 are -60% for Bobolink, -77% for Eastern Meadowlark, and -68% for Grasshopper Sparrow. Likewise, many pollinator species have been experiencing declines. This is especially apparent in the prairie-associated butterflies such as the Regal Fritillary, Monarch, Dakota Skipper, Poweshiek Skipperling, Ottoe Skipper, Arogos Skipper, as well as other prairie butterflies, moths, and bees.

Grassland Plans

Tallgrass Prairie Conservation Plan

In 2000, Congress authorized the use of Land and Water Conservation Funds to restore, and in some cases acquire, tracts of tallgrass prairie within the Northern Tallgrass Prairie Habitat Preservation Area (HPA). The purpose of the Tallgrass Prairie Conservation Plan is to facilitate attainment of the HPA goals in Iowa (Iowa Tallgrass Prairie Working Group, 2013).

Iowa Wildlife Action Plan

The Iowa Wildlife Action Plan (IWAP) is a ten-year, comprehensive conservation strategy for wildlife in all habitat types, including grasslands. The IWAP identifies several rare and sensitive ecological communities as land protection and management priorities, including two grassland community types: Sand Prairie and prairie remnants. The IWAP also identifies rare and declining fish and wildlife species that are in need of some type of conservation effort. These are identified as Species of Greatest Conservation need.

In addition to providing habitat for many common wildlife species, grasslands also provide habitat for a large number of species in need of conservation. Specifically, grasslands provide habitat to over 90 SGCN:

8 species of amphibians (e.g., frogs and toads)	21 species of reptiles (e.g., turtles, lizards, and snakes)
34 species of birds (e.g., songbirds, owls, hawks, quail)	17 species of butterflies (e.g., blues, monarchs, fritillaries, skippers)
1 species of crayfish (Prairie Crayfish)	11 species of mammals (e.g., shrews, jackrabbit, weasels)

The IWAP can be accessed at the following webpage: <http://www.iowadnr.gov/Conservation/Iowas-Wildlife/Iowa-Wildlife-Action-Plan>. The Iowa Association of Naturalists developed a useful overview of Iowa Prairies as part of their “Iowa’s Communities Series.” To download this booklet, visit their natural resource publications page at: http://www.iowanaturalists.org/resource_booklets.htm

Grassland Conservation Priorities

Grassland conservation efforts in Iowa should continue to focus on the following priorities from the above plans:

- Protecting rare and sensitive communities such as sand prairie, remnant prairie and native sod
- Restoring tracts of prairie within the Habitat Protection Areas identified in the Tallgrass Prairie Conservation Plan
- Restoring grasslands in places that expand existing grasslands or increase connectivity between existing core natural areas

Efforts to increase outdoor recreational opportunities that aren’t reliant on natural areas (e.g., development of playgrounds, basketball or tennis courts, softball or soccer fields) can also contribute to healthy ecosystem functions and aesthetics by incorporating native prairie and/or wetland vegetation. For example, a rain garden or pollinator-friendly prairie planting might help deter foot traffic in an area sensitive to erosion, while also enhancing the educational and environmental benefits of the area. The

Environmental Protection Agency has a helpful guide to Green Infrastructure in Parks (EPA 841-R-16-112) available for download at this site: https://www.epa.gov/sites/production/files/2017-05/documents/gi_parksplaybook_2017-05-01_508.pdf

Grassland Based Recreation

There are numerous opportunities for outdoor recreation in grasslands. Grasslands are great places to go birding, to observe and photograph wildlife, to use trails for walking, jogging, biking, camping, cross country skiing, and snowmobiling, or to hunt for pheasant, dove, or rabbit.

One unique outdoor experience in Iowa prairie is watching Greater Prairie-chickens from the viewing platform of the Kellerton Wildlife Management Area in Ringgold County each spring. People from across the region wake up early and head to the platform in March and April to view the Prairie-chickens perform their mating rituals, called “booming,” on the nearby leks (mating grounds).

Another outdoor grassland experience Iowa has to offer is a visit to the Neal Smith National Wildlife Refuge to view the thousands of acres of restored prairie, get a glimpse of a bison or elk, or perhaps participate in an event such as tagging monarch butterflies.

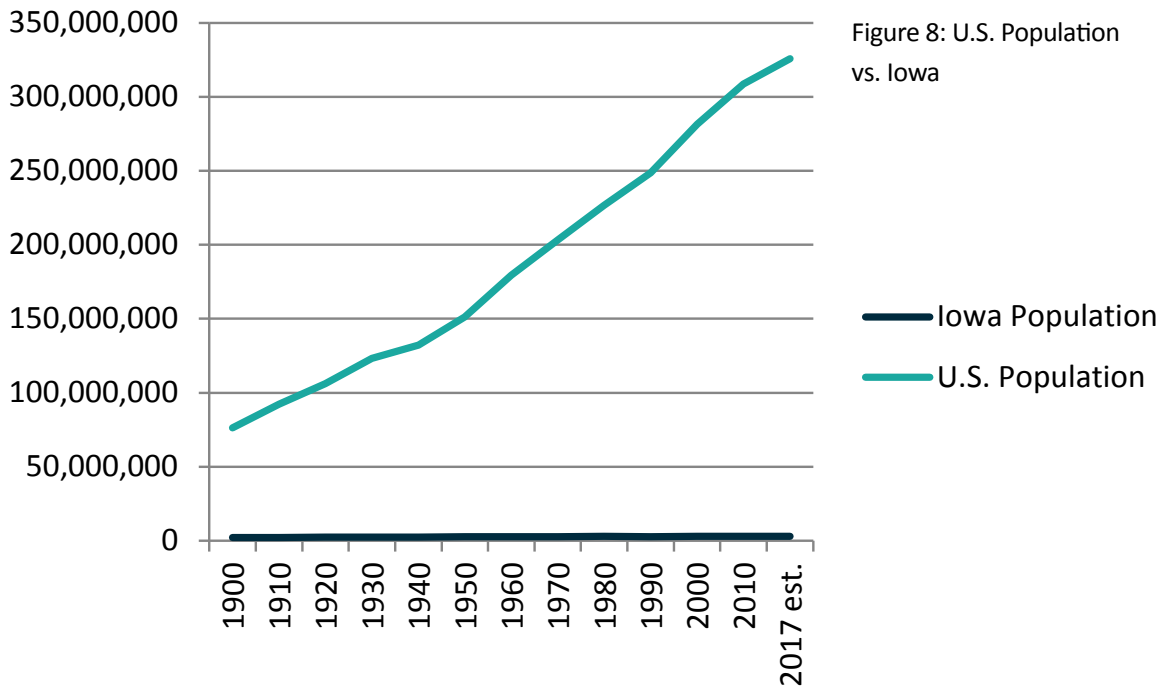
References

Iowa Department of Natural Resources. 2015. Iowa’s Wildlife Action Plan: Securing a future for fish and wildlife. K. Reeder and J. Clymer, eds. Iowa Department of Natural Resources, Des Moines, Iowa, USA.
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THE PEOPLE

Iowa’s population has remained relatively stable for a long time while the United States population has grown significantly (Figure 8). According to the U.S. Census Bureau, Iowa’s estimated population in 2017 was 3,145,711 an increase of 99,356 since the last plan. Iowa has a land area of 56,286 square miles with 54.5 people per square mile. Residents of Iowa are primarily Caucasian, however there are increasing populations of Hispanic, African American, Asian and other nationalities.

The population of the United States is getting older and living longer. Iowa also reflects this trend. Comparing 2010 data to estimated 2016 (Table 2), there is a slight decrease in the percent of Iowans 44 years and younger and a slight increase in the percent of older Iowans. Obesity, nutrition & physical activity, transportation, cancer, falls and heart disease are among some of the issues identified in the Iowa Department of Public Health’s Healthy Iowans 2017-2021 Iowa’s Health Improvement plan and are all potential contributors Iowans decrease in outdoor participation. In the Iowa Residents’ Participation in and Opinions on Outdoor Recreation (Responsive Management, 2018), older residents indicated that one of the barriers to outdoor recreation participation is health related. According to the survey, health/age issues have a greater impact on birding and fishing in a pond than other activities.



There is an estimated 1,247,932 households in Iowa. Nearly one-third of those households have children 18 or younger in residence. 56% of households surveyed with children indicated they feel it is extremely important that children participate in outdoor recreation. Asked if their children participate often enough in outdoor recreation activities (conventional and other outdoor recreation such as organized sports), 71% agreed that their children are doing so while 21% disagreed. 40% of respondents said they currently sign their children up for nature-related activities and 70% said they’d do so in the future (Responsive Management, 2018).

Most of the United States considers Iowa a rural state with the predominant industry as agriculture. Iowa has 88,637 farms comprising 30,622,731 acres (U.S. Census Data 2012) with 47,949 listing their principle occupation as farmers (U.S. Census Data 2012). Data shows, however, that more than half the population, 64% in 2016, live in urban settings concentrated mostly within major metropolitan areas. There are slight differences in where someone lives (urban, suburban, small town or rural area) that lead to the choice of recreational activities they like to do. Iowans, on average stay with a single employer for 12 years, 3 times the national average and commute around 19 miles to work.

Iowa is; the #1 producer of eggs, corn and pork, home to 80 insurance company headquarters, with \$28,062 billion in contributions from advanced manufacturing, the largest industry sector.

Table 2: U.S. Census Data	IA 2000 Census	IA 2010 Census	IA 2016 Estimate
Population	2,926,324	3,046,355	3,106,589
Male Population	49%	50%	50%
Female Population	51%	51%	50%
19 and Under	28%	27%	26%
20 -44 Years Old	35%	32%	32%
45-59 Years Old	18%	21%	20%
60 and Older	19%	20%	22%
Median Age	37	38	38
Households with Individuals under 18 Years of Age	33%	31%	28%
Rural vs. Urban	39% / 61%	36% / 64%	No Estimate

*2000 and 2010 Data from the U.S.Census Bureau

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<https://www.iowadatatcenter.org/county-quick-facts>

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Top 5 Employment (2015)

1. Trade, Transportation and Utilities
2. Education and Health Services
3. Government
4. Manufacturing
5. Retail Trade

Top 5 Gross Domestic Product (2015)

1. Manufacturing
2. Government
3. Finance and Insurance
4. Real Estate, Rental, Leasing
5. Health Care and Social Assistance

Top 5 Commodity Exports (2016)

1. Corn, Except Seed Corn
2. Tractors
3. Swine Meat, Fresh or Chilled
4. Herbicide
5. Soybean Oilcake and Other Solid residue

THE OPPORTUNITY

Iowa has about 56,286 square miles (36,022,848 acres) bordered by the Mississippi River on the east, and the Missouri and Big Sioux Rivers on the west with 2.44% of the land open to public access (Figures 9, 10, 11, 12, 13, 14).

Figure 9

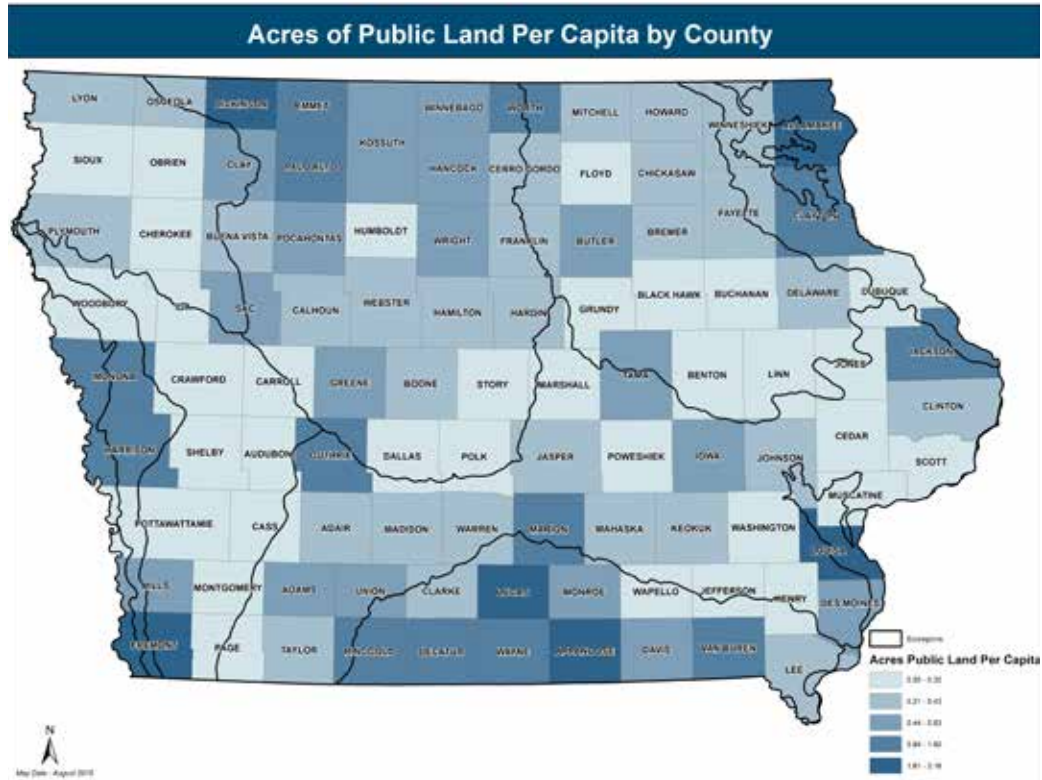


Figure 10

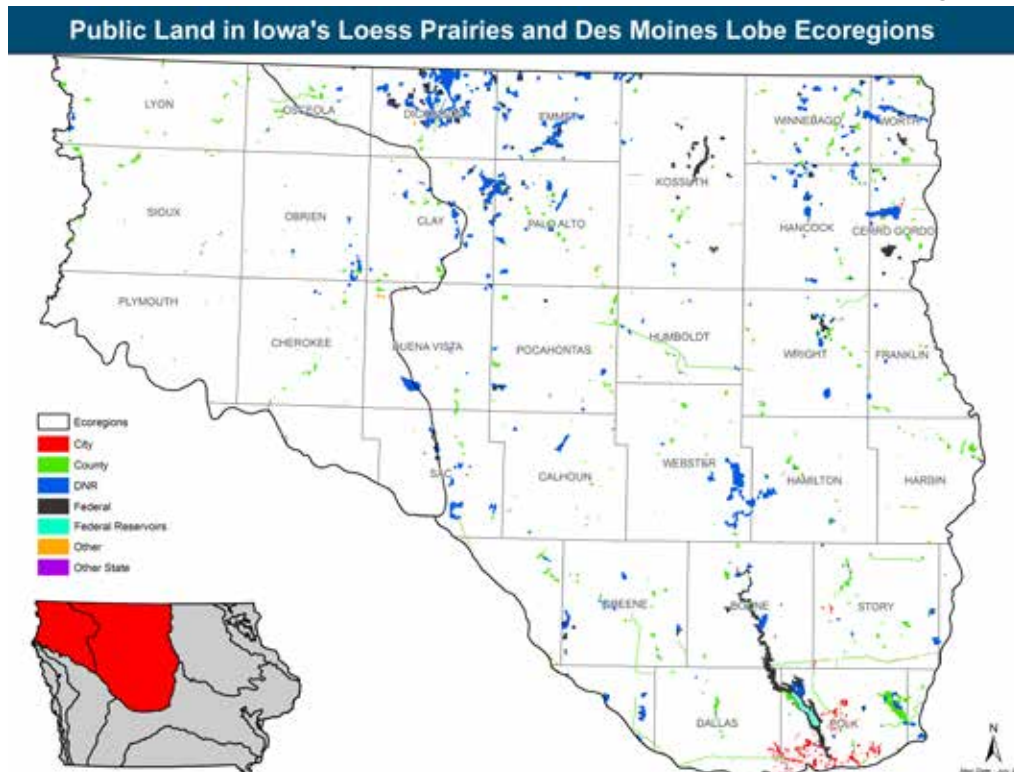


Figure 11

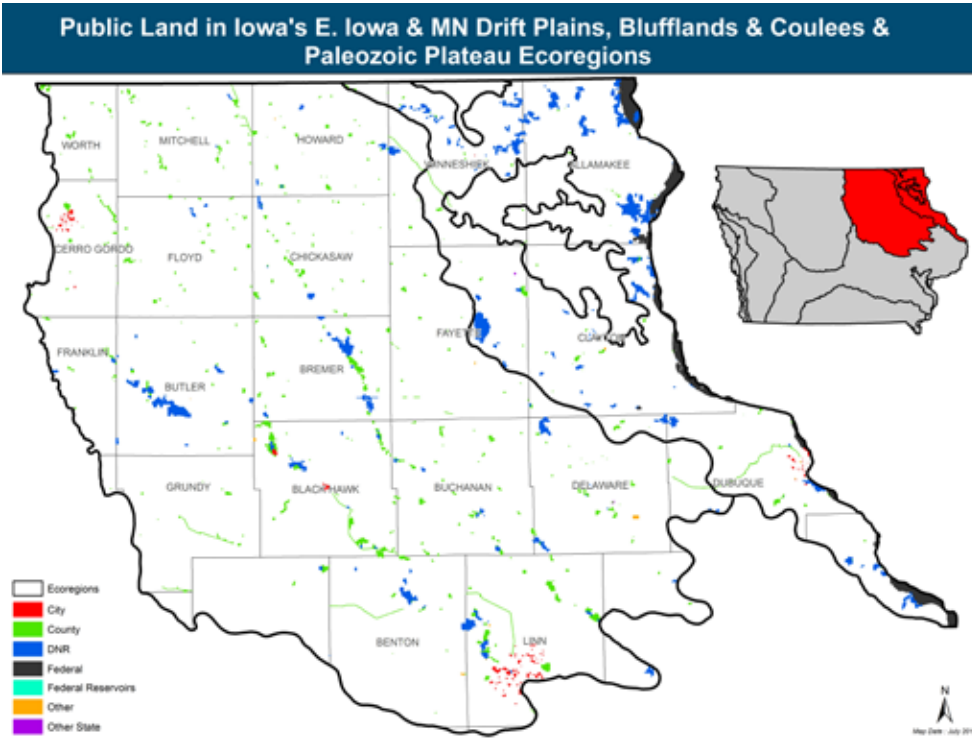


Figure 12

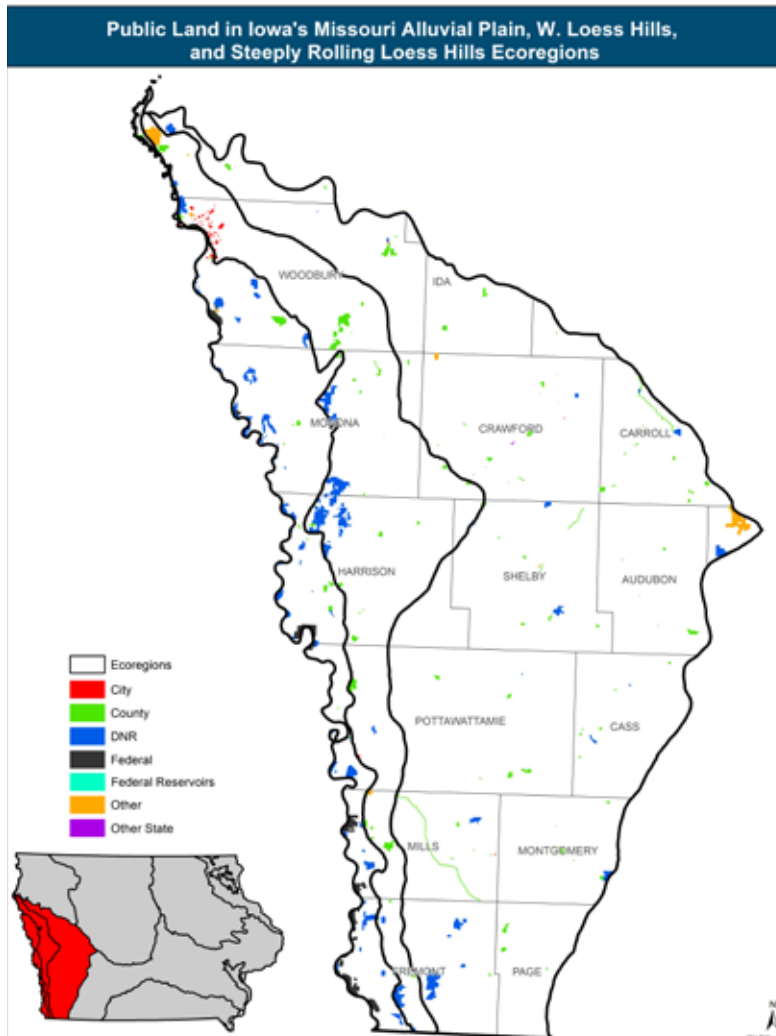


Figure 13

Public Land in Iowa's Rolling Loess Prairies, Loess Flats & Till Plains, and Upper Mississippi Alluvial Plain Ecoregions

