

GOAL 2:

Improve the Region's Environmental Health and Access to the Outdoors

Creating and maintaining natural resource corridors, natural stormwater management systems, urban forest canopies, and parks embody the concept of natural stewardship. Good land stewardship ensures long-term environmental and economic health, and its effects improve the mental and physical well-being of people.

A green infrastructure network gives people access to nature, recreation, quiet, and views. Trees and other green infrastructure mitigate the negative environmental and economic impacts of natural disasters, climate change, and poorly designed developments. Ultimately, green systems make communities more resilient and help to attract people and employers.

Strategy 2A

Promote the reduction of energy consumption, especially from non-renewable energy sources

The use of energy — to power homes, transportation, and industry — plays an important role in a region's health and economic prosperity and is present in nearly every aspect of daily life. Energy consumption affects air quality and impacts global climate as a result of emissions. Different methods of generating and acquiring power have different levels of impact on the natural environment. The cost of energy impacts the pocketbooks of people and industries. On a higher level, the quest for energy can lead to international political and military conflicts. Identifying and promoting innovative solutions that reduce overall consumption of energy — and especially consumption of energy from non-renewable sources — would help the Greater Des Moines region maintain its current air quality. That in turn will support the region's growing economy by improving efficiency and lowering associated costs. The region should take several steps to help it become **first in the nation for energy conservation** and a model for other regions to emulate.

The following are strategies for reducing energy consumption, especially from non-renewables, in Greater Des Moines:

- Establish baseline energy consumption metrics. The development of energy consumption metrics specific to the Greater Des Moines region will better enable the area to monitor energy reduction goals. Benchmarking the energy consumption of public buildings may be a key first step.
- Assess local building and zoning codes for potential opportunities, and remove the barriers to developing alternative energy infrastructure and conservation uses. Additionally, update codes to have higher energy efficiency standards.
- Use the strategies above to develop a framework for achieving regional energy efficiency goals — the first in the nation for energy conservation. Meanwhile, collaborate with the State Building Code Bureau and the International Code Council on training and enforcement of the energy code.
- Support a grassroots approach to energy conservation by working with neighborhood associations and individual communities to develop competitions, education, and marketing around energy conservation.
- Continue to develop demonstration projects that highlight best practices for residential, commercial, and industrial buildings.

- Reinvigorate, expand, and enhance the ongoing demonstration of energy conservation and efficiency projects by re-launching the Share Good Energy collaborative — a partnership between Ankeny, Des Moines, Urbandale, and West Des Moines aimed at highlighting energy conservation practices.
- Support the region's governments in developing ambitious energy conservation goals, allowing them to lead by example.
- Understand the value of natural resources, including shade trees that reduce energy use, green medians that mitigate the heat island effect, and green roofs that lessen heating and cooling needs, among others.
- Create a regional heat mitigation plan to address the heat island effect and other heat-related issues.
- Work with local utilities to provide an increasing amount of energy from renewable sources.
- Explore the use of distributed energy (i.e., wind and solar power) around Greater Des Moines.
- Quantify the impacts of public transportation and other transportation options, such as biking and walking.

Greater Des Moines can function with greater efficiency and cleaner fuels. To do so, the region should:

- Promote alternatives to single occupancy vehicles. Single occupant vehicles not only use the most road space per traveler of any mode, but they also consume the most fuel per person. Carpooling, using public transportation, biking, and walking all reduce, or eliminate, the amount of fuel used per person and, therefore, reduce emissions. Implementation of the DART Forward 2035 Plan and the Central Iowa Bicycle-Pedestrian Action Plan (Connect) will assist with this strategy.
- Promote transit-friendly development patterns. Some people enjoy driving private vehicles, but others drive simply because development patterns in certain areas are not conducive to walking, biking, or using public transportation. More transit-friendly development would provide individuals with choices and better allow them to choose to reduce their transportation-related energy consumption. Encouraging compact, transit-friendly development in certain places has the greatest opportunity to reduce transportation-generated emissions.
- Invest in alternative and renewable fuel infrastructure. Gasoline and diesel form the core of Greater Des Moines's transportation fuel infrastructure. However, initial investment in alternative fuel infrastructure has taken place in recent years and could lead to a

bigger market for alternative fuel vehicles. While alternative fuel may reduce emissions at the tailpipe, it is important to consider the comprehensive carbon footprint associated with these fuels, from production to final use.

- Encourage alternative fuel vehicle acquisition and alternative/renewable fuel use in business and government fleets.
- Develop a campaign with local governments to connect residents and businesses with incentives for the use of alternative fuels and for the development of alternative fuel infrastructure.
 - Encourage training of local officials on alternative fuel infrastructure;
 - Explore the creation of financial incentives for the adoption of alternative fuels by individuals and companies; and,
 - Reduce the barriers to alternative fuel adoption.



STRATEGY 2A POTENTIAL CHAMPIONS:

MidAmerican Energy
Communities
Transition Des Moines
DART
Trees Forever

“This strategy shifts our attention and our resources away from our dependence on fossil fuels and their disruptive effects on our health, climate, and economy. It encourages our investment in more efficient energy sources instead of oil, gas, and coal that are demanding steadily higher oil prices to make their production cost-effective. It leads us toward clean air that is essential to life and good health. This strategy empowers us to support local development and jobs in the renewable energy sector.”

Margaret Weiner
Transition Des Moines

Strategy 2B

Minimize the waste stream, emphasizing waste reduction in addition to reuse, recycling, and repurposing

The amount of municipal solid waste produced in the United States has nearly tripled over the past fifty years,¹ and the waste stream is complex in its composition. It includes plastics, leather, paper, tires, food, wood, batteries, glass, yard trimmings, electronics, and paper. Though some see waste as mere “trash,” waste management and disposal are a significant and costly challenge for municipalities. Many residents do not give waste another thought after it is removed from the curb. However, municipalities across the country must continue to deal with waste after it leaves the curb. Given the increasing attention paid to cost, sustainability, and efficiency, municipalities are developing creative strategies for dealing with waste.

Municipal waste strategies vary considerably, depending on the locations of disposal and recycling facilities, available funding, and public and political support. Some municipalities are pushing plans to have zero-waste, while others toil to create cost-effective and publicly supported curbside recycling programs.

Numerous programs are springing forth to reduce solid waste in Greater Des Moines. These programs not only benefit the environment but also the economy, by lowering operating costs

and creating jobs. A study from the EPA demonstrates how a dedicated waste reduction strategy can drastically reduce organizational costs. The following action steps can further these efforts:

- Promote the expansion of the Environmental Management System (EMS), a statewide initiative that addresses cost-effective natural resource management strategies for maximum positive impact on air, water, and land. Build support for this continuous improvement program across public and private institutions. It is currently in use among 11 solid waste agencies or service areas covering 23 counties across Iowa, including Metro Waste Authority. At a minimum, this initiative should be incorporated into education initiatives for the region.
- Create a centralized database of drop-off locations for the reuse and recycling of materials such as clothing, building materials, and kitchenware. Expand on-site educational efforts about the impact of recycling on reducing the amount of waste; these efforts need particular bolstering at apartment buildings and at other multi-family residential complexes.
- Provide convenient, affordable business recycling options, like Recycle Me Iowa, for small and medium-sized businesses.
- Provide disposal choices for hard-to-recycle items, including electronic waste. The EPA reports that the proportion of electronics discarded into the waste stream is increasing two to three times faster than any other waste segment.² Greater Des Moines municipalities should take steps to increase consumer awareness about proper disposal, provide electronic waste collection services and resources, and lead by example by requiring Environmentally Preferable Purchasing — green purchasing — and recycling of city-owned electronics. The region should also back the use of The Freecycle Network for hard to recycle items.
- Launch professional and consumer education efforts to target food waste reduction at the source, and support development of local and/or regional food rescue program(s) – programs that deliver food that would otherwise hit the waste stream to those in need of food. Broadly defined as uneaten or inedible portions of food from homes, restaurants, grocery stores, cafeterias, and commercial food establishments, food waste comprises 12 percent of municipal solid waste and costs the country approximately \$1 billion per year for disposal.³
- Develop a building deconstruction strategy across the region. Deconstruction is the systematic dismantling of a building that allows for the reuse and/or recycling of building materials. The EPA estimates that, in 2003, building-related construction and demolition debris totaled around 170 million tons. Not only does deconstruction reduce waste going into landfills, it

DON'T THROW IT AWAY – FREecycle!

The Freecycle Network⁴ is “a grassroots and entirely nonprofit movement of people who are giving (and getting) stuff for free in their own towns. It’s all about reuse and keeping good stuff out of landfills.” The Freecycle Network is an online platform that houses a registry of items people no longer want and connects them with local individuals who have the option of taking and reusing any of those items for free. Local volunteers moderate each group, and membership is free.

The Freecycle concept has expanded to over 85 countries since its inception in Arizona. The organization keeps over 500 tons of waste out of landfills each day. When stacked in garbage trucks, this is the equivalent of five times the height of Mt. Everest in just one year.

“As we change our perspectives and behaviors, we must also change our logistics.”