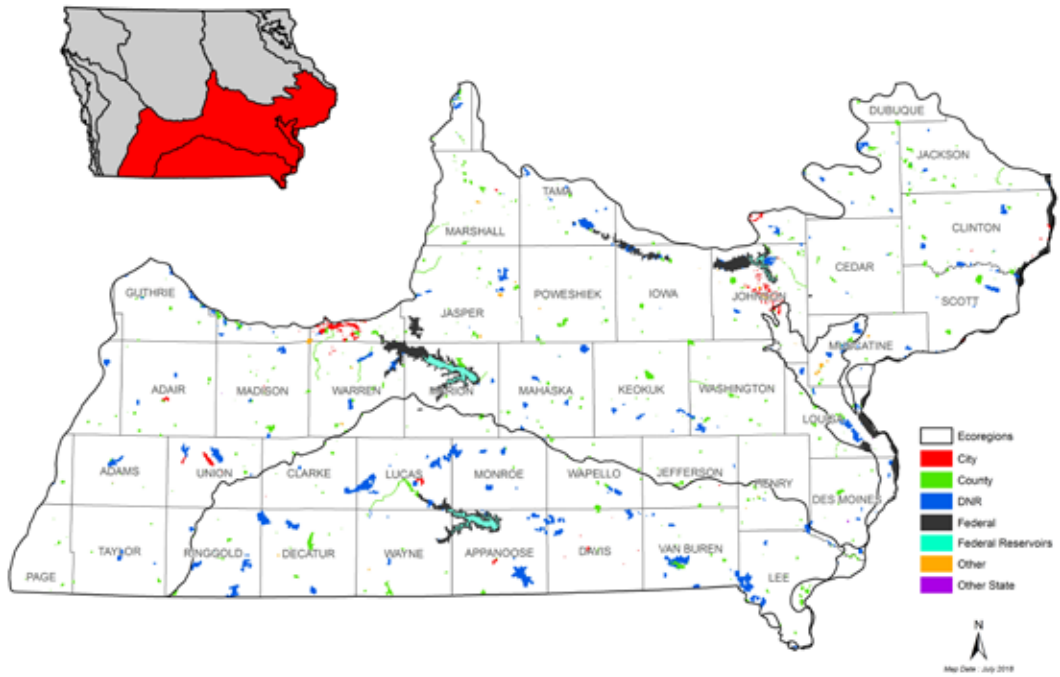
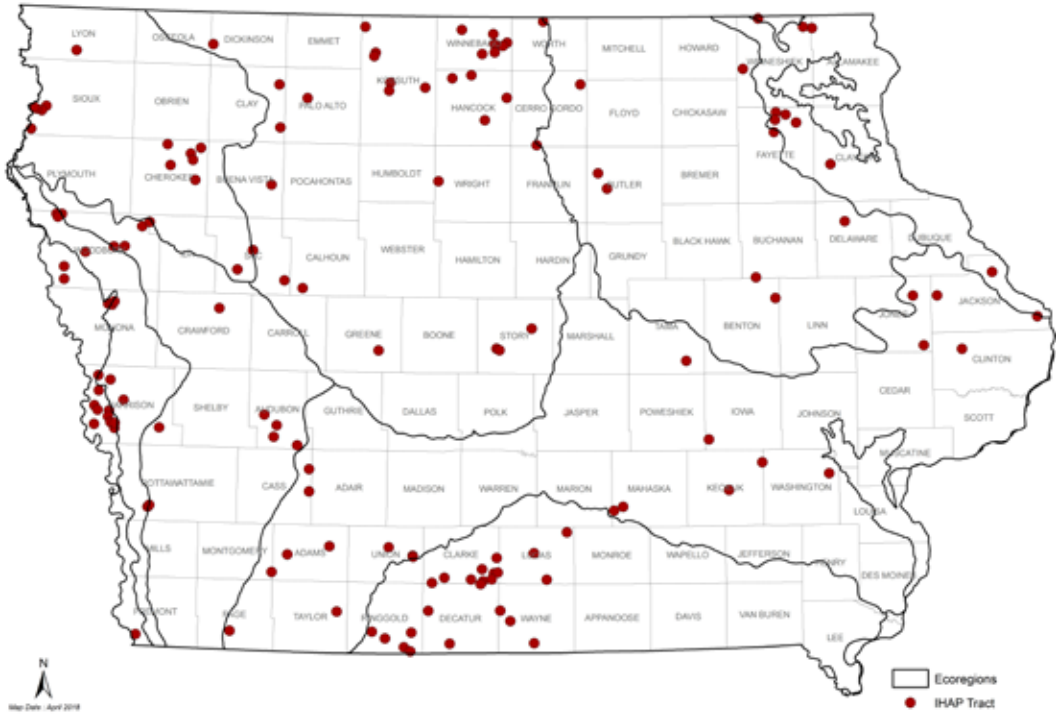


Figure 14

Iowa Habitat and Access Program Tracts



Iowa has a wide variety of outdoor recreation opportunities due to its wide range of natural resource offerings (Table 3) and it is unique in that public outdoor recreation is provided by:

- **City governments** - Park & Recreation Departments offer a wide variety of outdoor recreation opportunities through organized sports, swimming pools, city parks and playgrounds, nature areas, picnic and rental facilities.
- **County governments** - Iowa is the only state in the nation that offers a County Conservation Board (CCB) in all its' 99 counties. Operating at the local level, CCB lands offer similar opportunities to state and federal offerings including areas for lodging, camping, picnicking and family reunions but also areas for hunting and shooting sports. The CCB system also offers year-round outdoor educational programming, providing opportunities for local residents to grow, learn and connect with their resource.
- **State government** - Iowa Department of Natural Resources is responsible for outdoor recreation through state parks, preserves, forests, wildlife areas, and state lakes. There is a wide variety offerings in these areas from camping, rental facilities, hiking, fishing, hunting or shooting ranges.
- **Federal government** - U.S. Army Corps of Engineers and Department of the Interior (Fish & Wildlife Service and National Park Service) agencies comprise most of the federal government outdoor recreation opportunities. The most recognizable outdoor recreation offerings are found through the four flood control reservoirs (Saylorville Lake, Lake Red Rock, Coralville, Rathbun Lake) which also offer boating, camping, fishing, rental facilities and hunting opportunities. There are also hunting areas and refuge systems as well as the well known Mississippi and Missouri River areas.

According to the 2018 Iowa Residents' Participation in and Opinions on Outdoor Recreation, overall 91% of Iowans are satisfied with the experiences they were having and 73% felt the state's efforts to provide opportunities were good to excellent. The large majority of respondents also indicated that Iowa has the right amount of recreational opportunities available, and overall the quality has largely remained the same. The following tables (Table 4 & 5) show respondents ratings of the state's efforts and perceived quality trend for activities that had sufficient sample size.

Table 3: 2018 Land & Water Resources	
Interior River (Miles)	19,000 Miles
Trout Streams (Miles)	176 Miles
Border Rivers (Acres of Water)	203,000 Acres
Natural Glacial Lakes	16
Shallow Natural Glacial Lakes	27
Constructed Lakes	156
On-Stream Impoundments	52
Oxbow Lakes	32
Ponds on Public Lands	308
Ponds on Private Land	100,000
Surface Mines	130,000 Acres
State Parks	57,385 Acres
State Preserves	9,825 Acres
State Forests	45,246 Acres
State Wildlife Management Areas	418,675 Acres
City Parks	39,096 Acres
County Parks	193,624 Acres
Federal Lands	283,680 Acres
ATV Parks	909 Acres
Iowa Hunter Access Program	47,716 Acres



Table 4: Ratings of the State’s Efforts to Provide Opportunities for Each Activity

Activity	Excellent	Good	Fair	Poor	Don’t Know
ATVing	0	27	11	59	2
Baseball	58	39	0	0	3
Basketball	36	25	11	23	6
Bicycling: Other than Mountain Biking	27	48	18	2	5
Birding	24	45	2	3	26
Boating: Canoeing or Kayaking	10	55	29	6	0
Boating: Motorboating	32	42	23	0	3
Camping in a Tent	51	40	9	0	0
Camping in an RV	37	44	10	4	4
Driving for Pleasure	31	41	21	7	1
Family-oriented Outdoor Activities	34	34	13	8	12
Fishing from a Boat	48	32	14	2	4
Fishing from Shore	33	37	21	6	4
Fishing: Lake Fishing	47	45	9	0	0
Fishing: Pond Fishing	16	30	19	11	24
Fishing: Stream or River Fishing	19	49	14	14	4
Golf	43	35	10	4	8
Hiking	24	47	22	5	1
Horseback Riding	18	15	47	19	0
Hunting	34	39	16	6	6
Jogging or Running	46	33	18	4	0
Observing or Photographing Wildlife Near Home	24	22	27	8	19
Picnicking, BBQing, or Cooking Out	47	41	10	1	1
Shooting: Target Handgun Shooting	0	26	33	23	18
Shooting: Target Rifle Shooting	30	25	13	16	15
Soccer	40	20	16	0	24
Softball	56	27	4	4	8
Swimming in Natural Waters	15	23	49	10	3
Swimming in Public Outdoor Pools	30	59	3	5	3
Using Off-leash Dog Areas or Dog Parks	35	46	14	4	0
Using Trails for Physical Fitness	29	49	19	3	0
Walking	38	42	12	2	6

Table 5: Perceived Quality Trend of Each Activity

Activity	Improved	Remained the Same	Declined	Don't Know
ATVing	20	55	23	2
Baseball	33	59	2	6
Basketball	65	26	9	0
Bicycling: Other than Mountain Biking	78	19	0	2
Birding	55	24	3	17
Boating: Canoeing or Kayaking	10	69	20	0
Boating: Motorboating	18	72	6	3
Camping in a Tent	23	62	15	0
Camping in an RV	36	57	5	1
Driving for Pleasure	33	47	15	5
Family-oriented Outdoor Activities	44	37	3	16
Fishing from a Boat	19	53	15	13
Fishing from Shore	28	62	9	1
Fishing: Lake Fishing	41	42	10	7
Fishing: Pond Fishing	10	56	18	16
Fishing: Stream or River Fishing	22	50	28	0
Golf	22	50	28	0
Hiking	43	43	6	7
Horseback Riding	38	50	12	0
Hunting	20	38	36	6
Jogging or Running	49	47	4	1
Observing or Photographing Wildlife Near Home	12	61	27	0
Picnicing, BBQing, or Cooking Out	42	50	4	4
Shooting: Target Handgun Shooting	36	31	20	13
Shooting: Target Rifle Shooting	15	48	5	33
Soccer	61	32	0	7
Softball	36	47	8	8
Swimming in Natural Waters	17	58	7	18
Swimming in Public Outdoor Pools	54	34	9	3
Using Off-leash Dog Areas or Dog Parks	27	61	10	3
Using Trails for Physical Fitness	58	38	5	0
Walking	58	36	4	2

Outdoor Recreation Participation

The Outdoor Foundation's 2018 Outdoor Participation Report indicates that nationally 49% of the population participated in some form of outdoor recreation at least once in calendar year 2017. Over at least the last 12 years this percentage has fluctuated but very slightly with the high at only 50% in 2007. Motivations to recreate outdoors, found in Outdoor Foundation data and 2018 Iowa Residents' Participation in and Opinions on Outdoor Recreation (Responsive Management, 2018), are very similar (figure 15 from Iowa data) as are the reasons why individuals choose not to participate (figure 16 from Iowa data).

In 2018, a random sampling telephone (cell phone and landline) survey was conducted by Responsive Management on behalf of the Iowa Department of Natural Resources. The sample was designed to be a

Figure 15: Motivation for Recreating Outdoors

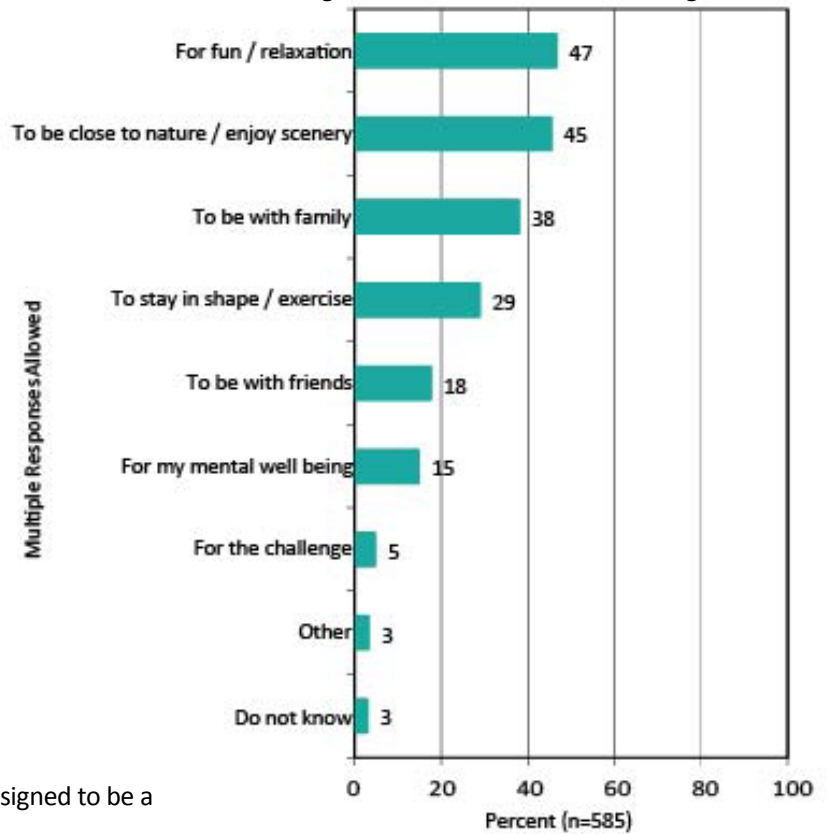
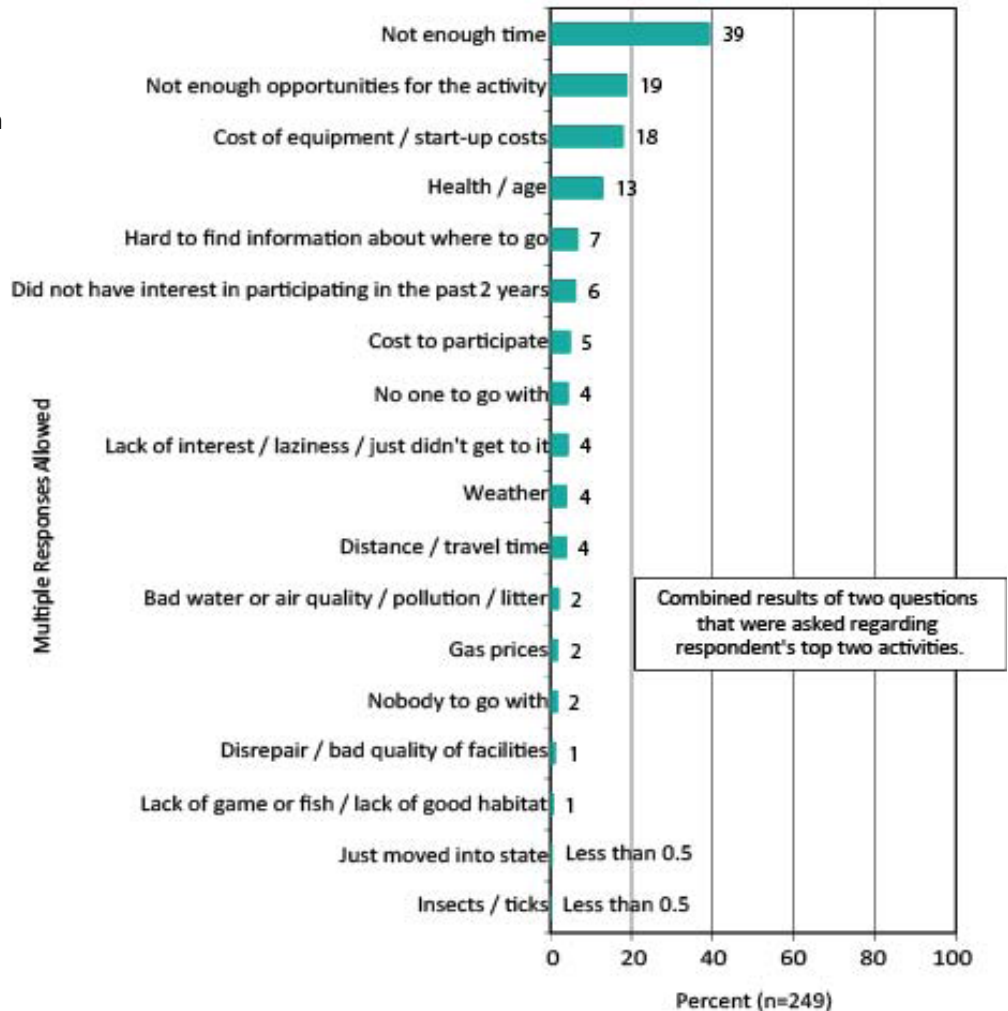


Figure 16: Lack of Participation in Outdoor Recreation Activities



representative of Iowa's residents within the eastern, central and western regions of the state as well as to be fully representative of the state as a whole (report in Appendix C). Based on this data, Iowa residents were asked about their current and future interests in participation on 71 different outdoor recreation activities. Figure 17 shows the percent of respondents who participated in the top 10 outdoor recreation activities within the last 2 years. The only activity that shows up within the national survey data's top 5 that is not represented in Iowa's top 10 is bicycling (road, mountain and BMX) although it shows up within the top 15. Figure 18 is a representative sample that shows the change in participation for over the last 3 Iowa resident surveys. Some activities see a

Figure 17: Top 10 Activities Iowa Residents Participated in the Last 2 Years

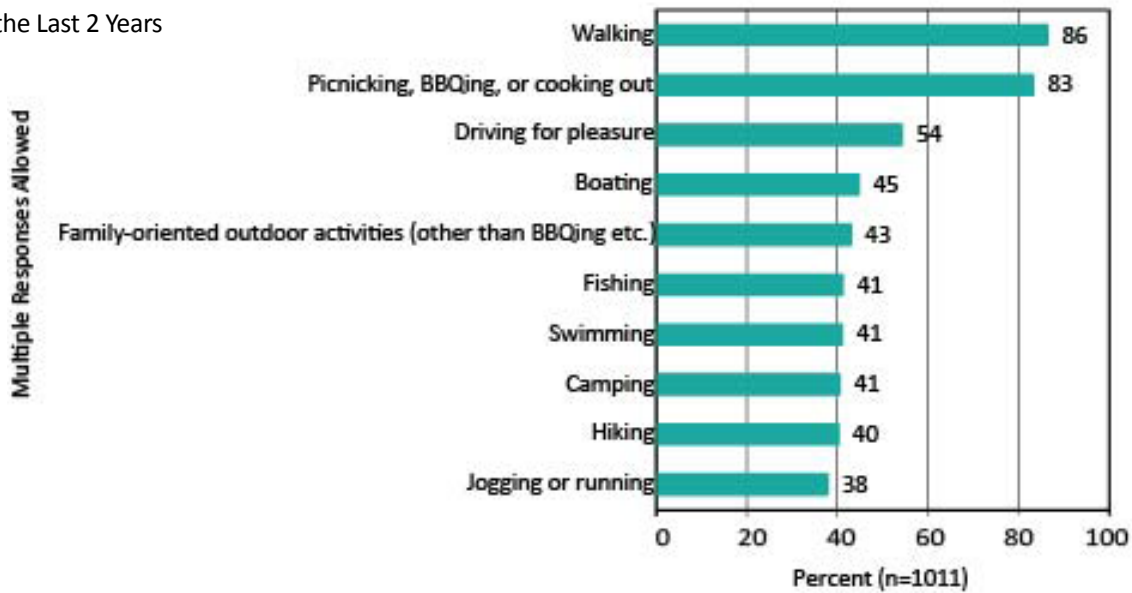
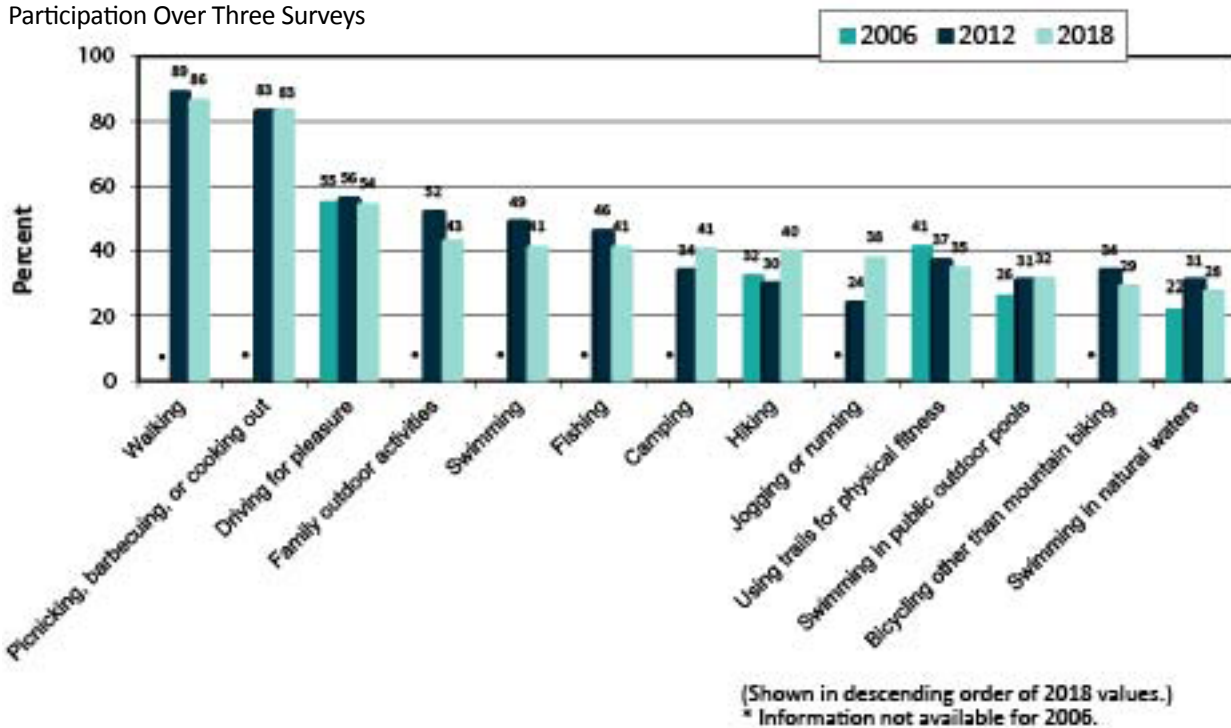


Figure 18: Comparison of Iowa's Participation Over Three Surveys



slight decrease or status quo but there are some notable increases in camping (specifically tent and RV), hiking and jogging and running and shooting sports. Participants were also asked about activities they currently aren't participating in but have interest in doing within the next 2 years (Figure 19). Again, Iowa data is very consistent with national data. In another 2018 report, The Physical Activity Council's Annual Study Tracking Sports, Fitness and Recreation Participation in the US, interest levels in outdoor recreation activities were looked at by age and included many of Iowa's top 10.

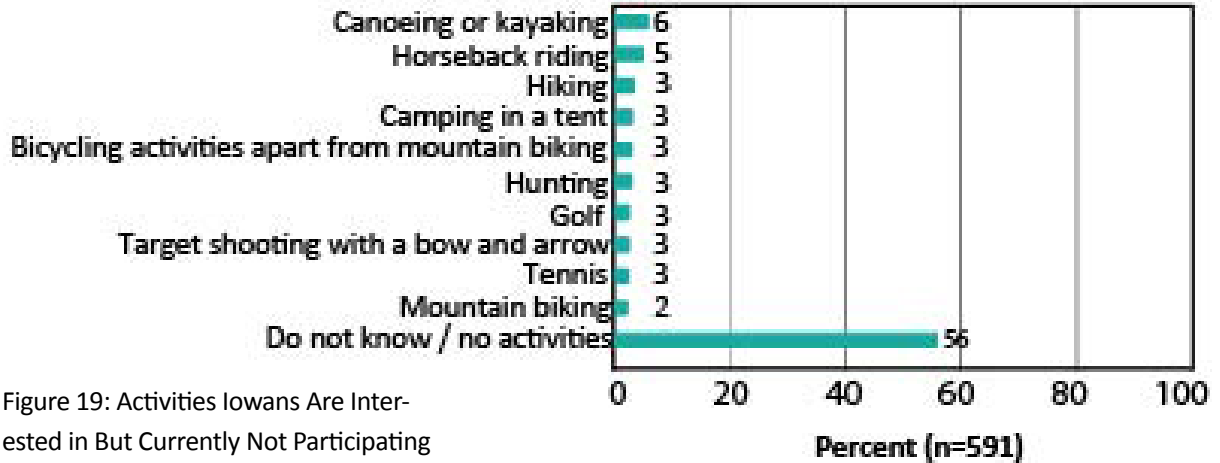
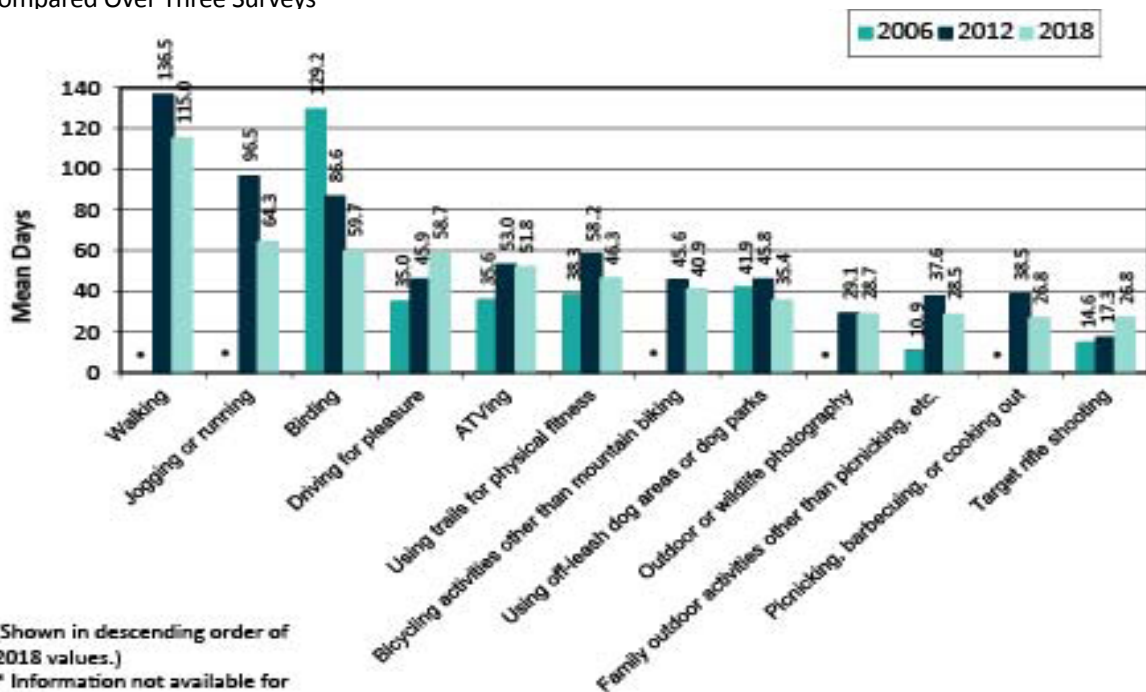


Figure 19: Activities lowans Are Interested in But Currently Not Participating (multiple responses were allowed)

In figure 20, you will see a representative sample of activities for which lowans indicated how many days were spent participating in an activity within the past 12 months. Some activities note significant decreases in days spent while others have increased. Activities such as shooting sports and fishing all increased over previous survey years for days spent participating in the activity while fitness activities, birding and equestrian activities have decreased. On average most people stay close-to-home, within 1 hour, to participate in activities. The availability and proximity of outdoor recreation facilitates both participation in and frequency of the activity.

Figure 20: Number of Days lowans Participated in an Activity Compared Over Three Surveys



Listed below is a representative sample of outdoor recreation activities lowans were asked about in the 2018 survey comparing national and state data.

Boating – Nationally, according to the American Recreation Coalition, the boating industry saw a 6% increase in sales in 2016 and is expected to continue. In Iowa, as of December 31, 2017, there were 220,466 registered vessels. Specifically out of all registered vessels, 32,831 vessels are canoes/kayaks and 15,586 are personal watercraft. According to the Iowa Residents Participation in and Opinions on Outdoor Recreation Survey (Responsive Management, 2012 & 2018) the percent of respondents who participated in boating (any type) increased from 32% in 2012 to 45% in 2018. According to lowan’s surveyed, when asked to think about areas of outdoor recreation priorities, 87% indicated that they’d like to see increasing access for natural water based recreation including boating as a high or medium priority (Figure 21).

Figure 21: Priorities in Outdoor Recreation

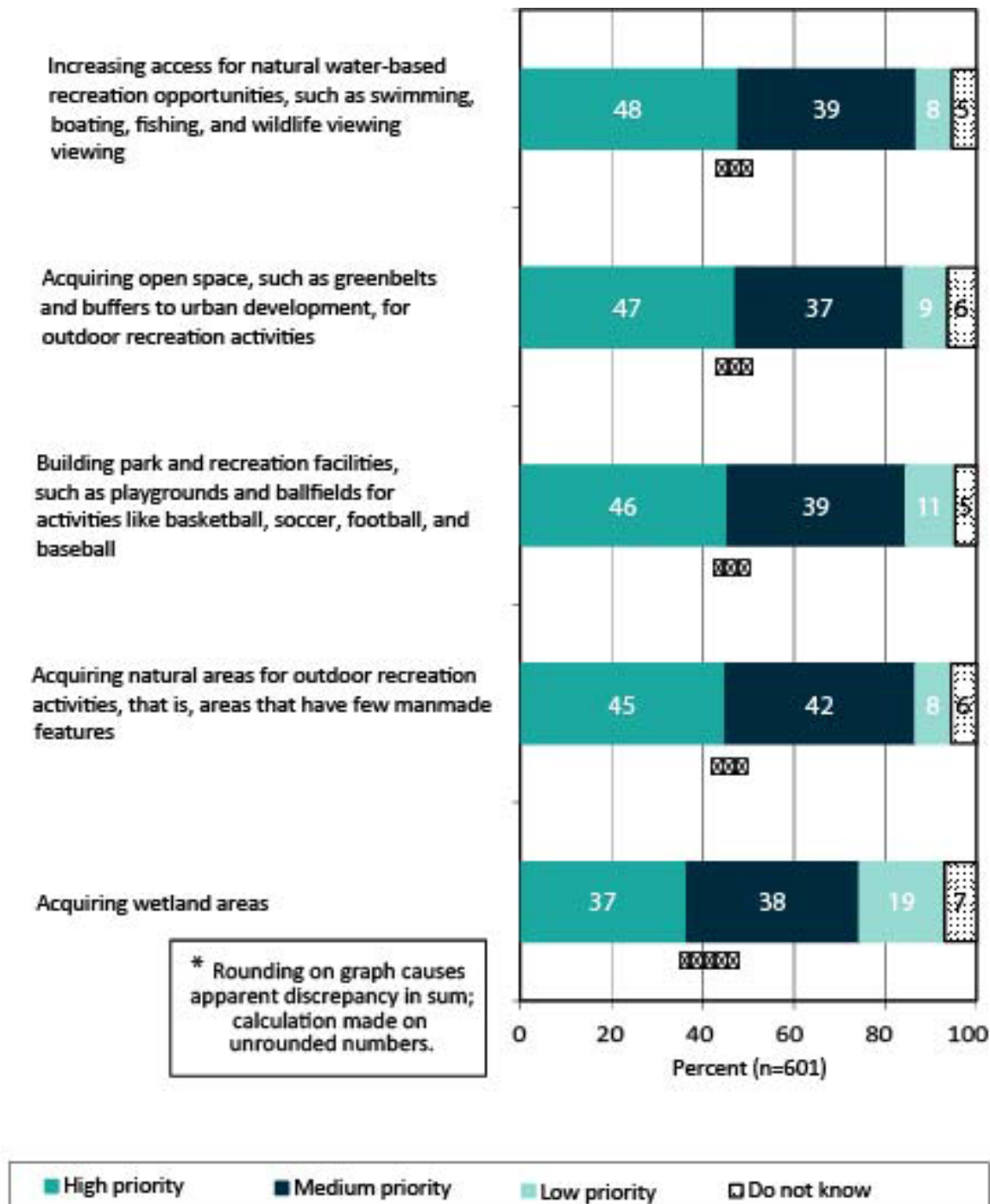


Figure 22: Children's Traditional Sports Participation (multiple answers allowed)

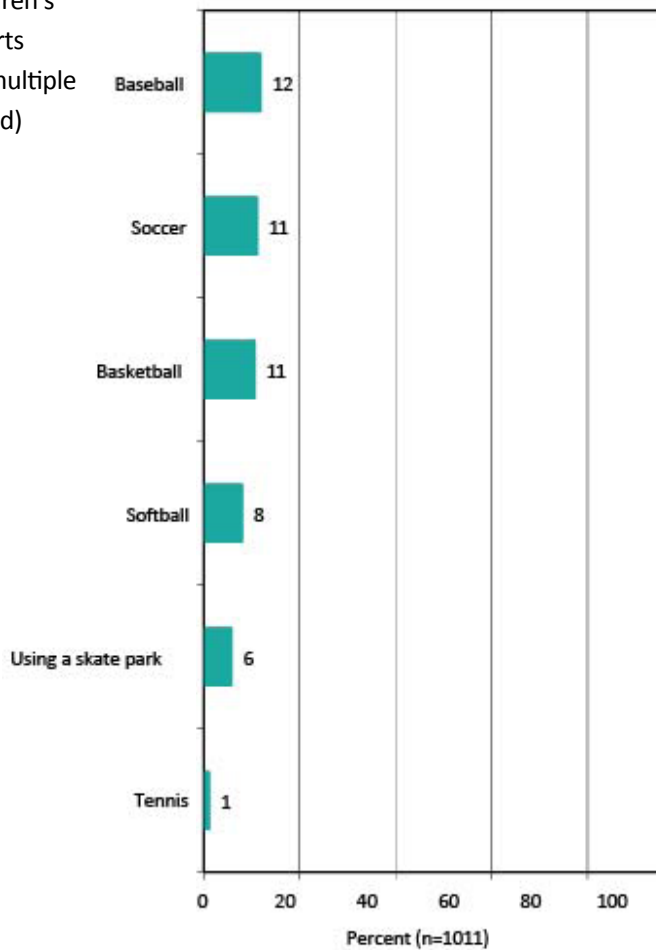
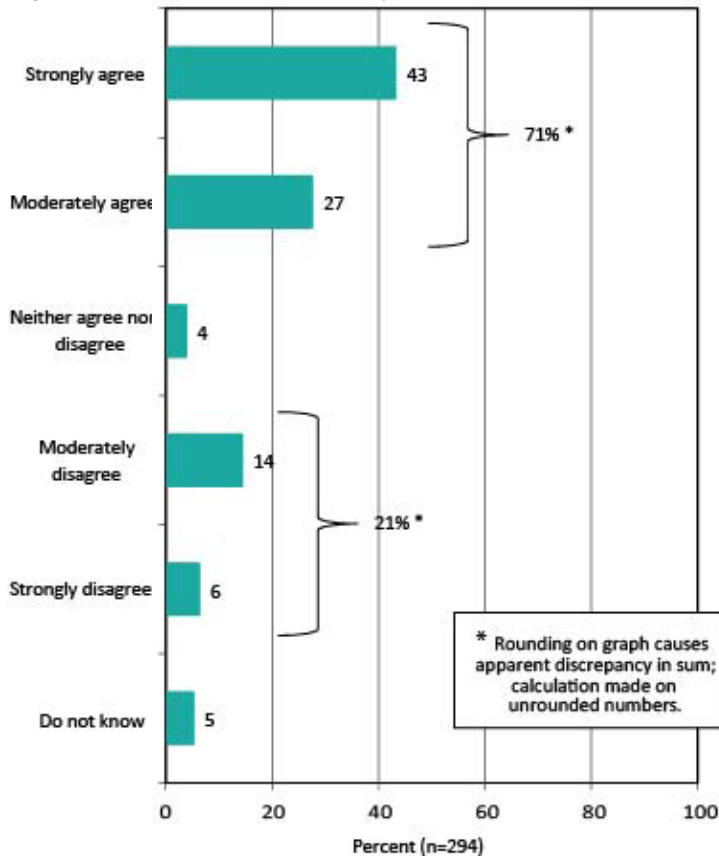


Figure 23: Children's Level of Participation in Outdoor Recreation

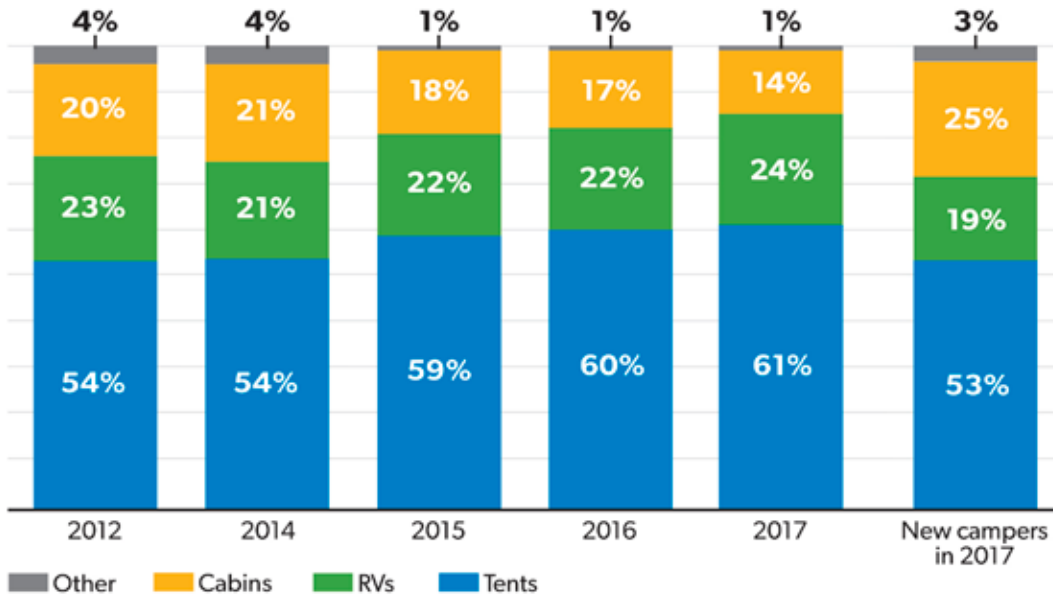


Multi-sport/Fitness Sports – Nationally, according to the the Physical Activity Council, fitness sport activities (cardio, cross training, workouts, running, jogging, walking) are continuing to grow in total participation rates. In Iowa, walking, jogging or running and using trails for physical fitness are still strong in percent of participation. Multi-sports (adult and child sport activities such as basketball, football, softball) have remained relatively stable over the years for percent participation. However, 85% of respondents indicated that building park and recreation facilities such as playgrounds and ballfields are a high or medium priority (Figure 21). The 2018 Iowa Residents’ Participation in and Opinions on Outdoor Recreation (Responsive Management, 2018) asked additional clarifying questions around youth and adult participation in multi-sport activities to determine use and need, available in Appendix C. Within the Physical Activity Council’s document, data shows that adults that participated in PE in youth are more likely to participate in physical activity as an adult. Figure 22, shows Iowa youth’s participation in sports activities and figure 23 shows adult’s response as to whether children are participating enough.

Camping – According to the 2017 American Camper Report, 40.5 million Americans, over the age of 6, camped at least once in 2016 with an average of 14.5 days per person. Data from multiple sources indicate that tent camping is the most popular type and Millennials are driving growth in this area. People who camp participate in a variety of additional outdoor recreational activities during their stay with hiking at the top of the list. RV camping, after seeing a small decline after the 2009 recession, is also on the rise although not at the same level as tent camping. From the Iowa Residents’ Participation in and Opinions on Outdoor Recreation survey (Responsive Management, 2018), 41% of respondents said that they had participated with the last 2 years up from 34% in 2012. Specifically, 21% responded they participated in camping in a tent, 20% in an RV, 5% in a modern cabin and 4% a camper cabin. Tent and RV camping increased from 2012 while modern cabin response was stable and camper cabin response decreased.

PRIMARY ACCOMMODATIONS

Figure 24: KOA 2018 Camping Survey



Iowa data is consistent with national data as released in the 2018 North American Camping Report by KOA, 61% of campers in 2017 were tent campers while 24% were RV and 14% were cabins. Even with new campers, tent camping was over 50% (Figure 24). Data from the Iowa State Parks reservation system shows that in 2017, 36,656 campsites were reserved by lowans and 13,929 sites were reserved by non-residents an increase from 2016. Cabins had 3,187 reservations by lowans and 1,095 reservations by non-residents.

Fishing and Hunting – Through a partnership with the U.S. Census Bureau, the U.S. Fish & Wildlife Service issues survey data on fishing, hunting and wildlife-Associated Recreation. In the 2016 findings, fishing still remains one of the most popular outdoor recreation activities in the United States with 35.8 million participants 16 and older and hunting had 11.5 million people 16 and older participating. In 2017, Iowa had 351,739 fishing licenses and 221,231 hunting licenses sold (Figure 25). Both Iowa data and national data are similar in that fishing participant numbers remain relatively stable with slight increases while numbers of hunters has decreased. From the 2018 Iowa Residents Participation in and Opinions on Outdoor Recreation Survey (Responsive Management, 2018), while respondents from fishermen (whether by lake, river, stream or shore) stayed stable, hunting was something that was an interest to participate in of those who currently were not participating.