Ciji Mitrising

Recycle Me Iowa Chief Recycling Officer

also creates considerable economic opportunities through job training programs and support of local salvage and repurpose businesses.⁵

- Explore a pay-as-you-throw strategy: Variable-rate programs charge customers for waste disposal based on the amount of waste generated rather than a flat-fee, thus creating an incentive for customers to reduce, reuse, or recycle items. Thousands of communities have implemented a pay-as-you-throw policy using a variety of rate structures.⁶
- Provide education to residents, businesses, and municipalities regarding waste.
 - Produce a video and/or infographic showing where waste goes if composted, recycled, or landfilled.
 - Create materials outlining how to recycle and how to compost.
 - Create a graphic showing the phased steps of replacing a large trash dumpster with recycling and composting dumpsters next to a smaller trash dumpster.
 - Deliver training on reducing and reusing waste to municipalities.
 - Expand education for the public and businesses about yard waste, cardboard, electronic waste, and hazardous materials.
 - Encourage state and national decisionmakers to facilitate corporate product stewardship/take-back programs (e.g., returning waste oil to oil manufacturers for reuse/recycling).
 - Encourage, educate, and train people to engage in production strategies that reduce waste and allow for demanufacturing and recycling. Demanufacturing allows for the efficient deconstruction of items for component part reuse and recycling. This is part of manufacturing with full lifecycle considerations in mind.
- Expand single-stream recycling services.
- Develop a regional zero waste plan.
- In partnership with Metro Waste Authority, Keep Iowa Beautiful, and others, provide training and education to businesses and civic leaders about waste-friendly events.



- As much as is practical, generate biofuel from organic waste.
- Support the expansion of methane recovery programs similar to the Metro Methane Recovery Facility.
- Support MWA's ongoing efforts to encourage the reduction of waste generated, particularly at the source. See the toolbox for guidance on environmentally preferable purchasing policies. These policies should address minimizing waste and toxicity.
- Continuously explore the potential positive impacts of technology on both waste reduction and education about waste reduction strategies.

STRATEGY 2B POTENTIAL CHAMPIONS:

Metro Waste Authority
Recycle Me Iowa
GreenRU

“It has been said that the human spirit needs places where nature has not been rearranged by the hand of man. While it is easy to understand how this holds true in our rural wild places, it is easy to forget that this is equally important in our urban spaces. Wild places are as important to urban dwellers as they are to the bird and the deer and the squirrel. These places cool our air, clean our water, and provide **refuge at no expense** to us. In turn, we are provided with places to escape the noise and bustle of the city, if for a short walk, a long bike ride, or a relaxing picnic lunch. These places are more than just recreational amenities; they are corridors to the greater natural world that bring life and resources into the urban fabric of our cities.”

Ryan Ellsworth
OPN Architects



Strategy 2C

Build a region-wide connected system of natural resource areas and corridors

A regional green infrastructure network of natural lands and corridors will establish Greater Des Moines as a leader among communities that value a healthy population, economy, and environment. The questions to ask are about which lands to include, how much land to incorporate, and what steps are needed to get there.

The region is already below EPA thresholds⁷ for healthy lands and waters. Ecologists largely agree that the removal of 50 to 75 percent of a region’s natural vegetation drives many species to extinction and damages the remaining forests, wetlands, and prairies. Covering just 10 percent of a watershed’s land area with rooftops and pavement (examples of impervious or hard cover) begins to deteriorate streams. With around 25 percent of connected impervious cover, the natural streams become urban streams — flashy (i.e., fast moving with fluctuating water levels and volatile stream flow) and polluted. In some cases, agricultural land acts as impervious cover, sending runoff quickly to downstream water bodies.

A regional green infrastructure network aims to prevent further deterioration of the natural environment and, taken further, can re-establish lost natural ecosystem functions and provide new opportunities for well-being and prosperity. To do so, the Greater Des Moines region must ask itself what land it wants to include, how much land is enough, and what else needs to be done to support the system.

Deciding where and how to create this system is not just an issue for habitat and species experts. The framework for the region’s green infrastructure must prioritize conservation of existing natural lands and corridors, and make room for expansion of the network in a way that will buffer and connect lands. Both the conservation and expansion of green infrastructure entail costs. The region must prioritize those pieces of land that create the most beneficial and effective green infrastructure network possible given the realities of funding, geography, regulatory power, existing conditions, and projected growth. For example, it is far easier to incorporate an existing wetland into a natural stormwater utility than to build one from scratch. Far less money is required to put a conservation easement on a viable forest than to buy cropland and plant trees. Such realities shape the design of the green infrastructure network.

To build this system, Greater Des Moines should:

- Develop green infrastructure collaborations and champions.
 - Conduct — and update on a regular basis — a regional tree inventory.
 - Identify and prioritize natural areas in the natural resource corridors.
 - Develop Water Works Park.
 - Connect existing resources, including Water Works Park, Gray's Lake, Principal Riverwalk, and upstream public lands.
 - Prioritize areas for a natural stormwater utility.
 - Leverage the trails network (river, paved, and unpaved) and isolated parks and communities by filling in gaps in the trail system.
 - Identify funding mechanisms to complete and maintain the regional network of natural lands and corridors.
- Build perpetual maintenance into project costs.
 - Develop concepts for ecological buffers.
 - Develop tools to establish greenways.
 - Develop a model ordinance for a region-wide natural resource overlay district using the prioritized natural areas.
 - Assess and plan the need for parks and open space.
 - Ensure adequate parks level-of-service as the region grows.
 - Enhance the regional treescape.