Shooting Sports – The U.S. Census Bureau and Fish & Wildlife Service in 2015 started estimating the numbers of shooters with firearms and archers. Survey estimates indicated that there were over 32 million target shooters using firearms 6 years and older and 12.4 million archers 6 years and older. The vast majority of both those using firearms and archery equipment were 16 years and older. According to a report entitled Target Shooting In America, Iowa has an estimated number of 155,312 target shooting participants spending about 2,849,192 days pursuing their sport.

Figure 25: Congressions Sportsmn's Data



Wildlife Watching – Wildlife watching is a favorite pastime at national levels as well as within Iowa. Nationally, data for wildlife watching shows that over 86 million people 16 years and older participate in feeding, photographing and observing wildlife. National data shows increases in overall wildlife watching participation with a significant increase (18%) from the 2011 -2016 survey in around-the-home participants. 22% of Iowans responded that within the last 2 years they've participated in taking a trip at least 1 mile to observe or photograph wildlife.

Motorized Sports (All-terrain Vehicle and Snowmobile) – The ATV Safety Institute reports that there are more than 35 million Americans who ride all-terrain vehicles with 78 percent of riding recreational. In Iowa for 2017, there were 49,875 (ORM, ORV and ATV) registrations with all vehicle types showing an increase in registrations over the last 3 years. For snowmobiles, the International Snowmobile Manufacturers Association reports that there are over 1.2 million registered snowmobiles in the United States with 21,849 registered snowmobiles in Iowa. According to the Iowa surveys from 2012 to 2018, ATV participation responses decreased while snowmobile participation responses increased by 1%.

Horseback Riding – According to the American Recreation Coalition in the Outdoor Recreation Outlook 2018, recreational riding is still amongst the most popular segment of the equine industry. In the Iowa Residents Participation in and Opinions on Outdoor Recreation (Responsive Management, 2018), 11% of respondents indicated they had participated in the activity within the last 2 years, an increase from 7% in 2012.



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SECTION 3: 5-YEAR PRIORITIES FOR NATURAL RESOURCE, PARKS AND OUTDOOR RECREATION

PRIORITY 1 – AVAILABILITY AND DIVERSITY OF NATURAL RESOURCES, PARKS AND OUTDOOR RECREATION OPPORTUNITIES ENHANCE THE QUALITY OF LIFE OF IOWANS

Quality of Life: The standard of health, comfort and happiness experienced by an individual or group.

When asked, those outside of Iowa believe our state is flat and primarily corn and beans. Iowans know better. Our state is rolling hills and rock outcroppings, lakes, rivers, and streams, wild areas and places of peace and beauty, communities of all shapes and sizes and farm fields. Iowa’s landscape offers a wide variety of experiences and plays a significant role in enhancing the quality of life for Iowans.

Goal 1: Develop and promote on-line tools to assist Iowans in choosing destinations and outdoor activities in order to become more engaged with natural resources, parks and outdoor recreation facilities close-to-home.

Current State

Unplug and experience the outdoors! That is the theme of many campaigns across the United States and the world as technology has taken hold and exploded over the last 20+ years. Data shows that 1 in 5 Americans are solely using the internet through their smart phones (figure 26). A Pew Research Center Survey conducted in January 2018 shows that 26% of American adults are constantly on-line up from 21% in 2015 (Figure 27). Similar research by the Pew Research Center also shows that, as expected, younger generations are more closely tied to their devices than older

Figure 26: % of U.S. Adults Who Do Not Use Broadband At Home But Own Smartphones, By Age

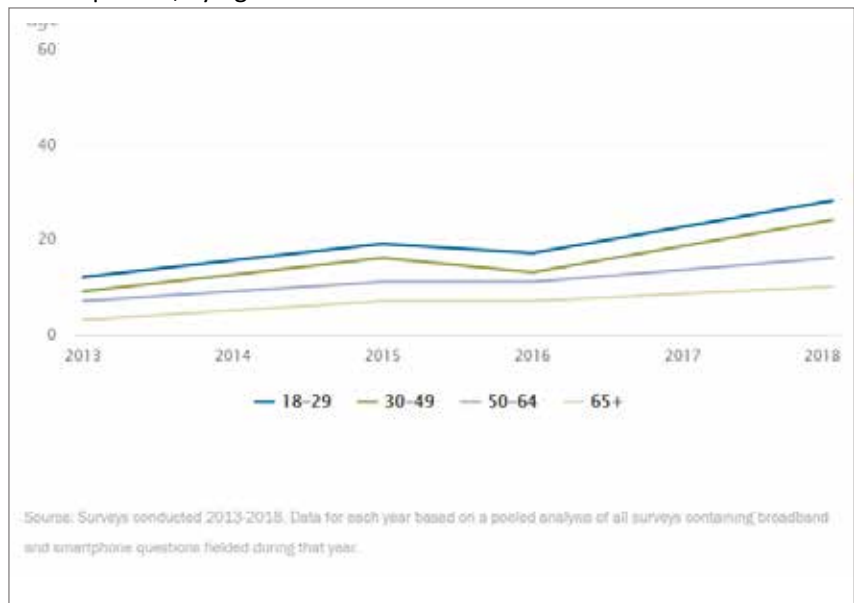


Figure 27: % of U.S. Adults Who Say They Go Online



Note: Figures do not add up to 100% because non-internet users were not asked the question.
Source: Survey conducted Jan. 3-10, 2018.

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Americans (Figure 27). In very few places across the U.S. can you truly unplug not due to personal preference but due to topography.

The Internet, however, is where people go to get and share information. The Iowa Resident's Participation in and Opinions on Outdoor Recreation survey (Responsive Management, 2018) showed changes in how Iowans want to be provided information which could be linked to the increased use in technology to get information over the last 5 years. In 2012, 40% of respondents indicated the best way to receive information was through direct mail while Internet (19%) and email (17%) were significantly behind. In 2018, the Internet (30%) and email (29%) were the highest platforms for receiving information while direct mail dropped significantly to 25%.

"...All of us now have the ability to find 'our people' - those who share our interests and passions and concerns - in ways that we couldn't when our connective avenues were limited by time and geography."

*- Scott McLeod
Professor University of Colorado Denver*

The two most heavily used social media platforms are Facebook and YouTube although younger adults use a wide variety of social platforms to communicate and receive information. According to data from Cisco, video traffic will be 82% of all consumer Internet traffic by 2021 with live video accounting for 13%. As the quote from Scott McLeod states, the Internet creates a virtual community where people with like interests can find each other and socialize while 1000's of miles separate them physically. To this end, both positive and negative experiences are shared, sometimes virally through these platforms. It's stated that 93% of buying decisions are influenced by social media; this includes recreational users selecting new places to go based on comments through Yelp or TripAdvisor, selecting brands to buy to make their experiences more productive or fun, or finding a "partner" in which to participate in the activity with.

62% of Americans, who think the Internet is a positive influence on society, believe that it makes things easier and faster to access. Over the last 12 years government programs have embraced the Internet for assisting outdoor recreation users in planning for trips, buying licenses and for program attendance. The Iowa State Park's Reservation System (<http://www.iowadnr.gov/Places-to-Go/State-Parks/Make-a-Reservation>) and the County Conservation Board's, My County Parks (<https://www.mycountyparks.com/Default.aspx>) make it easier for the user to pick, schedule and reserve campsites, cabins, shelters and lodges. Likewise, City Park and Recreation Agencies utilize the Internet for reservations and registration for recreation, sports and public programming. Purchasing a license to hunt and fish can also be done with a click of a button through the Internet (https://jc.activeoutdoorsolutions.com/ia_customer/app/home.do) or through the IDNR Mobile Sale Site. This is the easy access, available 24/7 that people today are looking for whenever they are searching for somewhere to be and something to do. Most government agencies also have sites on Facebook, Twitter, Instagram, and Pinterest where they share information, tips and tricks and photos. Information can be shared rapidly by individuals but also through the variety of groups such as "Friends of" groups, associations or non-governmental organizations. The more shares the greater the reach in and out of state.

Recommendation

When asked what would encourage respondents to participate more in outdoor recreation, 23% indicated more free time (Responsive Management, 2018). With a reduction in leisure time, Iowans need to know what natural areas are available locally and what they can do there quickly. 90% of respondents in the survey indicated that they know where recreational facilities are located; however the #4 reason that would encourage them to participate more was more information about activities (Responsive Management, 2018). This seems somewhat in conflict but in focus group meetings with millennials, participants indicated they may know where areas are, but it does not necessarily mean they know what organization manages the area for and what outdoor recreation pursuits can happen there.

Currently, there are a variety of Internet sites available to assist recreational users. Unfortunately this information is spread between many websites (federal, state, county, city) which may make it burdensome for users, especially new users, to find something quickly or within their activity interest, especially if they are unaware of who manages the resource and where to start. The following is just a small set of Iowa sites that users may visit:

Hunting: Habitat & Access Program (IHAP), Wildlife Management Areas, Iowa Shooting Ranges, Iowa Private Shooting Preserves. <http://www.iowadnr.gov/Hunting/Places-to-Hunt-Shoot>

Hunting: Hunting atlas an interactive map that shows all lands open to public hunting in that state totaling 711,908 acres. <https://programs.iowadnr.gov/maps/huntingatlas/default.html>

Fishing: Lakes, Ponds and Reservoirs, Interior Rivers, Trout Streams, Mississippi River, Missouri River. <http://www.iowadnr.gov/Fishing/Where-to-Fish>

Fishing: Fishing Atlas an interactive map that shows all lakes with links to take users to lake and structure maps and fishing reports. <https://programs.iowadnr.gov/maps/fishingatlas/default.html>

Fishing: Fish Local site is for discovering fishing locations in larger urban centers beyond lakes and river locations. <http://www.iowadnr.gov/Fishing/Fish-Local>

State Parks Camping/Shelter/Lodges/trails: <http://www.iowadnr.gov/Places-to-Go/State-Parks>

Iowa State Forests: <http://www.iowadnr.gov/Places-to-Go/State-Forests>

Iowa State Preserves: <http://www.iowadnr.gov/Places-to-Go/State-Preserves>

Recreational Atlas: Interactive map that shows open spaces (federal, state and county areas) and recreational amenities. <https://programs.iowadnr.gov/maps/Recreationatlas/Recreation.html>

Iowa Water Trails: <http://www.iowadnr.gov/Things-to-Do/Canoeing-Kayaking/Water-Trail-Maps-Brochures>

OHV Parks: <http://www.iowadnr.gov/Things-to-Do/Off-Highway-Vehicles>

Equestrian Trails on State Lands: <http://www.iowadnr.gov/Things-to-Do/Equestrian>

County Conservation lands: <https://www.mycountyparks.com/Activities/Default.aspx>

US Army Corps of Engineers Reservoirs: <http://www.mvr.usace.army.mil/Missions/Recreation/Saylorville-Lake/>, <http://www.nwk.usace.army.mil/Locations/District-Lakes/Rathbun-Lake/>, <http://www.mvr.usace.army.mil/Missions/Recreation/Lake-Red-Rock/>, <http://www.mvr.usace.army.mil/Missions/Recreation/Coralville-Lake/>

Iowa Tourism: <https://traveliowa.com/>

City Parks & Recreation Departments: too many individual city sites to list

In order to encourage new users to experience new activities or areas, there is value in creating a 1-stop platform where information can be simply searched by activity or by county with click-able links for further exploration that would connect many of the sites listed above in a coordinated and organized manner. An expansion of this could also provide links to restaurants, hotel/motel and other local information to help users plan day or overnight trips. This comprehensive site should be placed on an easy to find website with relevant keywords so that the site is at the top of the list in a Google or Bing search (Search Engine Optimization (SEO)).

In the Iowa Residents' Participation in and Opinions on Outdoor Recreation Survey 2012 (Responsive Management), respondents were asked how they wanted to learn. 73% who were interested in hunting and 49% who said they were interested in fishing said they wanted to participate in free skills seminars. Currently federal, state, county and city agencies offer in-person programs and services to assist new users gain skills. However, during focus group discussions conducted in 2017 with millennials, this age-group indicated that they were more likely to watch short video tutorials to learn a new skill and then go with friends or family instead of attending a class. They indicated they want videos in short 15-20 minute segments to learn and get started in the activity (e.g. <https://www.youtube.com/user/iowadnr>). Since Facebook and YouTube are the most frequented social media platforms, organizations should target material, especially video, to populate these two mediums in order to meet the needs of millennials as well as other interested users who might be intimidated by attending classes. Content must be authentic to the experience and the user, be welcoming to all and most importantly be truthful. Activities of interest to focus on by location (Eastern, Central or Western Iowa), community size (urban, suburban, and rural) or age can be found in data contained in the Iowa Residents' Participation in and Opinions on Outdoor Recreation (Responsive Management 2018 in Appendix C).

Technology is constantly changing and it is important for natural resource and recreation providers to change with it to meet the needs of users. With the majority of people dependent on getting information through the Internet and increasing mobile devices, we need to make sure it's easy for them to find out where to go, what to do and how to do it. Once there, we encourage them to unplug and enjoy the experience, the peace and the beauty of our places.

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Goal 2: Increase Iowan’s level of physical activity through participation in outdoor recreation activities.

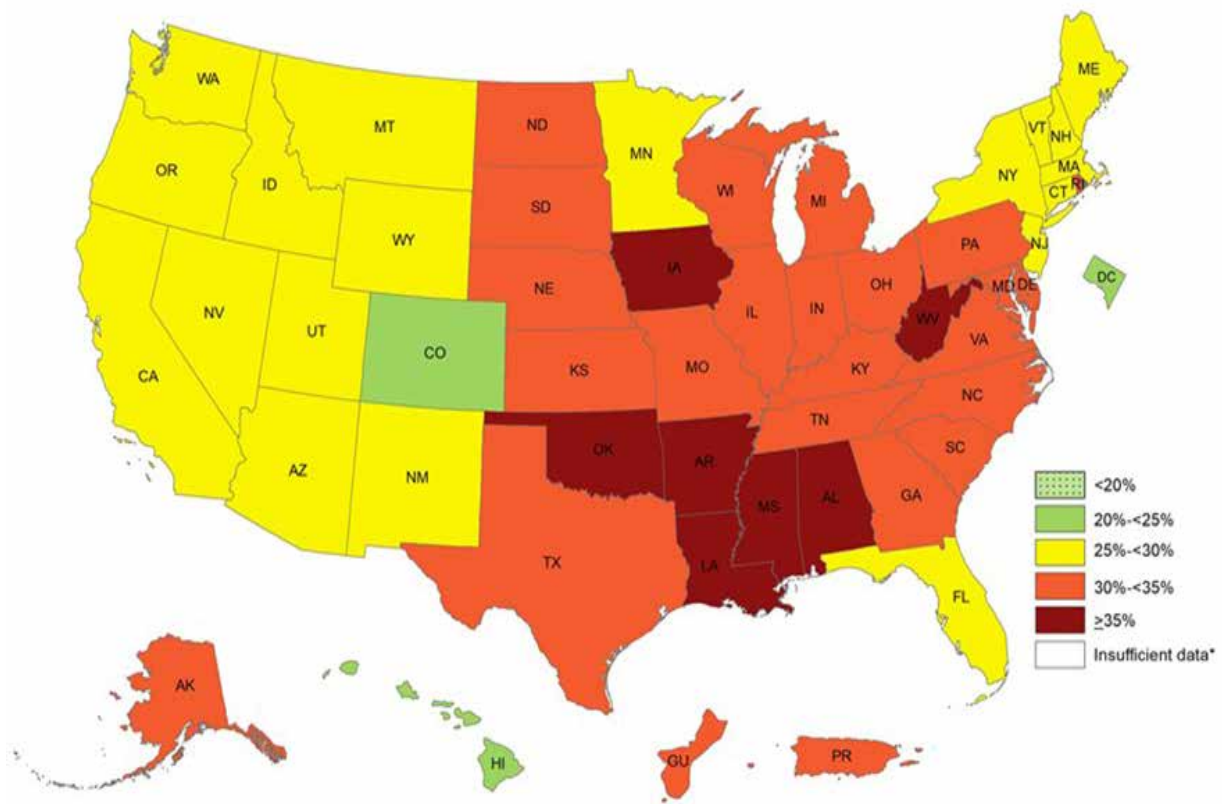
Current State

Spending time outdoors is good for everyone. Studies have shown being outdoors can improve mental, physical and spiritual health and encourage social interaction. According to data from the Centers for Disease Control and Prevention (CDC), about 1 in 5 adults meet the guidelines for physical activity as laid out in the 2018 Physical Activity Guidelines Advisory Committee Scientific Report which states adults should get 2 ½ hours of moderate-intensity or 1 ¼ hours of vigorous-

Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.

World Health Organization

Figure 28: U.S. Obesity

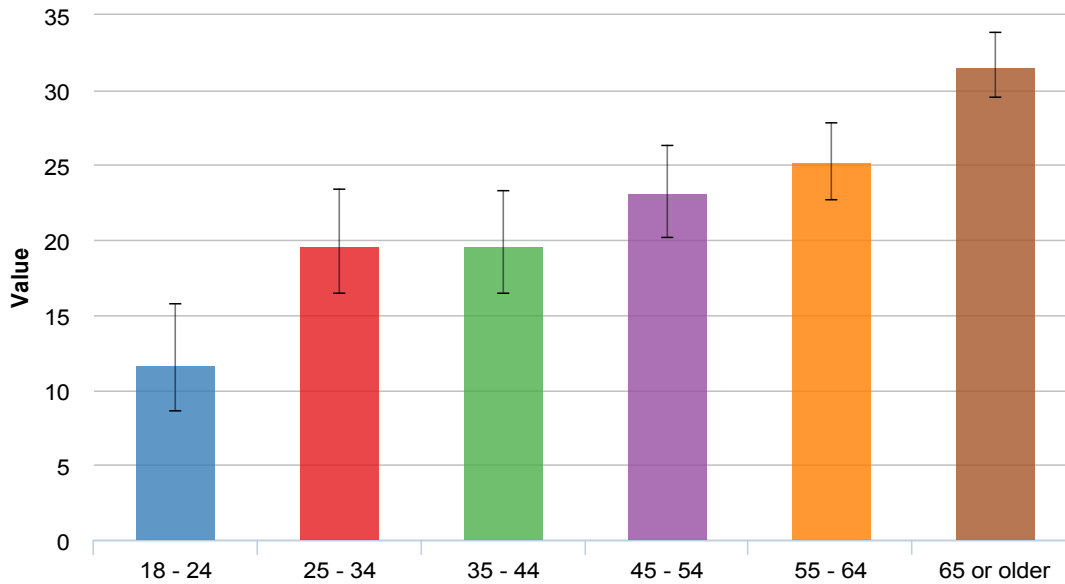


Data Source: Behavioral Risk Factor Surveillance System (BRFSS)

intensity activity per week. “Physical Activity” as defined by the national Heart, Lung and Blood Institute is any body movement that works your muscles and requires more energy than resting. The U.S. Department of Health and Human Services studies show that inactivity contributes to the rise in obesity, diabetes and other chronic health conditions and has an impact in the number and frequency of falls and fall-related injuries (Figure 28).

Specifically for Iowa, the April 2018 survey of Iowa Residents’ Participation in and Opinions on Outdoor Recreation (Responsive Management, 2018) shows that 77% of respondents said they were somewhat or very physically active while 20% responded that they were a little or not at all physically active. There was a slight change in data from the survey conducted in 2012 with a decrease in respondents indicating very active and a slight increase in those reporting they were a little physically active. Results are similar to Iowa Department of Public Health (IDPH) 2018 progress report data that shows 77% of Iowans are physically active an increase in 2015-2016 data.

Figure 29: Percent of Adults Who Engage in No Leisure-time Physical Activity - Iowa 2016 (By Age)



Footnotes

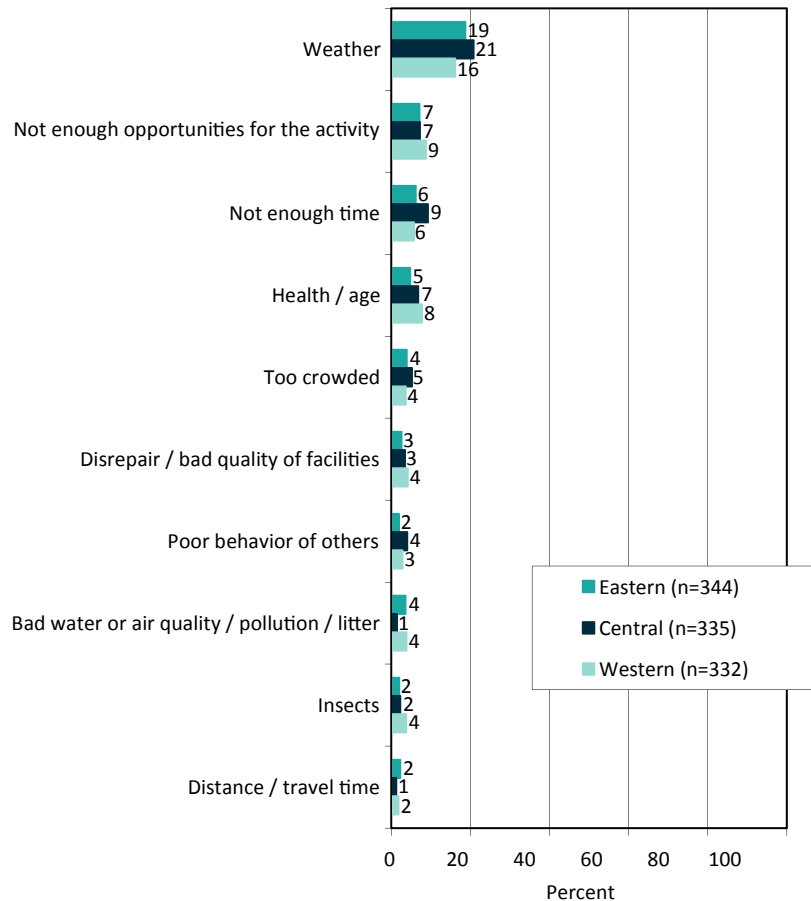
† Respondents were classified as participating in no leisure-time physical activity if they responded "no" to the following question: "During the past month, other than your regular job, did you participate in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise?" Adults aged ≥ 18 years. Respondents with missing data were excluded.

Data Source: Behavioral Risk Factor Surveillance System (BRFSS)

2016 data from the CDC provides a breakdown of those in their survey from Iowa who responded that they participated in no leisure-time physical activity by age (Figure 29). Some of the main reasons for lack of participation (limited or not at all) in outdoor physical activity include responses such as not enough time, health and age, no one to go with, weather and bad water/air pollutants (Responsive Management, 2018 -figure 30).

In 2016, 32% of Iowa adults reported heights and weights that are considered obese – the 13th highest rate in the U.S. (IDPH 2018 Healthy Iowans Progress Report). Obesity is Iowa’s #1 health threat according to the Iowa Department of Public Health’s Healthy Iowans 2017-2021 Iowa’s Health Improvement Plan. As already stated, physical inactivity can contribute to the deterioration or improvement of many conditions such as obesity, diabetes, heart disease, high blood pressure and depression. CDC 2016 data shows Iowans aged

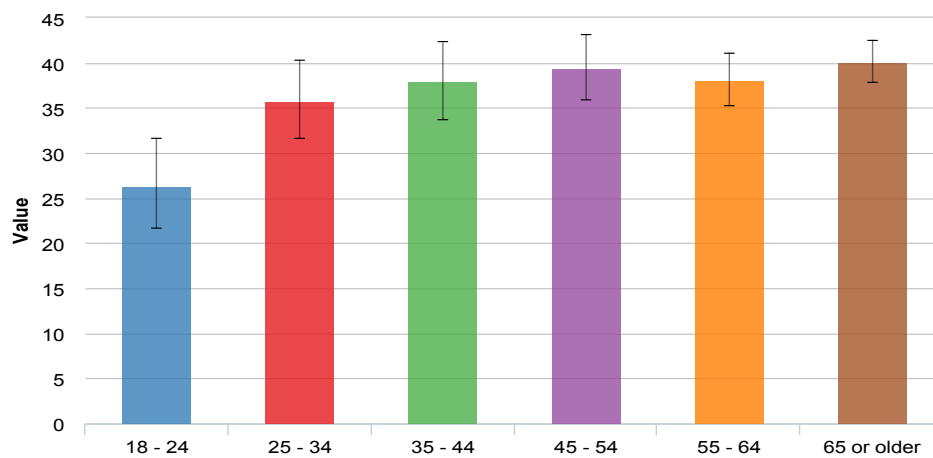
Figure 30: Barriers to Participation (multiple responses allowed)



35-44 with the highest percentage of obesity while 45-54 and 65 and older have the highest percentages in overweight classification (Figures 31 & 32).

Children are influenced by the behaviors and lifestyle patterns of their parents. Adult participation in physical activity is directly correlated to the increase or decrease in children’s participation and potential for higher risk in youth obesity and other health issues. The 2010 census bureau reports 31% of Iowans have children within the household. The National Survey of Children’s Health; 2011-2012 and the State of Obesity; 2013 states that 28.3% of Iowa 10-17 year olds are overweight or obese (Figure 33); 14.7% of 2-4 year olds from low-income families are obese; 41.5% of Iowa kids ages 10-17 watch TV or play video games 1-4 hours per day, and 48% of Iowa kids ages 6-17 have a TV, computer or electronic device in their bedroom. Iowa Residents who had children living in the household, were asked if they agreed or disagreed that their children are participating in outdoor activities

Figure 31: Percent of Adults Aged 18 Years and Older Who Have an Overweight Classification - Iowa 2016 (By Age)

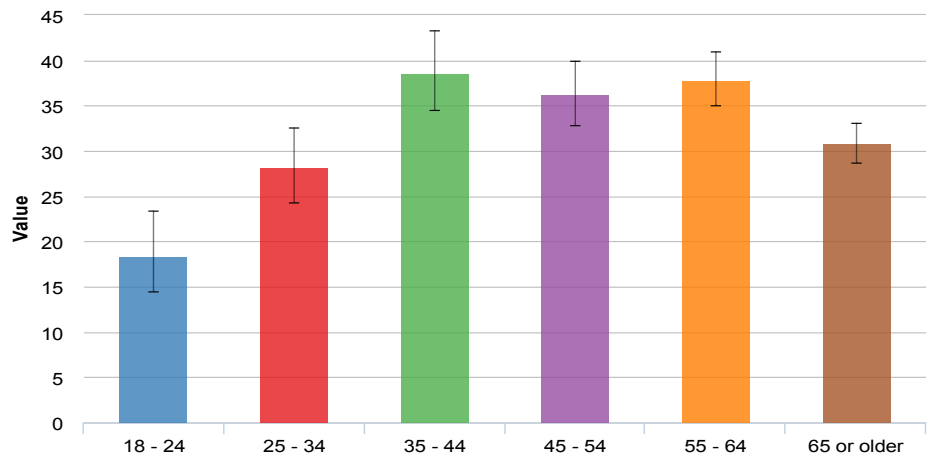


Footnotes

† Overweight is defined as body mass index (BMI) ≥ 25.0 but <30.0 ; BMI was calculated from self-reported weight and height (weight [kg]/ height [m²]). Respondents reporting weight < 50 pounds or ≥ 650 pounds; height < 3 feet or ≥ 8 feet; or BMI: <12 or ≥ 100 were excluded. Pregnant respondents were also excluded.

Data Source: Behavioral Risk Factor Surveillance System (BRFSS)

Figure 32: Percent of Adults Aged 18 Years and Older Who Have Obesity - Iowa 2016 (By Age)

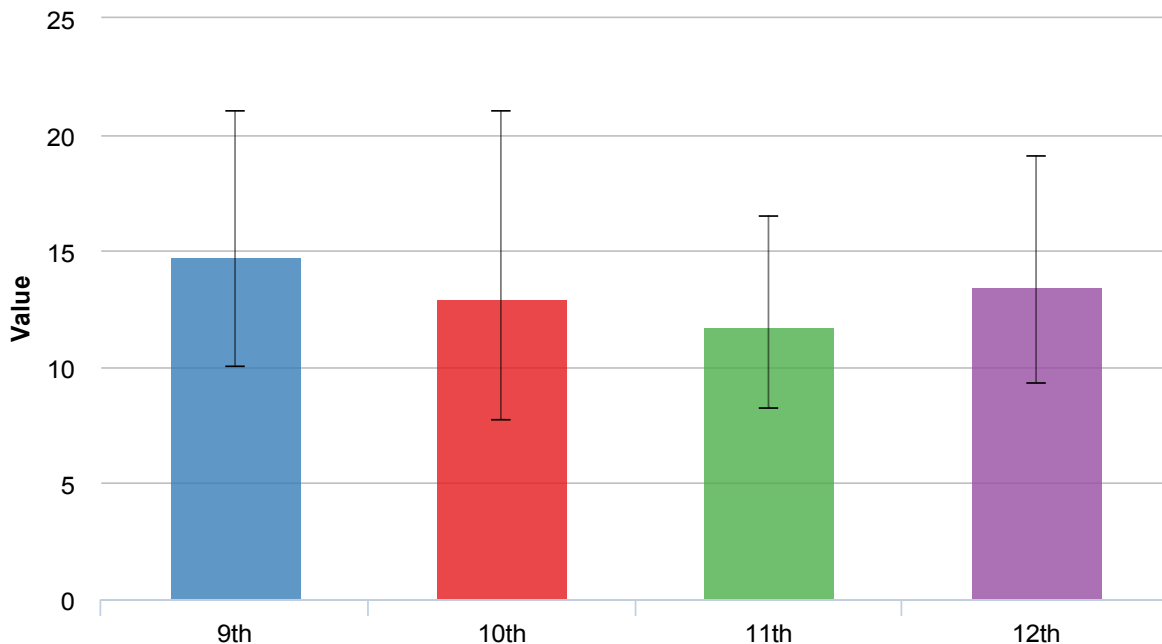


Footnotes

† Obese is defined as body mass index (BMI) ≥ 30.0 ; BMI was calculated from self-reported weight and height (weight [kg]/ height [m²]). Respondents reporting weight < 50 pounds or ≥ 650 pounds; height < 3 feet or ≥ 8 feet; or BMI: <12 or ≥ 100 were excluded. Pregnant respondents were also excluded.

Data Source: Behavioral Risk Factor Surveillance System (BRFSS)

Figure 33: Percent of Students in Grades 9-12 Who Have Obesity - Iowa 2016 (By Grade)



Footnotes

† Obese is defined as body mass index (BMI)-for-age and sex ≥95th percentile based on the 2000 CDC growth chart; BMI was calculated from self-reported weight and height (weight [kg]/ height [m²]).

Data Source: Youth Risk Behavior Surveillance System (YRBSS)

often enough 71% responded that they strongly agree or moderately agree and 21% disagreed (Responsive Management, 2018). Very similar results were found in adult respondents as referenced above. Iowans with children living in the household also indicated that 40% of children participate in non-school natural resource education programs (e.g. day camps, conservation programs, shooting sports) and 41% said they were very likely to sign them up in the future (Responsive Management, 2018). Studies show, youth engaged in the outdoors learning about natural resources, creates a gateway for future involvement in outdoor pursuits. How parents spend their leisure time and the decisions they make for their family to connect with outdoor resources and recreation activities has a direct impact on Iowa’s future health.

Recommendation

Federal, state, county and city agencies moving forward, need to consider their area’s potential impacts to improving community health as part of traditional resource planning. First, evaluate what resource areas (parks, wildlife areas, rivers, sports complexes) are close to populations? What recreation activities are allowed at the area and does it include a mix of opportunities for all ages and physical abilities. Finally, could there be additional recreational opportunities offered at that location without compromising or eliminating natural resource habitats, known as the recreational carrying capacity.

The #1 recreation activity that Iowans reported they currently are engaged in (Responsive Management, 2018) is walking and 5 additional trail related activities were listed in the top 20 activities. In the 1980s Iowa converted many old railroad corridors to multi-use trails with the 13.5 mile long Cinder Path trail in Lucas County one of the first. Iowa is known as a destination for trails and the network of trails (Figure 34) across the state offer close-to-home opportunities for many walkers, runners, bicyclists as well as cross country skiers and fat tire biking in the winter. Iowa has more than 3,000 miles of trails, paved shoulders and other bicycle and pedestrian facilities and trail interest and use is increasing. The Iowa Department of Transportation has completed the new Bicycle and Pedestrian Plan which serves as Iowa’s primary guide for decision-making regarding bicycle and pedestrian programs and facilities to provide continuity for all levels of bicycle and pedestrian mobility through regional, county and city plans and programs (Appendix B). Page 90 of the Iowa in Motion 2045: State Transportation

Plan shows the statewide trails vision which adds connectivity to the existing system shown in Figure 34. The plan also includes safe routes (trails) to schools to help get children more active while offering parents a safe solution. Connections offer a multitude of opportunities both economically and for destination tourism but also for encouraging healthy lifestyles. Finally, the CDC in partnership with the National Park Service created the Parks, Trails, and Health Workbook which helps guide the planning process including the needs for increasing physical activity for healthier communities. This tool, along with the plans and tools provided by the Iowa DOT are primarily intended for trail planning but they can also be a guide for other resource/recreation planning when considering recommendations for improving healthy lifestyles.

Outside the normal realm of natural resource and recreation providers, inclusion of health opportunities and accompanying promotion needs to embrace working with new partners. Local public health offices and area agencies on aging, health providers and rehabilitation clinics are potential partners who have shared interests to get lowans physically active but may not have knowledge about local opportunities in state, county, city natural resource areas and parks which are primarily free to the user. These potential partners can help craft messaging about health benefits of walking, hiking, camping, fishing and kayaking and can share those messages and locations for healthy engagement with outdoor recreation providers. For example, surrounding states, such as South Dakota, have partnered with the health community to heart rate trails. This gives health and wellness providers options based on physical ability, disability, health issue or age needs when prescribing the outdoors to help with health issues. The National Park Service has instituted many programs working with the health community, along these same lines, in their Healthy Parks Healthy People effort such as Park RX.

Leading a healthier lifestyle means getting physically active but you can also reap significant mental and spiritual benefits by enjoying the peace and tranquility outdoors. In Iowa, walking in a wildlife area or park observing nature, biking down a trail system, having a picnic and playing yard games with friends and family are all affordable ways to get active outdoors with many opportunities available close to where you live. Bringing the health community into natural resource planning provides opportunities for more lowans utilizing the resource. The more people experience (physical, mental and spiritual) our resources, the more they want to understand and protect the resource, a win for Iowa at every level.

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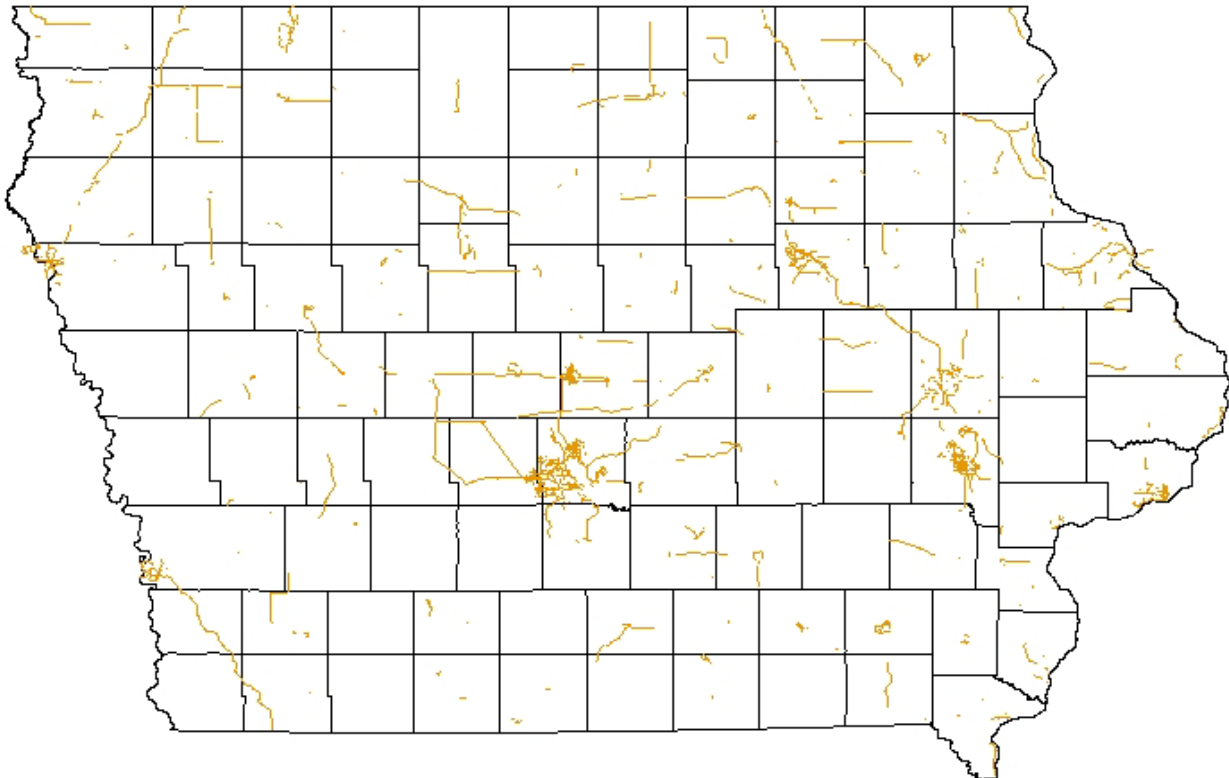
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Figure 34: Trails in Iowa



Goal 3: Link the benefits and potential opportunities of natural resources, parks and outdoor recreation to economic development.

Current State

When people aren't at work they need places to go exercise for physical fitness (hiking, biking, running), spend quality time with their families and extended families (picnicking, fishing, playgrounds, and ball fields) and de-stress (open spaces). Local businesses also benefit from outdoor recreation participation through; gas for vehicles (driving for pleasure is one of the highest recreational activities), food for picnics and game day (family oriented activities and recreational sports), purchase of equipment or bait (hunting, fishing, hiking, or biking) and the list goes on as the trickle down affect is felt throughout communities because of these places and the opportunities they hold.

In 2016, the U.S. House of Representatives and Senate passed the Outdoor Recreation Jobs and Economic Impact (REC) Act with unanimous and bipartisan support. The signing of this law ensures that the recreation economy is counted as part of the U.S. Gross Domestic Product. Since signing in 2016, the U.S. Bureau of Economic Analysis has been gathering data producing a preliminary report in February 2018 with the full report presented in fall 2018. The preliminary data shows outdoor recreation is \$374 billion of the US Gross Domestic Product (2% of the economy) and employs 4.3 million people. From 2012 – 2015 the outdoor recreation economy grew 3.8 percent compared to overall economic growth of 2.8%, a significant increase showcasing that outdoor recreation is vitally important to our way of life. Figure 35, from the Outdoor Industry Association indicates the activities that make up the outdoor recreation economy.

This includes direct spending by users for equipment and gear, travel, food, lodging and entrance or participation fees. It also considers the industry and recreational service providers contributions such as salaries and wages, product development and construction, transportation, etc... According to data from the Outdoor Industry Association, Americans spend more on bicycling gear and trips - \$81 billion – than they do on professional sports - \$24.5 billion – including football, baseball and basketball.



Figure 35

Also in 2016, the U.S. Congress created a bicameral, bipartisan caucus dedicated to the outdoor industry and the impacts of outdoor recreation on the economy and communities around the United States. The Outdoor Recreation Caucus Principles are:

1. Agreement that outdoor recreation plays a critical role in supporting healthy people, healthy communities and healthy economies.
2. Understanding of the importance of the outdoor recreation economy and the need to continue to quantify its benefits as a job creator and local and national economic driver.
3. Appreciation of America's lands and waters as the infrastructure and backbone for outdoor recreation businesses.
4. Support for the growth and success of manufacturers, retailers and outfitters that enhance the outdoor experience.

Specifically in Iowa, outdoor recreation annually contributes \$8.7 billion to the economy in consumer spending and directly employs 83,000 Iowans contributing to \$2.7 billion in wages and salaries and \$649 million in in-state and local tax revenue (Outdoor Industry 2017). Open spaces, parks and their accompanying outdoor recreation amenities are vitally important to Iowa's economy.

Parks and Trails Contributions to the Economy

Especially in urban and suburban communities, proximity to parks and their “curb appeal” increases the property value of homes by 5-20% also increasing property tax revenue.

Business leaders have a higher tendency to choose locations to move and expand based on the availability of open spaces and recreation which help them recruit and retain employees due to the positive impacts on and individual/families quality of life.

Close proximity to parks and trails increases an individual and family’s physical activity level. With increased physical activity health care costs decrease.

- Communities with parks, especially in urban and suburban areas, can see decreases in criminal activity.
- Sports complexes hosting tournaments bring out-of-town sports teams that boost spending bringing economic benefit to local communities.
- Parks are natural gathering areas for family or community functions, events and concerts. Out-of-town visitors both day-use and overnight bring revenue to local establishments and increased sales tax for communities.
- Urban and suburban parks with strong plant community diversity contribute the overall health of a community through the absorption of air and soil pollutants, management of storm water, prevent flooding and clean rivers.
- In the last 2 years, Iowans participated in walking (86%), hiking (40%), jogging or running (38%), trails for physical fitness (35%), bicycling activities (29%), mountain biking (14%), horseback riding (11%) – all activities that mostly take place on trails. In a 2011 study by the University of Northern Iowa, recreational bicycle riders contributed close to \$365 million annually in direct and indirect benefits while commuter bicyclists contributed \$52 million. The Register’s Annual Great Bicycle Ride Across Iowa (RAGBRAI) generates \$16.9 million annually for the 1 week-long event which includes more than 275,000 riders.
- A 2017 report from the Outdoor Foundation indicates in 2016, 40.5 million Americans camped at least once averaging about 14.5 days per person. Respondents spent an average of \$546.41 with first time campers spending around \$181.61 on gear and other necessities to participate. Iowa’s survey indicates 40% of respondents went camping in the last 2 years (Responsive Management, 2018). Specifically, 21% responded they were tent campers, higher than cabin and RV participation, which is consistent with national numbers where 77% responded they were tent campers. Camping is viewed as a gateway activity for participation in other outdoor recreation pursuits which may have a trickle down impact to local economies (e.g. purchase of bait for fishing, boat motor fuel, purchase of rental services from concession or local business).
- According to Outdoor Industry Foundations’ Recreation Economy Report in 2017, participants in wheel sports spend \$13,857,894 in gear, accessories and vehicles and \$82,864,146,456 on other trip related expenses. These expenditures contribute to 847,559 jobs across the nation.
- Nationally, snowmobiling contributes \$26 billion annually to the economy with over 100,000 full-time jobs generated by the industry from manufacturing dealerships to tourism related businesses, according to the International Snowmobile Manufacturers Association. Snowmobile clubs also conduct charity fundraising events generating additional funds for local communities.