**STRATEGY 2C
POTENTIAL CHAMPIONS:**

Communities
Central Iowa Greenways
Trees Forever

WHAT IS GREEN INFRASTRUCTURE?

“Green infrastructure” sometimes refers to constructed or site-based features that connect the natural and built environments. This can include streetscapes, rain gardens, green roofs or walls, street trees, and permeable pavement. At the regional level, “green infrastructure” refers to a connected network of larger scale open spaces and natural areas like greenways, stream buffers, wetlands, parkland, connected tree canopies, forest preserves, and native plant vegetation that, in combination, conserve natural ecosystem functions; improve water and air quality; and, provide enjoyment, health, and safety benefits to people. Site-based green infrastructure systems complement and work in conjunction with the regional green infrastructure network but are not a substitute.

Image Source: US Environmental Protection Agency



Strategy 2D

Develop a regional stormwater approach emphasizing the use of natural processes to carry out the functions of built systems

With foresight and collaboration, the Greater Des Moines region of the future will depend more on the natural functions of watersheds to manage stormwater runoff and less on the gray infrastructure of storm sewers and detention ponds. Where conditions are created for infiltration strategies, using the natural functions of watersheds may save 10 to 50 percent on the cost of most stormwater infrastructure projects.⁸ Municipalities will have to adopt a watershed perspective that corresponds with natural rather than political boundaries to establish these natural stormwater utilities.

In some ways, a natural stormwater utility is not that different than a conventional stormwater utility. It is a designed system, occupies a specific location, and requires maintenance. Street and property assessments pay for both kinds of utilities. The main differences are in the methods used and the effect on downstream water resources. Street trees, rooftop disconnections, bioswales, rain gardens, permeable paving, and created wetlands are among

the possible methods for managing stormwater runoff rather than curbs, gutters, storm sewer inlets, and pipes. Natural swales and existing wetlands also are important parts of a natural stormwater utility. Because they have been widely used for only a couple of decades, some see these techniques as experimental. Others do not like their look, which is not as tidy as a curb, gutter, and mowed boulevard edge. That said, the outcomes are profoundly different. With little filtering and volume reduction, rivers, streams, ponds, and lakes downstream of conventional stormwater systems are usually damaged and polluted. Bringing green infrastructure into stormwater systems tends to make downstream water bodies cleaner and more stable.

Nearly all municipalities in the Greater Des Moines region have conventional stormwater utilities that charge users of the stormwater management system according to the area of pavement and rooftop on their land. Cities like Minneapolis,⁹ Urbana,¹⁰ and Portland¹¹ use best practices modeled on green infrastructure to offset stormwater utility charges. Some cities like Seattle mandate the use of green infrastructure for stormwater management in developments.¹² Municipalities in Greater Des Moines could modify their stormwater utilities to favor best practices using green infrastructure. In this expanded utility, developers could earn credits for preserving natural lands that infiltrate runoff.

For Iowa, retaining 90 percent of precipitation from all rainfall events equates to holding back all storms of up to 1.25 inches.¹³ These kinds of storms occur many times every year and are responsible for most of the pollution that washes into streams, lakes, and rivers. The *Iowa Stormwater Management Manual* describes dozens of approaches for holding back this amount of rainfall, mostly via green infrastructure methods. Some object on the grounds that Iowa's heavy soils do not allow for serious infiltration strategies. In fact, infiltration strategies are used across the country in many different soils — the design of the system can compensate for slow infiltration. As an alternative, some municipalities remove the first amount of rainfall that carries the most pollution. This is called the “first flush.” While it helps with water quality, downstream waters are still damaged by the extra runoff generated by impervious cover and drainage systems.

Tools already exist to improve water quality and stream stability in the region. When implemented, they will reduce the runoff, flooding, and soil erosion that presently damage waterways and communities. Five tools are essential:

- Complete a regional soil-type analysis to identify areas that are suited for stormwater management via infiltration practices. For areas that are not suitable for infiltration practices, identify alternative stormwater management practices.

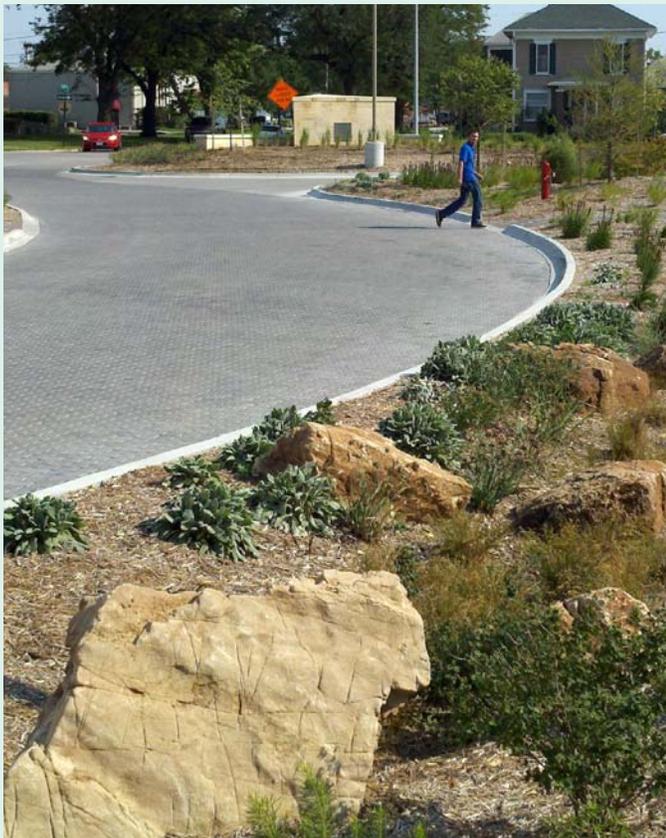
A COOL EXAMPLE: VERMILLION RIVER WATERSHED TROUT STREAM

The Vermillion River Watershed Joint Powers Organization (JPO) in Dakota County, Minnesota, worked with municipalities to develop ordinances that support one of the best trout fisheries of any urban area in the country. The JPO recommended that all new developments retain 98 percent of all rainfall on site, primarily by infiltrating the runoff.¹⁴ Besides virtually eliminating pollution, this standard replenishes the groundwater that keeps the stream cold and trout alive despite summer heat. Municipalities and the JPO developed a watershed plan in 2005, standards in 2006, and rules in 2007. At each step of the way, municipalities weighed in, setting the tone and modifying the requirements. This collaborative approach resulted in the adoption of the standards and rules by all 20 municipalities in the watershed.

GREENING THE GRAY



AN EXAMPLE OF PUBLIC EDUCATION THAT DEMONSTRATES THE CONNECTION BETWEEN STORMWATER AND WATER QUALITY IN OUR RIVERS AND STREAMS



A SYSTEM OF NATIVE VEGETATION USED TO HELP ABSORB WATER AND CLEANSE IT AS IT IS SLOWED DOWN AND MOVES THROUGH THE SOIL PROFILE BEFORE REACHING A RIVER OR STREAM



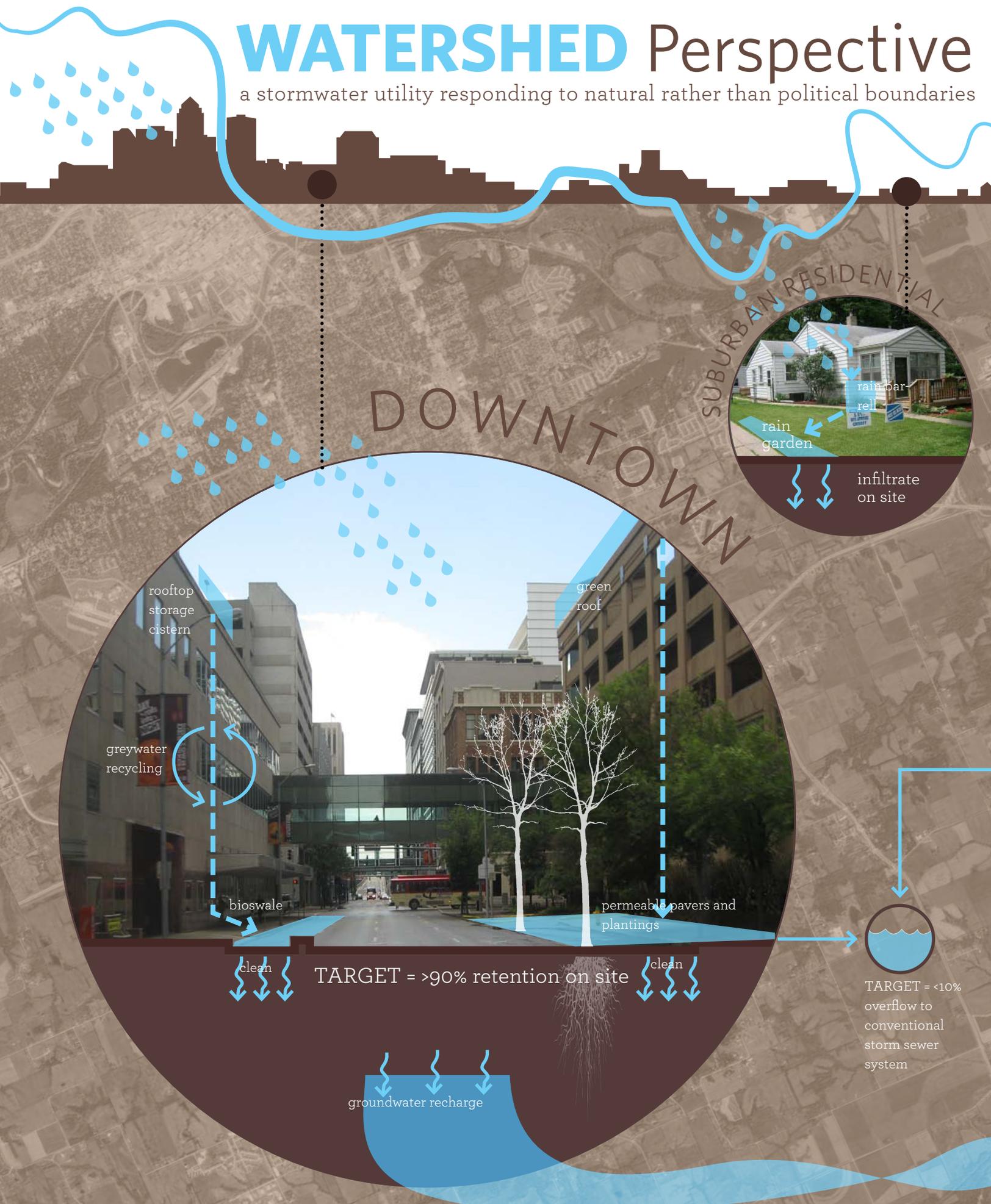
YET ANOTHER EXAMPLE OF A VEGETATED INFILTRATION SYSTEM, MEANING A SYSTEM THAT ALLOWS WATER TO SOAK THROUGH IT