Wildlife Management Areas, Preserves, Lakes and Rivers Contributions to the Economy

- Habitat conservation (native plant and restored areas) and the diversity of plants and animals found in wildlife areas, forests, parks, lakes, rivers and streams contribute to the health and well-being of Iowa both directly (consumptive and non-consumptive recreation) and indirectly through soil development and erosion protection, absorption of nutrients, carbon sequestration and biodiversity maintenance. Healthier landscapes help rural communities.
- The U.S. Forest Service reports that over a 50 year-lifetime, one tree generates \$31,250 worth of oxygen, provides \$62,000 worth of air pollution control, recycles \$37,500 worth of water.
- Pollinators, including bees and butterflies, provide significant environmental and economic benefits to

agricultural and natural ecosystems including adding diversity and productivity to agriculture. About one-third of the crops grown in the United States are pollinated by insects (Pimentel, et al, 1997).

- Open spaces can ease flood damage impacts and costs to local communities. Wetlands reduce the frequency and intensity of flooding because they can absorb significant amounts of water. The Environmental Protection Agency states a one-acre wetland can store about three-acres of water or 1 million gallons.
- Statewide, lakes generate \$1.2 billion in annual in-state spending and support 12,000 jobs. Water quality, proximity and amenities at the lake are the three most important factors for lowans when choosing a lake to visit. 60% of lowans visit lakes annually and take about 8 trips per year with 22% making at least 1 overnight trip. Once a lake restoration project has been concluded, there is an increase in water quality and improvement in aquatic systems which propels an increase in recreation use. It's estimated that a return on investment from a restored lake will be within 5 years of project completion.
- River restoration activities help control shoreline erosion and improve water quality for downstream neighbors and communities. Rivers draw fishermen, canoeists and kayakers that can include day or overnight trips. In the 2012 Iowa State University CARD report on outdoor recreational use. River systems contributed to 18,780,745 visits with \$823,847,666 in spending impacting 6351 jobs.
- Dam mitigation converts potentially dangerous and outdated infrastructure into better river corridor and fisheries habitats and creates a powerful new economic driver when integrated into city planning. Studies (pre and post construction) conducted by Iowa DNR Fisheries and Interior Streams Research at the recent dam mitigation project at Manchester show; more than 3 times increase in all river recreation hours upstream and downstream, inner tube rental customers reported \$33.04 spending per visit, general users reported spending \$14.76 per visit (camping, picnicking, food, gas, rentals, supplies).
- Hunting Works for Iowa reports that hunting alone contributes to 7,000 jobs and generates \$227.9 million in salaries and wages. The average trip related expenses and gear for a hunter is \$1,600 all creating a ripple effect which puts money into Iowa's system through state and local taxes, as well as back through federal taxes into our conservation and recreation programs through the excise tax on equipment. Trips taken away from home that include overnight accommodations directly impact local economies, especially seen on opening weekends of pheasant and shotgun deer seasons.
- Data from the U.S. Fish & Wildlife Service in 2016 indicates that the U.S. has over 86 million people, 16 and older, feeding birds in backyard feeders and photographing and observing wildlife. These recreational users spent \$75.9 billion on these activities. About ¼ of all wildlife watchers take a trip more than 1 mile from home. 22% of lowans surveyed (Responsive Management, 2018) indicated they take a trip or outing to observe or photograph wildlife more than 1 mile from home which brings increased revenue into local communities through purchase of gas, food and lodging.
- Nationally, 35.8 million people, 16 and older, fished in 2016. Anglers spent \$46.1 billion on trips, equipment, licenses and other items to support this activity with an average of \$1,290 per trip which includes travel, lodging and other expenses, according to the U.S. Fish & Wildlife Service. In the recent Iowa survey, 41% of respondents indicated they have fished in the last 2 years and half of those indicated they go on overnight trips with travel distances about 3 hours away (Responsive Management, 2018). Trips that include overnight accommodations have direct impacts to local economies through food, gas, and lodging and to restock bait and other fishing supplies, especially seen in the Great Lakes area for the walleye season opener each May.
- Iowa's wood products industries generate 1.7% of Iowa's manufacturing GDP and employ almost 9,022 people. Iowa's woodlands also support a significant portion of Iowa's recreation, tourism and hunting which is also tied to activities such as camping, fall foliage tours, hiking, and bird watching for a trickle down economic effect.
- The US Fish & Wildlife Service reports that more than 3.7 million of the nation's 12 million registered boats are found in the Midwest region. The National Marine Manufacturers Association shares that Iowa's recreational boating industry has a 1.8 billion impact to the economy through direct, indirect and induced spending supporting 9,378 jobs in 2016. In the Iowa survey, boating participation increased from 32% in 2012 to 45% in 2018 (Responsive Management, 2018). Boating activities are both day-trip or overnight

opportunities with potential impacts to local economies through purchase of food, gas, lodging, marina fees and parts and maintenance needs.

- 13,660 youth shooters registered in the Scholastic Clay Target and Scholastic Action Shooting Programs. 50% (6,830) spent more than \$1,000 on things like ammunition, shooting apparel, firearms, eye and ear protection, targets, club memberships, etc... With the increase in the program there is also an increase in events which expands the economic impact into other areas of community. An average expenditure while at an event can be up to \$1,429 with travel costs around \$450.

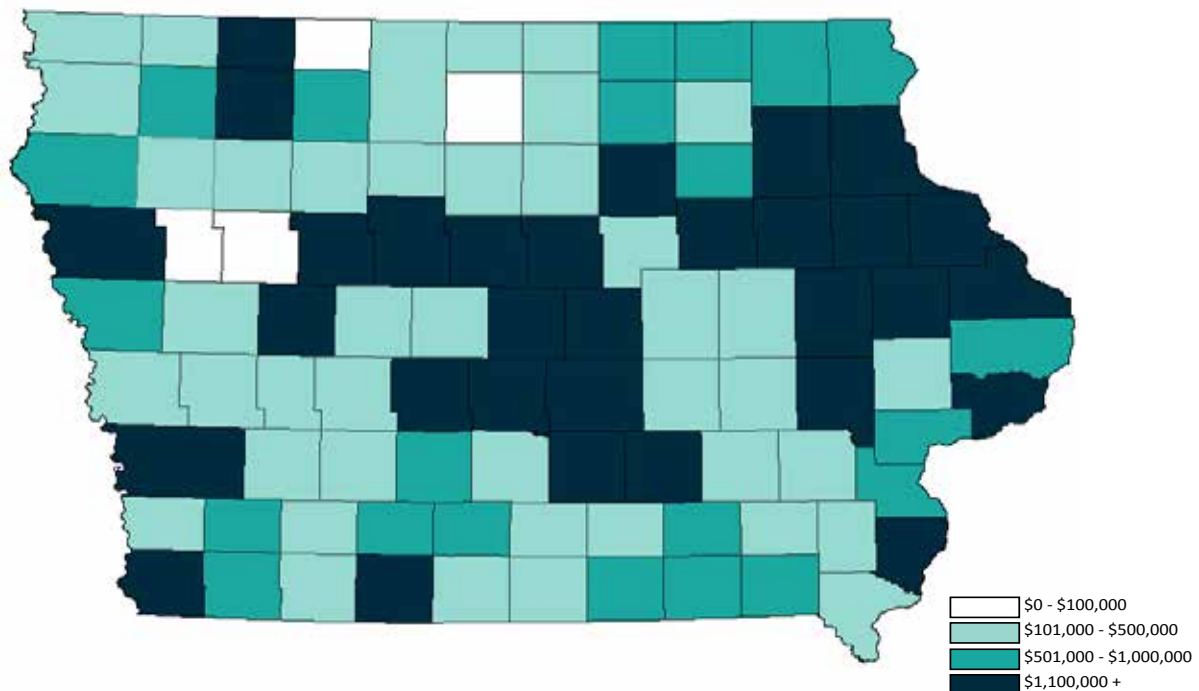
Recommendation

From state fiscal year 2013 – 2017, the State of Iowa has provided \$94,081,962 in grants (24 grants from 5 different state agencies) with all 99 counties receiving some level of funding (Figure 36 and Appendix D). Grant projects are primarily received by city and county agencies putting funding into their communities to improve, expand or add new open spaces and outdoor recreation amenities. 72% of materials used in recruitment packages for communities/counties contain images of open spaces, parks, and their outdoor recreation amenities (NRPA, 2018). What open space, parks and outdoor recreation providers do in their areas matters beyond the obvious recreational users. These places make communities livable and vibrant and have direct and long lasting (indirect) economic benefits.

Natural resource, parks and outdoor recreation providers should develop partnerships, if not already existing, with a community or county’s economic development office, convention and visitor bureau, chamber office, and downtown/community/county development groups. Start with participation in a small partner project, something that may be a new grant opportunity or serves multiple agency purposes. Invite opposing agencies to have a seat on a board or include in planning meetings to discuss opportunities for growth and health & safety needs. Developing a high-level quality of life (health, comfort and happiness), in a community/county/state means breaking down the silos between all agencies by sharing data, resources and ultimately broadening the understanding and appreciation of all sides. Due to the uniqueness of Iowa, many counties/communities have city, county, state and federal outdoor recreation opportunities all within its boundary. Some may view this as

Figure 36

**Outdoor Recreation and Natural Resource Grants Received
Fiscal Year 2013 - Fiscal Year 2017**



competition but agencies need instead practice co-opetition. Co-opetition is the act of competing in certain segments while cooperating in others in order to develop and accomplish a common goal.

One of the best things about living in Iowa is that we are a 4-season state offering potentially different experiences spring, summer, fall and winter expanding the economic reach. Many times, however winter becomes the forgotten season to get outdoors even though natural resource areas come alive with different species and recreation opportunities that can only be achieved with cold and snow. What do our areas have during the seasons and how could it impact local residents, communities, businesses and tourism? Open space, parks and outdoor recreation providers should partner to build print and social media systems that showcase activities happening throughout the year. For example, in the late fall/winter when people normally stay indoors, what opportunities are there for working with local business to #OptOutside (small game hunting, hiking or fat tire biking) for Black Friday? How can communities/counties work with their city, county, state and federal parks for a New Year's Day – First Day Hike, a way for local businesses to start off their new “wellness” year with employees?

When considering a new home, buyers look not only at the physical house and what it offers, but many decisions hinge on the green space, where the kids play, where you will to socialize with family and friends, feed the birds, grow plants, gardens and trees. Natural resource, parks and outdoor recreation opportunities are the green spaces of the community/county and residents, business and industry strongly consider these areas when making decisions. They are where people “play” during non-work hours, an extension of their backyards. Our parks and trails are where people gather to socialize at special events, family reunions and weddings. Our natural resources provide plant and wildlife diversity that help our natural and agricultural systems thrive and are critical in water quality protection, air pollution and flood control. These spaces are vibrant, alive and provide long-term health (natural and human), social and economic benefits, improving the quality of life for Iowans.

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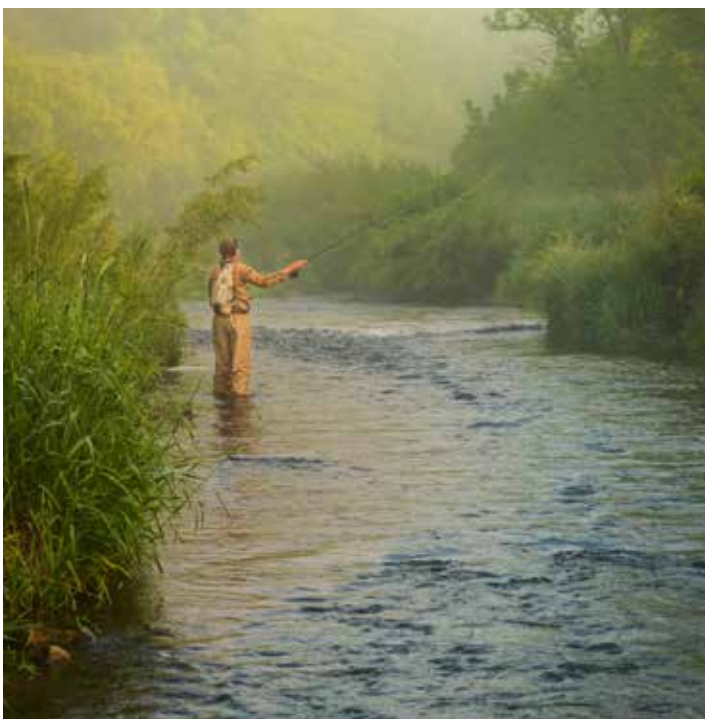
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PRIORITY 2 – NATURAL RESOURCE, PARKS AND OUTDOOR RECREATION OPPORTUNITIES ARE AVAILABLE TO ALL IOWANS

Resource managers strive to create natural systems that include diverse plant and animal species. Increased diversity equals a higher functioning more resilient, and sustainable system that provides multiple benefits back to the system and to those that interact with it. This same philosophy is true when considering diversity, equity and inclusion in outdoor recreation.

Diversity – The condition of having or being composed of differing elements such race, culture, religion, age, socio-economic, disability (physical and mental), gender and sexual orientation. Diversity exists everywhere (households, communities, regions, states and the world) and is influenced by experience, background and ability.

Equity – Represents fairness without bias or discrimination. Takes into consideration values (cultural, socio-economic, religious, etc.), practices, policies and an understanding that everyone comes from a different place on the spectrum (diversity) but still have opportunities for participation in events, location and enjoyment.

Inclusion – Systems and organizational structures are purposefully created to leverage and support the diversity within the group in order for it to be at its best.

“Diversity and inclusion work is not swift: it is an iterative process of awareness building, information gathering, analysis, vision development, planning, and action. There is no magic shortcut.”

- Center for Diversity and the Environment

Goal 1: Natural resource agencies (city, state, county & federal) will strive to improve accessibility through embracing diversity, equity and inclusion.

Current State

Diversity influences what we do and how much time is dedicated to the pursuit of outdoor recreation. Iowa’s estimated population for 2017 was 3,145,711; 90% white, 5.7% Hispanic or Latino, 3.6% African American, 2.4% Asian, .3% American Indian/Alaska Native and .1% Native Hawaiian/Pacific Islander; 49% male and 50.3% female. In the 2012 survey of Iowa Residents’ Participation in and Opinions on Outdoor Recreation (Responsive Management, 2018), Males had a high degree of interest in hunting, fishing, shooting sports activities and golf while females had a strong degree of disinterest in participating in those same activities. Females, however, had a high degree of interest in walking, using trails for health and fitness, wildlife photography and wildlife watching, activities males showed a greater dis-interest in. When looking at income, age, race and where people live similar differences in interest/disinterest in outdoor recreational activities are seen, but also opportunities for future planning.

In a 2014 report, the CDC indicated that at least 1 in 5 people nationally were living with a disability and the number of adults reporting disability was expected to increase (Figure 38). According to the 2009-2012 American Community Survey as reported in the Public Health Needs Assessment of Disability in Iowa 2014, “Iowa non-metro counties had a higher age-adjusted prevalence of physical, vision, hearing, self-care, and work-related limitations/ impairments compared to metro counties. The risk of multiple disabilities was 50% higher in non-metro counties.” In the Iowa Residents’ Participation in and Opinions on Outdoor Recreation survey in 2018, respondents were asked if anything took away from the quality of their experience or decreased participation in recreation activities they were currently pursuing, 6% indicated age/ health with only weather (19%), not enough opportunities



One in five American adults has a **disability**.*

Take a minute to imagine yourself in a public park. Just for now it is empty of people. It's a warm summer's day, the trees are heavy with leaves and the sun breaks through to make you feel warm. There is a slight breeze; you can feel it on your face. As you look forward you can see a path winding its way far into the distance. Around the path there are flowers, grassy patches of cut grass and large leafy trees. The only sound is of birds singing. You hear the birds and smell the freshly cut grass; you feel the heat of the sun and are refreshed by the slight breeze. You look in front of you and decide to follow the path. You begin to walk and you move along the path and hear human voices in the distance. You look first to your right and then to your left, you notice a young child kicking a football. The child throws the ball into the air and catches it as it falls. You notice the ball fall hard into the child's hands. Two people are playing with the child – you smile and wave towards them noticing the smiles on their faces. You continue to walk around some large trees and pass two people sitting on a bench. They are laughing loudly – you try to hear what they are saying. You move again along the path and see a couple walking towards you holding hands. They walk past you as you look at them. As you walk on a number of men are sitting on a bench by the path, talking and laughing – you look at them one by one. As you walk on you are nearing the gate of the park, you walk through the gateway and in front of you, you see this building (make relevant to environment). You walk into the building and then into this room. You sit on the chair and feel it under you. You begin to slowly open your eyes and come back into the group when you are ready.

Contemplate following questions:

- When you saw the child with the ball, was the child female?*
- The two people you saw with the child, did you imagine them to be the child's parents?*
- The two people sitting on the bench: what did they look like? Were they white and able-bodied?*
- The couple holding hands that were walking towards you; were they an old or retired couple, were they able-bodied, were they non-white, were they two women or two men?*
- The group of men on the bench, were they young or old, were they able-bodied, and were they white?*
- Did anyone in your park wear clothing or jewelry which made you think they were from a different culture?*
- Why do you think that you saw the park in that way?*
- How do you think that the way we see the world influences our work?*

-Adapted from Dundalk Outcomers Facilitator's Pack for inclusion in the Intersectionality Toolkit

(7%) and not enough time (7%) with higher responses. Asked of respondents for activities they were interested in but hadn't participated in the last 2 years, 13% indicated the reason for non-participation was age and health. Natural resource, parks and outdoor recreation agencies follow the Americans with Disabilities Act regulations for both construction and media and try to make accommodation in the field where applicable through special permits and licenses.

There are also requirements within state grants that speak to diversity, equity and inclusion. All grant applications submitted to the State of Iowa, pursuant to 2007 Iowa Acts, HF2393, Iowa Codes Section 8.11, must include a Minority Impact Statement. This statement requires a grantee to assess the project to determine if it will have a positive or adverse impact on minority persons (Women, Persons with a Disability, Blacks, Latinos, Asians, Pacific Islanders, American Indians, Alaskan Native Americans, Other) with rationale or consultation included for determination. State Recreation Trails, Federal Recreation Trails, Resource Enhancement and Protection grant applications have grantees provide information on how their project meets the requirements of Americans with Disabilities and civil Rights. The Land & Water Conservation Fund Grant application provides additional bonus points for the following:

1. Projects which have special features for the elderly and handicapped above the normal access requirements for this population will receive three points.

2. Projects which serve an area of greater minority population (race and culture) than the state average of 2.6% will receive points as follows:
 - a. Minority populations greater than: 3.5% - 1 point
 - b. Minority populations greater than: 4.0% - 2 points
 - c. Minority populations greater than: 4.5% - 3 points

Recommendation

Iowa has had fairly consistent demographics but all indicators point to a coming change and in some areas, it has already started. Change - in the composition of race, culture, religion, age, socio-economic, disability (physical and mental), gender, and LGBTQ populations of our state. So how do natural resource, parks and recreation agencies respond? Do existing infrastructure and recreation offerings meet the needs of our citizens and how do our areas become more inclusive of under-represented populations (age, gender, socio-economic, disability, cultural)? In order for our resources to be at their best we need all Iowans understanding and appreciating the purpose and role they play in natural resources contributing to the quality of their life. This happens when people connect with the resource, mostly through outdoor recreational opportunities.