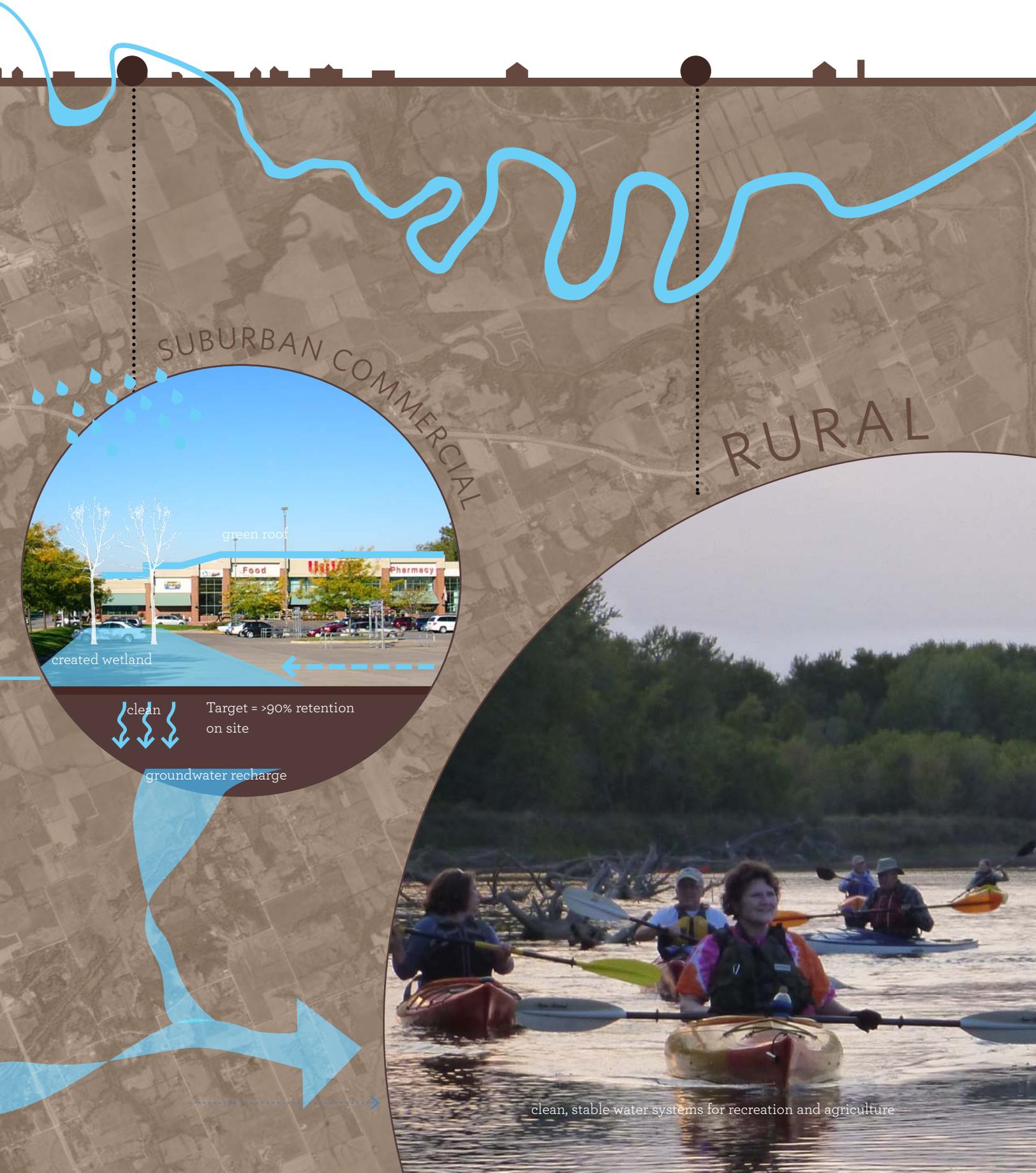
PERMEABLE PAVING - UNDERNEATH THESE PAVERS IS A POROUS SYSTEM OF SOIL AND GRAVEL READY TO FILTER WATER AND SLOW IT BEFORE IT REACHES RIVERS OR STREAMS

WATERSHED Perspective

a stormwater utility responding to natural rather than political boundaries



This graphic explores how a regional stormwater approach could use natural processes to carry out the functions of traditionally built systems resulting in cleaner, more stable waterways. Typologies along an urban-rural gradient show general solutions. Exact application depends on context.



- Develop watershed management authorities (WMA). Recently allowed under Iowa statutes, several WMAs exist or are forming. A WMA can work across municipal borders, develop an implementation plan for a watershed, receive and distribute funds to complete projects, and monitor water quality improvements. It is an ideal tool for selecting and executing the best projects to improve water quality and stream stability. In the Greater Des Moines region, collaborations of several jurisdictions have established the Fourmile Creek WMA, the South Raccoon River WMA, and the Middle South Raccoon River WMA. These will serve as models for Walnut Creek, Beaver Creek, North and Middle Rivers, and the other major watersheds in the region. The region should prioritize those watersheds that cross jurisdictional boundaries.
- Manage stormwater runoff via natural stormwater utilities. Stormwater utilities, as described above, are a tool that the region’s municipalities already use to manage stormwater runoff. Expanding these utilities will promote best practices and enhance the green infrastructure network. The Iowa Stormwater Management Manual describes dozens of best practices that include green infrastructure.
- Investigate the range of policy options that exist to develop a regional natural stormwater utility.

- Develop a model ordinance for best stormwater practices. In order to comply with Phase II of the Clean Water Act,¹⁵ most municipalities in the Greater Des Moines region have changed their stormwater ordinances. Some communities in the region have excellent stormwater ordinances, and dozens of other examples exist across the country. At a minimum, a good package of stormwater ordinances addresses the items outlined in the table below.¹⁶

STRATEGY 2D
POTENTIAL CHAMPIONS:
 Communities
 Polk Soil & Water Conservation District

STORMWATER ORDINANCE ELEMENTS

ORDINANCE	BENEFIT
Construction Erosion & Sediment Control	<ul style="list-style-type: none"> ■ Prevents sediment from construction sites from washing into storm sewers or streams, wetlands, and other waters
Post-Construction Stormwater Volume Control	<ul style="list-style-type: none"> ■ Prevents excessive, destabilizing runoff from reaching streams and other water bodies ■ Caps the total annual runoff that can leave a site from small, moderate, and large storms. Volume control reduces flooding but does a better job than flood-control in stabilizing water bodies
Post-Construction Water Quality Control	<ul style="list-style-type: none"> ■ Prevents the worst pollutants — sediment, phosphorus, organic matter, and nitrogen — from reaching water bodies ■ Stops other pollutants — hydrocarbons, heavy metals, and road salt ■ Requires a stormwater treatment series of different practices in sequence, each performing an important pollutant-removing function
Water Quality and Stream Buffers	<ul style="list-style-type: none"> ■ Prevents pollutants from nearby lands from washing into streams and other water bodies through filter strip buffers ■ Creates corridors for wildlife, trails, erosion control, and stormwater management projects through habitat buffers

Strategy 2E

Expand regional park capacity in terms of acreage, facilities, programs, services, and connections

The Greater Des Moines Region has seen low levels of investment in open space over the last 40 years, with 88 percent of all current public interest land established before 1970.¹⁷ The Tomorrow Plan estimates a population increase of 50 percent by 2050, emphasizing the need for investment in lands for public access.

Studies show that parks trails, greenways, and open space register remarkable benefits. At the most basic level, these include cost avoidance: the healthcare costs avoided as a result of more active lifestyles and the infrastructure savings as a result of natural flood mitigation. A more proactive case can be made as well: property value increases up to 20 percent,¹⁸ mental health benefits, water quality and quantity improvements, soil erosion reductions, habitat protection, and better air quality. Economic churn from recreation exists, and natural resources are a driving force for overall community attractiveness and regional character.

Without adequate investment in parks and natural resources, the region will fail to appeal to what the workforce employers need and want.

We already enjoy many fine parks and a remarkable trail system. With the right actions, we can create a regional network of parks and open space that will be world class, attracting families, young workers, and new companies. Within the boundaries of

The Tomorrow Plan, nearly 20,000 acres of regional parkland already exist. To maintain the current level of regional service with a 50 percent increase in population, the region must secure an additional 10,000 acres of regional parkland. The specific parks created from this land can be a combination of natural open spaces, where residents can be immersed in the outdoors, and more traditional parklands, where residents have more structured recreational opportunities.