Building a foundation of inclusiveness takes time and involves bringing to the table under-served populations to hear their thoughts on barriers to participation and improvements to areas and facilities as well as a willingness to take action. There are tools agencies can use to gather insight; focus groups (qualitative data), surveys (quantitative data), peer reviews at sites, or through county/community-wide planning where organizations or individuals are included as part of the process. There are a number of organizations around the U.S. as well as in Iowa that can assist natural resource, parks and recreation agencies in these efforts as well as to provide feedback on future projects. These groups may also have additional resources and may be interested in partnering on projects because they have knowledge or access to volunteers, engineering/structural expertise gained from other projects, or know of funding opportunities. The following is a short list of government agencies and non-government organizations that can be contacted. Additional resources may exist at the local or regional level:

- Iowa Department on Aging - <https://www.iowaaging.gov/>
- Local Area Agencies on Aging - <https://www.iowaaging.gov/area-agencies-aging>
- Iowa Department of Human Rights - <https://humanrights.iowa.gov/>
- Iowa Association of Council of Governments - <http://www.iowacog.com/>
- Latino Outdoors - <http://latinooutdoors.org/>
- African-American Nature & Park Experience - Facebook Page
- Outdoor Afro - <http://outdoorafro.com/>

Not only should agencies consider the physical side of inclusiveness, but also thought and planning should happen around promotion and marketing. Many locations may already have appropriate opportunities and amenities but is it well-defined for all users? Websites, social media, brochures and wayfinding tools should also include aspects of inclusiveness in the messaging and symbols used. People make decisions on what they read and see many times before they ever venture to a site. Images should show a wide diversity of people and gatherings of people participating in recreation opportunities. Messages should speak to accommodation of use beyond what has been traditional, such as instead of only noting the distances on a trail map (print, web or sign) it may also include surface material, difficulty and time to complete at an average 2.4 mph walking speed. This type of information can provide users with physical challenges extra data in order to help plan a safe and enjoyable trip, where if left unknown or not easily accessible; they may never venture to the site even though the opportunity exists.

Signage in areas should always include the use of universal symbols. Universal symbols are identifiers recognized by almost everyone throughout the world. For recreation, both the National Park Service and Fish & Wildlife Service use universal symbols that generally meet the needs for all natural resource, parks and outdoor recreation sites and are readily available. Navigating through our areas, these symbols stand out and are seen whether traveling by car, bike or boat much easier than a sign consisting of text only. These symbols can also carry through on brochures or other media creating a consistency across all channels of communication.

Natural resources change over time, resource agencies plan for and adjust for this. The makeup of Iowans, although historically and seemingly unchanged, is changing and services offered and the promotion of them should reflect that. Natural resource and park and recreation agencies need to find the balance of conservation and protection while serving all Iowans equitably.

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PRIORITY 3 - THE RIGHT OPPORTUNITIES. IN THE RIGHT PLACE. DONE THE RIGHT WAY.

In Iowa, 2.4% of the landscape is open for public access. Our public areas showcase best practices for habitat management that private landowners can emulate, but with so few public acres, they are some of the only places where many types of outdoor recreation can take place. Natural resource, parks and outdoor recreation agency's responsibility is to maintain high quality resources that support a diverse ecosystem while also trying to navigate increasing recreational users and new recreational pursuits. There has been a philosophical shift in how agencies approach engagement of people interested in outdoor recreation. It starts with an organizational commitment to planning and development of strong partnerships which are foundational to overall success. This will foster consistent messaging and public relations strategies will help resource managers find a balance between the resource and the user and ultimately result in strategic approaches that are also sustainable.

Goal 1: Increase collaboration and planning at the local level, utilizing data to manage land use restrictions vs recreational needs, understand audiences and meet quality of life goals.

Current State

During the establishment of the Land & Water Conservation Fund, the federal government and the Outdoor Recreation Resources Review Commission realized that in order to meet the recreational demands of citizens, planning was needed at the local level. Additional Federal agencies; Fish & Wildlife Service, Department of Agriculture, Environmental Protection Agency and the Federal Highway Administration also over time have added the requirement of state plans, many requiring similar planning and reporting (conservation, preservation, recreation). This Outdoor Recreation in Iowa Plan is charting a new course in its attempt to bring together federally required state plans and create synergy between them. Hopefully, this will draw attention to the existence of all plans germane to Iowa, what their focus is and how they relate to planning required at the local level.

"Let every citizen of Iowa catch and hold that vision of the economy and the enrichment of human living to be achieved only through state-wide, far sighted development plans. Not for too visionary, but for too meger-minded planning shall we be held to account."

- Report on the Iowa Twenty-Five Year Conservation Plan, 1933

Iowa's Resource Enhancement and Protection Program (REAP) was signed into law on May 27, 1989. REAP invests in the enhancement and protection of the state's natural and cultural resources. All of Iowa's 99 counties

receive funding through quarterly payments and can apply annually for grants. The REAP Program also includes a requirement that every county has a Resource Enhancement Committee. A REAP committee is developed and guided at the local level to meet the interests and needs of the county's residents. Currently, 97 counties have contacts for their REAP committee. County Committees have several functions:

1. The signature of the county committee chairperson is necessary for all city, county conservation and private/public costs share grant requests.
2. County committees are in the best position to educate county residents on what REAP has done for their county, along with the values and benefits of REAP.
3. County committees should prepare a plan for their county showing what they want REAP to accomplish in the future, and where they want to see REAP money expended. This is a proposed 5-year plan that includes a one-year proposed expenditure plan which is submitted to the Department of Natural Resources.

Recommendation

Many times plans are created and placed on a shelf. Sometimes those plans are reviewed and updated but not necessarily on a routine basis. It is recommended that plans (area/topic specific such as X city/county/state park or wildlife area, county-wide, regional or statewide) are at least reviewed and updated on a consistent basis to keep in touch with changes in climate (natural, political, economic), technology and people's interest and needs. Federally required plans by state agencies have varying cycles of renewal from the most frequent Outdoor Recreation in Iowa Plan and Iowa in Motion 2045 State Transportation Plan (5 year schedules) to Iowa's Forests Today and the Iowa Wildlife Action Plan (10 year schedules). As indicated above, county-wide plans as required by the REAP Program must be renewed every 5 years.

Routine natural resource, parks and outdoor recreation planning ensures that recreation opportunities and the associated natural resources are safe, well-constructed and maintained, provide easy and sufficient access, and relevant to the current demands and within the limitations of the resource. Planning helps maintain equally distributed recreational opportunities so everyone within Iowa has a relatively close-to-home opportunity in which to participate and has offerings for year-round participation, for all ages and those with physical limitations. Planning, at the local level, encourages groups to consider all city, county, state, federal and private areas and efforts to help eliminate redundancy, develop consistent messaging and promotion, and help foster private/public partnerships that create the best opportunities for outdoor recreation and natural resources conservation in the community. Planning also considers economic development, tourism and health and wellness of a community or county's citizens.

Routine local planning (area specific such as X city/county/state park or wildlife area, county-wide and regional) should link to and support larger state plans that focus on conservation and recreation. Local plans take statewide scale information down to the action/engagement level and show how the work can be accomplished and how users are affected. Following is a list of statewide agency plans for review and consideration when developing local conservation and recreation plans:

- Iowa Wildlife Action Plan: Securing a Future for Fish & Wildlife – A Conservation Legacy for Iowans (see "A vision for Wildlife-Associated Recreation" in chapter 6)
- Iowa's Forests Today: An Assessment of the Issues and Strategies for Conserving and Maintaining Iowa's Forests
- Wetland Program Plan for Iowa & Wetland Action Plan
- Healthy Iowans 2017 – 2021: Iowa's Health Improvement Plan
- Iowa Bicycle and Pedestrian Long Range Plan
- Iowa In Motion 2045: State Transportation Plan
- Outdoor Recreation in Iowa Plan
- Iowa's State Water Trails Plan
- Cultivating the Future of Outdoor Recreation in Iowa: Strategies for Recruiting, Retaining and Reactivating Outdoor Recreationists

There are other planning tools that might be of assistance for area, county-wide or regional planning. Councils of Governments (COGs - <http://www.iowacog.com/>) are a great resource and have tools for county-wide or project specific planning and have worked with many state agencies, facilitated and developed local plans throughout Iowa. The Bureau of Land Management uses a Benefits-Based Planning and Management Model and a Recreation Activity Management Plan (www.blm.gov/sites/blm.gov/files/uploads/Media_Library_BLM_Policy_H-8320-1.pdf).

"Five guys on the court working together can achieve more than five talented individuals who come and go as individuals."

- Kareem Abdul-Jabbar

No matter the model used, the first step in successful planning understands what the resource provides and what its limitations are. Just as importantly is an understanding of recreational users' current participation and interests. At a statewide level, a survey is conducted every five years (Appendix C), however, there are benefits to developing simple local surveys or listening sessions in each community within the county to engage users, listen to their thoughts and ideas to determine what will benefit the area. Secondly you need to assess what additional opportunities are available or should be available to assist new or returning users. The Outdoor Recreation Model (ORAM) is also a tool to consider. Individuals adopting a new idea or activity progress through "stages" (awareness, interest, trial, continuation with support, continuation without support) before embracing the activity. On page 8 of *Cultivating the Future of Outdoor Recreation in Iowa: Strategies for Recruiting, Retaining and Reactivating Outdoor Recreationists* you will find further description and use for this tool (<http://www.iowadnr.gov/About-DNR/Recruitment-Retention-Reactivation>). Considering all of this, agencies can meet gaps and resolve concerns identified by users in order for them to be successful and be a lifelong participant. Plans that include county-wide or region-wide strategies, implementation, and success measures are challenging but necessary and will help to improve Iowa's support, protection and use of our places.

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Goal 2: Develop Partnerships with Outdoor Recreation Business and Industry

Current State

The outdoor industry supplies recreational users with the tools and equipment needed for successful ventures. For example; motor vehicle and parts dealers, transportation equipment manufacturing, finance and insurance, marina services, boat dealers and educational services all contribute a recreational boater's experience. The products they deliver to recreational users are based on survey information (Outdoor Recreation Industry Association), new trends, what customers are buying, and social media and verbal feedback. They rely on this information to be successful whether they are building the boat (industry) or selling one (business).

Traditionally, natural resource, parks and outdoor recreation agencies work with segments of business and industry principally through partnerships on targeted promotions, give-a-way items, donations of equipment for activities, programs and events, or by delivering presentations at special events (ones organized by agencies at public areas as well as those at the location of the business). It isn't uncommon for agencies (primarily state and county conservation boards) to have tables at a sport show or swap meet targeted at specific outdoor pursuits. Multi-Sport complexes also have partnerships with local recreation businesses or suppliers of recreational equipment both through sponsorships of the complex, or through a team's uniforms and equipment.

Partnerships between business and industry and natural resource, parks and outdoor recreation agencies beyond this in the realm of sharing data or recreational planning, is limited.

Recommendation

Business and industry continually look at recreational needs, what activities are gaining strength or weakening, upcoming new activities as well as the support products needed in order to have a positive experience. They have at their disposal a wide array of data which they can look at from surveys such as those administered by the Outdoor Recreation Industry Association, other trend reports and the individual business's sales and

customer service data and reports. Traditionally, natural resource, parks and outdoor recreation agencies are more reactionary. Once new products or activities arrive it is then determined if the activity is, or has potential to be, detrimental or compatible to the resource and if there are conflicts with other recreational pursuits already allowed that would become an issue. Data used for decision making generally comes through word of mouth accountings from recreational users (e.g. first person accounts to staff, TripAdvisor, Yelp or Facebook) and occasionally from focus group or surveys.

Successful partnerships exist when two entities share in the profits and losses of a common business. Business, industry and resources agencies have a common business goal in outdoor recreation. What does each party gain from this partnership? Simply, without high quality natural resources and opportunities for outdoor recreational pursuits there would be limited recreational users with which to purchase the goods and services. Each entity brings different knowledge, as stated above, to a discussion or project, but when one's strengths can shore up another's weakness that is when the true purpose of a partnership becomes reality.

Developing strong partnerships that both parties find value in takes time and trust. It starts with the basics of understanding where each party is with its vision, goals and passion through good and open communication. Below are questions that can be used to initiate conversations in order to meet and adapt to local recreational needs.

Outdoor Recreation Participation

Do you hear from customers and/or dealers in the area that there is sufficient and quality outdoor recreation opportunities available? If not, why (environmental factors, enough space, ect...)?

What do you think are the most popular outdoor recreation activities in our area? Do you see differences by gender? By age? Ethnicity? Other? What about the activities you see or hear about that aren't as popular - or are there recreational activities on the rise?

Do you feel that overall participation in outdoor recreation in the area is increasing? Decreasing? Why?

What do you see as significant barriers to participation in outdoor recreation (real and perceived)?

Do you find people make purchases and discuss adventures for out-of-state use or in-state use more? If out-of-state is more frequent, why? Do you feel customers know the opportunities and locations for participation in the area? If not, why not?

Do you feel that we have unmet needs or opportunities for outdoor recreation?

What is the role of public health in outdoor recreation? What are ways the public sector and possibly in partnership with health sector and industry could partner to promote this as also a healthy alternative.

Learning and Skills

If you offer classes, do you feel you have solid attendance? Do they request in-person classes, mentoring, on-line workshops/training?

Do you feel that people want to learn in groups, with family and friends or one-on-one more often?

Do you feel class attendees are more comfortable when it is a mixed class or specific to their gender/age/ethnicity/other?

Would you be interested in partnering with the natural resource, parks and outdoor recreation agencies for classes?

Partnerships with Industry

Where do you get data or feedback on trends in outdoor recreation? Is this data you can share with local resource agencies? Are there places we should be going to gather data to help with planning efforts?

Where do you see outdoor recreation going in the next 5 years? Without sharing trade secrets, what are your priorities? What do you think local natural resource, parks and outdoor recreation agencies priorities should be?

Are there ways agencies could help the outdoor recreation industry (e.g. tools to help meet customer needs) or partner with small grants?

Are there ways business and industry could help agencies that we aren't currently doing or aware of? (e.g. partnerships with pilot projects, educational and outreach within stores)?

What advice could you provide on marketing that would help local agencies connect residents to outdoor recreation opportunities? Do you feel social media plays a large part of connecting with your customers?

Industry

Where is your favorite place outdoors in Iowa? Why?

Does your company foster a culture of outdoor recreation with your employees?

If we could do only 1 thing locally to dramatically improve outdoor recreation what would it be?

Establishing effective and inclusive partnerships is not easy and doesn't happen overnight. It starts with asking questions, being open to other's perspectives, finding a shared vision, looking for innovation and creating efficiencies. Moving forward in partnership, outdoor recreation businesses and industry and natural resource, parks and outdoor recreation agencies can create a system for Iowans that challenges the status quo, sets recreational users expectations, increases the quality of the experience all while building and maintaining a balance of resource awareness and protection. Ultimately, the reason each entity exists.

Goal 3: Utilize the strengths of multiple governmental organizations to develop consistent messaging and public relations strategies for natural resource, parks and outdoor recreation and tourism activity.

Current State

Tourism is generally defined as travel at least 50 miles away from home for a length of stay a minimum of 24 hours. Nature-based tourism can then be defined as the central component of the tourist activity focusing around the resource or recreational activities that take place within the resource. Nature-based tourism brings together local businesses and natural resource and outdoor recreation providers to develop a common vision and goals which ultimately helps support the local community.

According to the Iowa Travel Federation, in 2016 the Iowa Tourism Industry impact on Iowa's economy was \$8.23 billion, a 2.0% increase over 2015. Travelers are mostly from the Midwest averaging 3.5 days with 33% spending \$1-\$250 per trip. Tourism supported jobs in several sectors; food service, entertainment and recreation, lodging, auto transportation, public transportation, general retail trade and travel planning and on average every dollar spent by domestic travelers produced 16.4 cents in payroll income for Iowa residents. AARP data shows that 99% of Baby Boomers traveled for fun in 2017, taking an average of 5 trips per year. Data also shows that Iowans and surrounding state travelers are still taking shorter and more frequent trips. Travelers stay closer to home and travel as a family mostly to visit other family or friends. 63% of travelers typically travel 10 miles or less with only 10% travelling more than 50 miles (Outdoor Foundation, 2018) When Iowans who fished were asked how far they traveled to participate in their activity 34% traveled at least 31 minutes and 31% traveled at least 1- 5 hours away with 30% of the trips staying in Iowa (Responsive Management, 2018).

Currently, the Iowa Tourism Office's website focuses on the following themes directly related to natural resources and outdoor recreation, that when you click deeper into the site offers information and resource links to other websites:

- This is the Great Outdoors
- This is Iowa's Great River Road
- This is Historic
- This is Hunting and Fishing
- This is Winter Fun
- This is Summer Fun
- This is biking
- This is the Scenic Route
- This is Sports

Recommendation

Through the process of developing the state's R3: Cultivating the Future of Outdoor Recreation in Iowa plan, workgroups and partner input stressed the need for an overall communication strategy. Strategy 6 of that plan (available in Appendix B) is to communicate value of outdoor recreation to expand agency and organizational relevance with the measure of success being that a consistent marketing brand will be created and shared across the agencies and partner networks. It is recommended that this strategy be expanded to all natural resource and outdoor recreation activities and also include a more expansive network of partners, such as the Iowa Tourism office, Department of Public Health and the Department of Transportation. Many of these agencies have data and information about audience needs and expectations that when pulled together could create an effective platform. For example, when connected through consistent messaging, efforts like Healthiest State Month (October) can include promotions during Physical Activity Week of natural resource and outdoor recreation messages and opportunities that promote healthy living, joining together multiple agencies goals for the betterment of all Iowans. This is just one example of many individual statewide efforts.

Key messages, marketing strategies and brands, said consistently and across multiple channels have a greater impact than any one entity trying to go alone, especially when multiple agencies and partners have similar or complimentary visions and goals. Building off of themes already created with the Office of Tourism first at a statewide and then the local level can help spread key messages to the value of natural resources and outdoor recreation for Iowans. Ultimately the goal is that Iowans not only understand what is available and where to go in order to experience and participate in natural resources and outdoor recreation but they also physically act upon this knowledge. Use leads to a greater understanding and appreciation and as stated in previous priorities, action contributes to a healthier lifestyle and healthier (physical, emotional and financial) community. A platform created at the statewide level should include key messaging that is:

Concise: Will focus on three to five messages.

Strategic: Has a defined purpose, speaks with a single and identifiable voice, shows value and benefits to recreational users/tourists and the resource

Relevant: Connects with something within the frame of reference to the actual or potential recreational participant.

Compelling: Forges an emotional and intellectual connection between the interests of the recreational user and the meaning of the resource.

Simple: Easy to understand and repeatable. It is easily incorporated into programs, promotions and social media.

Memorable: Messages resonate and last.

Real: It is authentic to the experiences users could have.

Tailored: Can be easily adapted at the local level to fit with any agency, partner organization for all natural resource areas and recreational opportunities including all seasons.

Iowans travel time is primarily during the traditional recreational season, June through August. Iowa however, has tremendous opportunities throughout all four seasons. Development of messages or campaigns should also include emphasis on continuing the exploration of Iowa's outdoor opportunities September – May. Fall-color and migration watches, small and large game hunting, fat-tire bike riding, snowmobiling, First-Day Hikes, and spring migration are all great outdoor activities that could see increase in participation. Continued outdoor participation into the "off-season" also keeps people engaged and maybe seeing and learning about a side of Iowa they've missed before. Creation of itineraries for each season showcasing locations and activities in which to participate in various activities and how to connect with others that have similar interests might have value to expanding the recreation season.

Iowa is a great place to live and work, but it's also a great place to travel and try new things. Parks, trails and outdoor spaces are where people can go to make these connections, find meaning and share experiences with family and friends and future generations. Positive experiences lead to continued and increased participation, better health and quality of life. Consistent messaging from all sectors benefiting from nature-based tourism can help remind and provoke Iowans to get outdoors.

Resources

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Section 4: Doing Great Things

The Outdoor Recreation Plan in Iowa sets forth the priorities for the next 5-years. To kick-start thinking and planning, below are examples of activities across Iowa that have been making an impact.



High Trestle Trail

Western Expansion and development of the railroads in the mid-to-late 1800s brought many Italian immigrants to Central Iowa to work in the coal mines. Camps were built along the river valley to support the growing population and in 1881 the first rail road was built in the region. The coal industry needed access to the other side of the river valley, so a wooden bridge was built in the 1800s. In 2005, the Union Pacific Railroad sold the track to the Iowa Natural Heritage Foundation who worked with communities and counties to make the paved trail and iconic bridge a reality.

Engineering design could have successfully taken people from one side of the river to the other, however, it was the “story”, embodied in the purposeful integration to the architectural structure, that captured the imagination and created a relevant experience for those crossing the bridge. The artwork takes into account many factors and functions, expressively using materials to interpret history. Lighting is also a significant factor, thoughtful of the site as it changes from day to night, as well as extending the usage of the trail and bridge. The installation is now the “keystone”, uniting five distinct communities along the trail.

According to a study conducted by Iowa State University’s CyBIZ Lab, from 2013 - 2015, the annual usage for the High Trestle Trail is 246,193 people. The report notes that “the economic activity of users generates direct impacts of \$5,368,866 and total impacts of \$7,968,100.” This economic stimulus comes from the events, amenities and businesses that besides the natural decision to “go bike today,” draw users to the trail as well as the equipment, sporting goods, lodging and other services that accompany this activity. 80% of the businesses alone on the trail have seen an increase in general customer traffic with about 67% noting an increase in revenue.