In addition to the parks that are entirely within The Tomorrow Plan boundary listed in the above below, a number of existing or potential regional parks, such as the Chichaqua Bottoms Greenbelt to the northeast of the region and Badger Creek State Park to the southwest, lie just beyond The Tomorrow Plan boundary. Nonetheless, these regional parks are important assets to Greater Des Moines.

Regional parkland benefits public and personal health, protects and connects habitat, conserves energy, cleans air, provides entrepreneurial and economic opportunities, allows for outdoor education and skills-building, enhances social and family health, mitigates flooding, and improves water quality.

A multi-faceted approach will be required to expand regional park capacity in terms of acreage, facilities, programs, services, and connections. The region should:

- Develop a mechanism for ongoing regional park, greenway, trail, and open space planning and implementation. The MPO already facilitates the Central Iowa Bicycle and Pedestrian Roundtable (Bike-Ped Roundtable), an example for future regional work around parks and connections. Parks directors and conservation

REGIONAL PARKS + OPEN SPACE

ENTITY	REGIONAL ACRES	COMMUNITY, NEIGHBORHOOD, MINI PARK ACRES	OPEN SPACE & GREENWAY ACRES	OTHER PARK/OPEN SPACE RELATED ACRES
All Cities in MPO Region	1,883	2,855	1,973	3,283
Des Moines Water Works	746	-	746	-
IA Dept. of Natural Resources	5,778	119	5,898	-
Dallas Co. Conservation Board	1,235	141	1,376	-
Polk Co. Conservation Board	3,519	-	3,519	506
US Army Corps of Engineers	6,831	-	6,831	16
TOTAL	19,993	3,115	20,342	3,805

Note: Other park/open space-related acres include uses such as cemeteries, golf courses, sports facilities, and other special uses

professionals of Greater Des Moines should convene at quarterly or semi-annual summits to discuss regional park and greenway strategies.

- Acquire future parkland, trail rights-of-way, and natural areas when possible. As development pressures continue, the costs for acquiring these areas will only rise; the development of these lands will be most cost effective the sooner these lands are secured.
- Provide sufficient financial support for the maintenance of existing parks, trails, and natural areas.
- Educate residents and decision makers on the multiple benefits of parks, trails, and open space to develop the political will to expand the capacity of these areas.
- Implement greenways and buffers, as immersion experiences will emerge as a greenway and buffer system becomes reality. Planning regional parks in the context of this network takes advantage of existing large natural acreages.
- Develop and support recreational programs and facilities for all ages.
- Prioritize connections to adjacent regional features, beginning with those outlined by the Polk County Water and Land Legacy.¹⁹ While it is a priority to expand regional parks within the planning area, creating links to existing parks outside of The Tomorrow Plan boundary deserves equal weight.
- Identify future park locations that enhance the connections between parks in the regional park system. The Tomorrow Plan identifies many large, connected natural lands on the western side of the region and few in the east. A number of existing parks could be expanded and become regional parks. Fourmile, Spring, Mud, and Camp Creeks afford opportunities. Polk County's Thomas Mitchell Park and Gay Lea Wilson Trail in the far eastern area of the region could fill a gap in that portion of the study area. Brenton Slough in the northwest and the Maffitt Reservoir in the southwest could serve similar roles. Carlisle's Scotch Ridge Nature Park offers a prime example of future flood mitigation, ecosystem preservation, and watershed planning.
- Leverage trail connections and the gateway opportunities of regional portals. Meaningful trail connections, regional parks, and places where parks and trails meet can serve as meaningful

points of entry to the region. While the High Trestle Trail Bridge is technically outside The Tomorrow Plan boundary, it is an example of the portal concept, attracting many visitors to the region and serving as an initial hub of discovery for residents.

- Develop Water Works Park as an example of a multi-benefit regional park. Community leaders and experts are already planning for the development of Water Works Park as the result of an international design competition.²⁰ Development concepts envision expanded civic and event spaces, a paddleboard course on a created water circuit, kayaking on the Raccoon River, horseback riding, expanded hiking trails, adventure play, nature education, and remote camping. However, even with these many activities, the intent is to keep the majority of the park's



1,500 acres natural. The park is designed to provide water quality protection, flood mitigation, wildlife habitat, and public health benefits associated with active play and "wild" experiences. The economic benefits of a dynamic public space with iconic features in further defining the region reinforce the notion of Water Works as an exceptional example of a regional park generating multiple benefits.

PARKITECTURE

A two-stage international design competition, Parkitecture focused on the design of connections in and around Water Works Park and the Raccoon River, as well as the role Des Moines Water Works plays in providing the water supply for the region. The competition was framed around the question, "How do you define connection(s) relative to Water Works Park and second, how is this understanding realized?"

**STRATEGY 2E
POTENTIAL CHAMPIONS:**

- Communities
- Conservation boards and staffs
- Iowa Natural Heritage Foundation
- Sierra Club of Central Iowa