Iowa’s Community Fishing Program

To address Iowa’s increasing urban population, the Iowa Department of Natural Resources made it a priority to develop a Community Fishing Program and to hire a statewide Community Fishing Biologist to focus on Iowa’s larger and more diverse urban cities. According to the last US Fish and Wildlife Service’s National Survey of Fishing, Hunting, and Wildlife-Associated Recreation in 2011, approximately 56% of anglers in Iowa and 72% of anglers nationwide are considered urban. Additionally, according to the last US Census Survey in 2010 64% of Iowans were considered urban. This is a 3% increase from the previous survey in 2000.

Although fishing opportunities exist for urban anglers in Iowa, many areas are unknown by anglers or are not marketed for fishing, lack proper amenities and access, and do not have the ability to sustain a quality year round fish population. By working with fisheries management biologists and by creating partnerships with city governments, developers, engineers, and other community partners, these barriers can be addressed to increase the presence of quality fishing opportunities in urban Iowa. Furthermore, by creating these community partnerships, we can get fishing information to areas that have not normally been customers of the DNR, specifically to the growing minority populations in Iowa's larger cities.

The overall goal of the program is to increase or enhance existing angling opportunities and access within urban centers by working with city governments and partners to promote fishing as a safe, family friendly activity. We will also identify and address barriers to fishing in urban areas to increase participation within Iowa's larger populated areas. One way to achieve this goal is to work with cities to build wet-retention basins to specifications that would sustain a year-round fishery, while maintaining the original storm-water management goals. These retention basins will need to have a steeper slope (mostly 3:1), as well as deeper maximum depths (15-25 ft.) and average depths (10-12 ft.) than are currently suggested for wet-retention basins. To give cities and developers this option, we have submitted a more fishing friendly wet-retention basin design to be included in the upcoming chapter 7 revision of the Storm Water Manual. This design will help hinder the current issues plaguing these basins such as excess aquatic vegetation and winter fish kills. Once the basin is built to specifications and the city has consulted with the Community Biologist, we will make the initial stocking for the city of Largemouth Bass, Bluegill, and Channel Catfish.

We are currently dispersing consistent harvest regulations and public fishing signage to be placed at each publicly accessible urban fishery that will include the Iowa DNR's logo as well as partner logos. The Community Biologist will coordinate with the district Fisheries Management Biologist on future fish stockings, management, and consultations with the cities. We will also be working to identify what is needed to get residents out fishing in these areas. Some preliminary research suggests that amenities such as trails, bathrooms, ample parking, and garbage cans are things that people look for when trying to find a place to fish.

Lastly, in May of 2018 we developed a statewide Community Fishing Atlas which can be found at <http://www.iowadnr.gov/Fishing/Fish-Local> that will show where public ponds are located within these cities. Work is currently focusing on the top 30 cities by population along with their surrounding fast growing suburban areas. This would include major cities with a current population of greater than 15,000 residents. Future work will look at ways to secure funding for competitive grants for cities to apply for to help alleviate the costs of renovating or building quality fisheries. Since 2016, the Community Fishing Program has assisted with the design and/or stocking of 21 new community fisheries across the state with more on the way.

Northeast Iowa Food and Fitness initiative

Back in 2007, after learning that childhood obesity was rising drastically, a group of people from Northeast Iowa got together and asked the questions- "How can we make our region a healthier place? A more vibrant place? A better place? Now, and for years come? For everyone, but especially for our children?"

So for the next two years, this group continued to meet and to imagine. To imagine what healthier families could look like. To imagine what healthier schools could look like. To imagine what healthier communities could look like. And from this group's imagination and willpower came the creation of a grassroots movement. A movement that would one day change the world in Northeast Iowa, one family, one school, one community at a time. This movement became known as the Northeast Iowa Food and Fitness Initiative (FFI).

For over 10 years, through strong regional collaboration, FFI has been transforming the region's food and fitness systems to create a region where every day, all people have access to healthy, locally grown food and abundant opportunities for physical activity and play. With support from the WK Kellogg Foundation and other generous donors, FFI has been able to invest well over \$8 million back into the region through its transformational efforts—and the impact has been truly remarkable.

FFI is made up of a team of core partner organizations and many regional partners, including the Iowa Department of Natural Resources, working together towards the shared vision of making the healthy choice the easy choice. An aspect of this shared vision is focused on the promotion of 'active living' and to ensure

that people use the natural and built environment of Northeast Iowa for physical activity, play and active transportation. The region boasts a regional Safe Routes to School (SRTS) program, the first of its kind in Iowa and now a national model for SRTS in rural areas, thanks to FFI. Additionally, FFI has focused efforts on connecting families and residents of Northeast Iowa to parks and outdoor recreation areas throughout the region. Being outdoors engaging with nature is a great way for families to spend quality time together while being active. FFI partners, including Iowa Department of Natural Resources, have been instrumental in this endeavor. Examples of activities promoted over the years include an outdoor treasure hunt known as ‘Safari’ and community walks.

Even with ten solid years of efforts, thousands of success stories and millions of dollars invested, the work of FFI is not yet over. Obesity rates in the region are still above state and national averages. And current predictions are that one in three of our first graders will become diabetic in their lifetime. Changing the culture or mindset of a community or region does not happen overnight; in fact, it does not even happen within a decade. It is going to take a full generation of effort to truly realize long-lasting, sustainable changes around the region’s food and fitness systems. But some day, years down the road, FFI and its regional partners know that this work will make a difference. And that is why they continue to keep fighting the uphill battle day-in and day-out.

To learn more, visit www.iowafoodandfitness.org.

Fishing for Fun

Shelby County Public Health and the newly formed Shelby County Prevent Child Abuse Council (SCPCAC) kicked off a campaign to provide opportunities and educational events that strengthen families and support positive childhood experiences.

National Child Abuse Prevention Month features the blue pinwheel as the symbol of the joyful childhood all children deserve. In honor of Child Abuse Prevention Month, the Shelby County Prevent Child Abuse Council is dedicated to education in the community and looking out for our children. The Shelby County Prevent Child Abuse Council showcased community resources that help parents manage stress, strengthen connections, and gain parenting skills.

The Learning for Life program provided a “Fishing for Fun” event on Monday, May 7, 2018 from 5:30 p.m. to 7:30 p.m. at Nishna Bend, 516 Maple Road, Harlan. Parents and children went through the paces to learn how to fish as well as how to clean and prepare. At the conclusion of the event attendees were helped with purchasing a fishing license so that they can extend the opportunity well into the future.

“Child abuse is preventable. We want to lead community efforts to eliminate child abuse and neglect by strengthening children and families through education and prevention. Our goal is for all children in our community to be raised in the safe, stable and healthy environment children need to thrive,” said Joan Kloewer, president of the Shelby County Prevent Child Abuse Council.

For additional information, call Shelby County Public Health at 712-755-4422 or visit the Prevent Child Abuse Iowa’s website at www.pcaiowa.org.

Partnerships Make Things Work

The Archery Trade Association has provided over \$75,000 in educational bowhunting and bow fishing equipment trunks and booklets to the state of Iowa free of cost. Training and equipment have been provided to several archery in the schools instructors, county conservation board naturalists, city park and recreation staff, teachers and volunteer hunter education instructors across the state impacting hundreds of youth and adults annually through local programming.

The ATA has also been instrumental partnering with local archery shops, agencies and organizations to provide designs and input in archery range development through their Archery Park Guide. One of the most notable projects the ATA was involved with in Iowa is the Raccoon River Park Archery Range in West Des Moines. The archery facility is the first of its kind in Iowa and includes features such as:

- Enclosure walls/fencing
- Overhead ‘arrow curtains’
- Shelter over shooting area

- Staging area
- 12 shooting lanes
- Targets up to 40 yards distance

Funding for this project was made possible by Polk County Board of Supervisors, IDNR Shooting Sports Program, WDM Community Enrichment Foundation, City of West Des Moines.

Also, The Sportsman’s Warehouse in Ankeny has been a huge partner to many natural resource based outdoor recreation organizations and agency’s. They donate product, services and store discounts to many banquets and events across the state such as the Iowa Outdoor Expo, National Archery in the Schools Programs (repair bows free of charge), Iowa Hunter Education Instructor Association, NGO Banquets and the Iowa Traditional Bowhunters Annual Rendezvous.

Sportsmen’s Warehouse has also partnered to offer Hunter Education classes and other outdoor recreation programming such as outdoor cooking, Dutch oven cooking, mushroom hunting, ice fishing and hunting seminars. Sportsmen’s Warehouse was one of the first industry partners to jump on board with the state’s R3 efforts sending staff to workshops, summits and planning sessions. They have also implemented a “Ladies’ Night” program that is held multiple times throughout the year that offers special deals and discounts to women interested in learning more about outdoor recreation in Iowa. They have several instructional booths and programs throughout the evening geared towards women. Dave Nitzel, the store manager, has also done several programs at partner’s requests such as treestand safety at the Iowa Outdoor Expo and Introduction to Bowhunting at the Becoming an Outdoors Women Annual Workshop.

Castaway Disabilities

The mission of Castaway Disabilities is to encourage a rehabilitative and therapeutic fishing event to Veterans with life changing disabilities. Offering veterans a chance to make memories with fellow Veterans in the beauty and serenity of the outdoors while being part of recreational activities on a lake.

A six-day event was held for the 2nd time in 2018 at Honey Creek Resort State Park on Rathbun Lake. Participation in the event is open to all veterans with spinal cord injuries, orthopedic amputation, or life changing disabilities. During the week-long event, participants spend every day fishing from boats, pontoons and off the dock with nightly campfires, fishing contests, a fish fry and awards night. These activities provide Veterans that have physical limitations and can’t participate in other more strenuous activities an avenue to health and wellness. This event also addresses mental health issues and assists Veterans and their families with resources to enhance normalcy of everyday life.

In 2018, 64 veterans and



41 caretakers participated. Support came from 36 staff/volunteers including 8 Veterans Affairs, 26 community members and 16 other donors. Partners were from the Iowa City Veterans Affairs HCS, DAV Chapters 6&53, Eagles 695 and Iowa Department of Natural Resources.

Gone Fishing Digital Media Campaign

Through a partnership with the Iowa Tourism Office, the goal of the Gone Fishing campaign was to promote Iowa's fishing opportunities through innovative, attractive and helpful content on numerous digital media platforms. Through this partnership, the DNR hoped to find ways to expand its target audiences, especially families planning summer activities, which is the key tourism market. Ultimately, the Iowa DNR wanted to determine if digital marketing, especially social media and email marketing, can convert those who enjoy DNR/Tourism content into license purchasers.

From May 24 - July 31, 2016, DNR and Travel Iowa showcased fishing as a "leisure activity of choice" for outdoor-minded Iowa families and casual anglers among several of its on-line channels. The campaign included a "Gone Fishing" web page with numerous where-to/how-to articles, dozens of social media posts on Facebook and Twitter, and advertisement purchases including Facebook carousel ads, promoted posts and native ads, all leading to either the DNR license sales website or the campaign page at www.traveliowa.com/fishing. The campaign also included a "Gone Fishing" email to past purchasers who had not yet bought their 2016 license.

The strength of the campaign was the partnership between the Iowa DNR and Tourism. The program allowed both agencies to reach new audiences with relevant content. Additionally the program leveraged strength areas - the DNR has content expertise about outdoor recreation, and Tourism has sophisticated advertising knowledge, including media buying, design, content development and metrics. Additionally, the Iowa DNR's license vendor, Active Network, crafted email communications and provided analytics.

Overall, 28,302 sessions to the "Gone Fishing" campaign/content page were generated on Travellowa.com during the campaign time-frame and social media efforts drove 22,718 sessions. 2,544 on-line visits to the DNR license buying page occurred during the campaign time-frame, with digital content and adds referring 577 people to the page. DNR reported on-line fishing license sales up 22% from 2015 during the campaign time-frame although direct tracking from social media was not available.

Opening up partnership doors between Iowa DNR and Tourism allowed each entity to build on each other's strengths and expand the reach and engagement with new audiences.



Section 5: Funding and Grant Opportunities

Cities, County Conservation Boards, the DNR and federal agencies continue to increase the quantity and quality of recreational opportunities throughout the state. Through the assistance of grant funding, mostly from state or federal funding sources, these agencies have developed small and large projects across the state. Projects range from playground upgrades, development of new shelters, upgrade of large campground electrical systems or land acquisitions and habitat improvements. Most projects are not accomplished by a single entity alone, they usually involve working with partner groups such as Pheasants Forever, Ducks Unlimited, Iowa Natural Heritage Foundation and local organized clubs or foundations.

Every county in Iowa has received some level of funding in the last 5 years towards outdoor recreation opportunities (Appendix D). In general, there are more projects submitted than can be funded for every grant offering. Competition is high which means grant applications have to be targeted, specific, and justified. Some grants do not require matching funds but in almost every grant, showing matching funds is a positive move.

A handful of grant opportunities require that project justifications show relationship to furthering priorities of this plan. Quality outdoor recreation doesn't exist if there aren't efforts to maintain a quality resource as well, so connection to all state and federal plans (eg., Iowa Wildlife Action Plan, Iowa's Forests Today, Iowa's Wetland Action Plan, found in Appendix B) should be considered as a best practice as well as looking forward to future maintenance of the upgraded or new amenity. In REAP meetings held around the state in the fall of 2017, it was common to hear attendees talk about maintaining amenities and resources as it was conversations about building or acquiring new.

Competitive grants are offered through the following funds. For specific information on each grant and the grant requirements please visit their websites.

Land and Water Conservation Fund (LWCF)

The Land and Water Conservation Fund (LWCF) Program is a federally funded grant program that provides match funds of 50 percent for outdoor recreation area development and acquisition. Iowa's cities and counties are eligible to participate. This program provides an excellent opportunity to develop a wide range of outdoor recreational projects in high demand. Popular projects in recent years have included skate parks, playgrounds, new and renovated swimming pools, sport complexes, campgrounds and multipurpose trails.

Enhance Iowa

This program is administered through the Iowa Department Economic Development Authority. Enhance Iowa provides funding to assist with projects that are recreational, cultural, entertainment or educational attractions as well as sports tourism. Funds must be primarily used for vertical infrastructure (land acquisition and construction, major renovation and major repair of buildings, all appurtenant structures, utilities, site development and recreational trails). Projects must be available to the general public for use and at least 65% of the total project funds have to be raised.

Resource Enhancement and Protection (REAP) City Parks & Open Space

This money is available to cities through competitive grants. Parkland expansion and multi-purpose recreation developments are typical projects funded under REAP, which comes from annual allocations by the Iowa State Legislature.

Resource Enhancement and Protection (REAP) County Conservation

This money is available to counties, only if they are dedicating at least 22 cents per \$1,000 of the assessed value of taxable property in the county for conservation purposes. This money is available to counties for land easements or acquisition, capital improvements, stabilization and protection of the resources, and environmental education.

Resource Enhancement and Protection (REAP) Private/Public Open Space Acquisition

This money is available for cost-share land acquisitions with private organizations. The cost-share arrangement entails 75 percent of the acquisition costs coming from REAP and the other 25 percent from private contributions. This program provides an excellent opportunity for private conservation organizations to help the DNR achieve open space protection goals. The DNR owns and manages the property that is jointly purchased.

Resource Enhancement and Protection Conservation Education Program (REAP CEP)

This money is available to grantees for programs that teach people of all ages about their environment and how to make intelligent, informed decisions about its wellbeing. \$350,000 is available for this program.

Resource Enhancement and Protection (REAP) Roadside Vegetation

This program is administered through the Iowa Department of Transportation and this money is available for state, county, and city management of roadside vegetation. The establishment of attractive gateways into cities is also becoming a popular use for this money. Demonstration and research projects are typically funded under this program in an effort to learn and share new approaches to vegetation management. The purchase of specialized equipment and seed to carry out management practices is also a part of this program.

Resource Enhancement and Protection (REAP) Soil & Water Enhancement

This program is administered through the Iowa Department of Agriculture and these funds are available to landowners for soil and water conservation and enhancement projects and practices. Project money is directed towards protecting the state's surface and ground water resources from point and non-point sources of contamination. Practices awarded funding include: reforestation, woodland protection and enhancement, wildlife habitat preservation and enhancement, protection of highly erodible soils, and water quality protection.

Resource Enhancement and Protection (REAP) Historic Resource Development Program

This program is administered through the Iowa Department of Cultural Affairs to help preserve, conserve, interpret, enhance and educate the public about Iowa's historical assets. The Historic Resource Development Program provides funding for documentary collections, historic preservation and museums.

OHV Grants

These funds are for the acquisition and development of All-Terrain Vehicle (ATV) trails and the upkeep and maintenance of DNR-designated Off Highway Vehicle (OHV) parks. This program is funded from vehicle registration fees. Fees are placed into an account and can be used for the development of riding areas, trail maintenance, equipment purchases, operation and maintenance of sites and equipment, insurance and land acquisition.

State Recreational Trails Program

This program is administered through the Iowa Department of Transportation. The State Recreational Trails Program funds public recreational trails. The grant requires a 25 percent local match and the trail must be maintained as a public facility for a minimum of 20 years. Proposed projects must be part of a statewide, regional, area-wide or local trail plan.

National Recreational Trails Fund

This program is administered through the Iowa Department of Transportation. The National Recreational Trails Fund is a federal granting program with a 20 percent local match. It can be used to construct and maintain motorized and non-motorized recreational trails and trail-related projects.

Water Trails Site Planning and Work Crew Assistance Application

The Iowa DNR River Programs offers an opportunity for site planning and work crew assistance. The crew is designed to help groups with a variety of low-tech projects in Iowa on designated or in-progress water trails that adhere to naturalistic river and surface trail design principles, or on a site of a low-head dam mitigation project.

Water Recreation Access Cost-Share (WRAC) Program

The Water Recreation Access Cost-Share Program is available for constructing or improving boat access facilities to Iowa's lakes, rivers and streams. Projects can include boat launching ramps, loading/off-loading docks and other structures to enhance use by the public. Grantees must have a 25% cash or in-kind match for the project unless they manage the area through a DNR management agreement where they can receive 100% grant funds.

Wetland Program Development Grants (WPDGs)

This program is administered by the Environmental Protection Agency and is available for applicants to conduct projects to promote the coordination and acceleration of research, investigations, experiments, training, demonstrations, surveys, and studies related to the causes, effects, extent, prevention, reduction and elimination of water pollution. This program is to assist state, tribal, local government agencies and interstate/intertribal

entities in building programs to protect, manage and restore wetlands. Requests for proposals are typically announced in the spring.

Fish Habitat Grants

This program is available to County Conservation Boards for land acquisition and development of fish habitat. Up to 90% of costs may be reimbursed under this program. Land must be under the direct control of the county to be eligible for assistance. Available funds are divided equally between six county districts and applications are reviewed and selected by county conservation district reviewers.

Iowa Archery in the Schools Foundation Equipment Grant Program

This grant program was established to promote youth archery by providing the equipment needed to conduct National Archery in the Schools Program (NASP), international-style target archery programs. The equipment is usually provided as part of a “package” that includes all of the equipment needed to start an NASP program.

Iowa Scholastic Clay Target Grant Program

Schools starting a High School/Scholastic Clay Target Program are eligible to apply for a grant for up to \$10,00 over a two-year period.

Wildlife Diversity Small Grants Program

Funded by donations from the Fish & Wildlife Protection Fund (Chickadee Checkoff) and Natural Resources License Plate funds, small grants are available for projects directly relating to wildlife diversity conservation, education or research. Approved projects will be funded on a single-year basis but can be submitted for additional funding in subsequent years (not to exceed 3 years in succession).

Wildlife Habitat Management Grants Program

The Wildlife Diversity Program makes small grants available for habitat management projects directly related to wildlife diversity conservation. Approved projects will be funded on a single-year basis but can be submitted for additional funding in subsequent years (not to exceed 3 years in succession). Proposals will be accepted from any organization engaged in management for the benefit of wildlife conservation. Projects should be closely related to the goals of Iowa’s Wildlife Action Plan. Total grant allotment is \$15,000 per year with \$7,500 being the maximum amount available per proposal request.

Wildlife Habitat Promotion with Local Entities Program

This program offers 75 percent cost-share funding to County Conservation Boards for the acquisition and development of lands for wildlife habitat. Lands must be open to hunting and trapping. Only those compatible activities such as fishing, hiking, nature study, cross-country skiing, etc. will be permitted. Applications must be for a project with a cost of not less than \$4,000 due to administrative costs. Grant applications for wildlife habitat projects are received two times a year.

Habitat and Access Program

This program provides habitat improvement funding to landowners. In turn the landowners who voluntarily participate offer public hunting access on designated areas of their private land from September 1 – May 31 of each hunting season.

Grant Preparation and Review

The Department and its other agency partners are committed to providing better assistance to local governments for the preparation of grant applications. In the past (1980s to early 1990s), the Department of Natural Resources held workshops for local governments on a frequent basis in which to discuss the variety of grants available and what makes a successful grant. This practice faded away and the Department is committed to reinstating the workshops as well as providing separate workshops for grant reviewers. Workshops for grant reviewers will go over requirements and scoring criteria for grants, how a reviewer should interpret these and how plans such as the Outdoor Recreation in Iowa Plan, local REAP or other local conservations plans should weigh in meeting requirements.