Black Earth Creek Resource Area Plan

Adopted by the
Dane County Board of Supervisors

August 21, 2003

Black Earth Creek Resource Area Plan

Steering Committee

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Prepared for the Dane County Parks Commission by the
Staff of the Dane County Regional Planning Commission

Author/Editor: Mike Kakuska

Adopted by the Dane County Board of Supervisors
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This plan was funded through a DNR River Planning grant,
with matching funds provided by Dane County.

Resolution No. 49, 2003-2004

ADOPTING THE BLACK EARTH CREEK RESOURCE AREA PLAN AS AN ELEMENT OF THE 2001-05 DANE COUNTY PARKS AND OPEN SPACE PLAN

The Dane County Parks Commission has authorized a study of the Black Earth Creek area. Public input was gathered through public meetings with local property owners, officials and other interested groups. The Dane County Parks Commission is presenting the attached documentation titled: *Black Earth Creek Resource Area Plan,* summarized as follows:

- This is a **voluntary** financial compensation program offered to land owners within the resource area identified on map 2 of the Plan.
- The program pays a financial incentive for the landowner to protect natural and historical resources within the identified area.
- The resource area as outlined on the map/s can only be used with this **voluntary** program and cannot be used for or against any other land use division or rezone action by any agency, committee or municipality.
- All private property rights must be protected.

A partial listing of natural resources, sites, and methods that may be considered for this program are:

- 100 feet each side of the Black Earth Creek for protection from active farm practices runoff.
- Maintain rural character by the placement of new construction at least 100 feet back from the crest of a hill and leave or plant a permanent tree break.
- Sale of development rights to keep agricultural lands for crop production or open space.
- Preservation of historical buildings.
- Existing and historic wetlands.

The *Black Earth Creek Resource Area Plan* shall be included in and a part of the *Dane County Parks and Open Space Plan.*

THEREFORE, BE IT RESOLVED, that the Dane County Board of Supervisors and the Dane County Executive adopt this plan with the provisions as identified in this Resolution. This Resolution becomes effective upon adoption and publication as prescribed by law.

Submitted by Supervisors: Wendt, Ripp, Mohrbacher, Lowe and Opitz, June 5, 2003 (p. 43, 03-04)
Referred to PUBLIC WORKS/FACILITIES MANAGEMENT, ZONING/NATURAL RESOURCES, AND PARKS.

Approved by the Dane County Board of Supervisors August 21, 2003
Approved by the County Executive August 26, 2003

Executive Summary

The Black Earth Creek valley is a highly valued environmental area that includes a nationally recognized trout stream, prime farmland, the Ice Age National Scenic Trail and Scientific Reserve, important riparian corridors, wildlife habitat, as well as scenic beauty. This area of steep slopes, wetlands, floodplains, and adjacent uplands is an important contributor to the baseflow and water quality in Black Earth Creek. It is an important regional recreation area within urbanizing Dane County, and also possesses significant natural, cultural and historic functions and values. It is important to protect these valuable resources through wise planning.

The *Dane County Parks and Open Space Plan* identifies natural resource study areas and recommends that project plans be prepared. Project plans identify the specific resources to be protected and establish priorities for targeted acquisition efforts identified through a public planning process including representation from state and local resource management agencies, local governments, private interest groups and landowners.

The *Black Earth Creek Resource Area Plan* was developed including input from a steering committee representing a cross-section of interests in the area. The plan includes both the Upper Black Earth Creek Watershed, and Black Earth Creek Valley Resource Study Areas identified in the *Dane County Parks and Open Space Plan.* Both areas were included because of their relationship to one another and the creek, and because it made sense for many different reasons (coordination, logistics, economies of scale, etc.). The plan is also developed in relation to other adopted land use, park and open space plans, and their specific recommendations for this area. These recommendations promote the protection, restoration and enhancement of the resource, as well as existing/future recreational opportunities and linkages between and among communities. On August 21, 2003, the Dane County Board of Supervisors adopted the *Black Earth Creek Resource Area Plan* as an element of the *Dane County Parks and Open Space Plan* specific to this area.

The protection, restoration and enhancement of the significant natural resources and outdoor recreational opportunities emphasized in the *Black Earth Creek Resource Area Plan* are consistent with and supportive of the goals and objectives contained in various local, state and federal plans. This is in addition to the focus of activity by various resource management agencies and private interest groups, representing significant local interest and support. In this regard, the *Black Earth Creek Resource Area Plan* complements these other management efforts and provides a focal point for coordinating, combining and targeting community resources where they are needed most and where they will have the most beneficial effect. It also fosters joint cooperation and support among the various partners to help accomplish commonly held goals and objectives.

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Introduction

The Black Earth Creek watershed is located in northwestern Dane County (Map 1). Excluding its tributaries, the creek drains about 48 square miles. The creek and its contributing watershed are a significant and especially unique resource in Dane County in terms of its water quality, its value as a trout fishery, as an excellent example of glacial geology, as productive farmland and an area of overall scenic beauty. There are a number of government agencies and private citizen nonprofit groups that have been working to preserve the unique qualities in and around Black Earth Creek. The watershed is the site of a recently completed priority watershed project, the Ice Age Trail Corridor crosses here, and the state Black Earth Creek Fishery Area lies along most of its length.

While agriculture dominates the watershed, more rural subdivisions and residences have been developed in the areas more accessible to Madison and its western suburbs. Increases in recreational demand as well as impacts on the resource are expected to increase along with increasing population and development pressures. As such, efforts need to be taken now to protect and enhance critical habitat, protect and improve water quality, as well as provide managed recreational opportunities and trail linkages prior to these areas being developed. This can be accomplished within the existing framework provided by the county's parks and open space program, its network of open space corridors, the Ice Age Trail Corridor, as well as other federal, state and local protection measures existing and proposed in this area.

The Black Earth Creek Resource Area (Map 2), adopted as part of the *Dane County Parks and Open Space Plan*, establishes the basis and outlines the general scope for more in-depth study and planning efforts. The Black Earth Creek Resource Area includes both the Upper Black Earth Creek Watershed (9,435 acres), and Black Earth Creek Valley (2,196 acres) Study Areas. Both areas were included because of their relation to one another and the creek, and because it made sense for many different reasons (coordination, logistics, economies of scale, etc.). The *Dane County Parks and Open Space Plan*, approved by the Parks Commission and adopted by the County Board of Supervisors, is necessary for the County to be eligible for state Stewardship Program funding. It is completely advisory in nature and has no legal effect.

The *Dane County Parks and Open Space Plan* emphasizes resource protection and outdoor recreation opportunities working within widely accepted guidelines regarding the County's role. The plan does not affect a landowner's right to develop or otherwise use his/her land. The only legal effect of the plan is to enable the procurement of state and federal dollars when and if purchases of lands described in the plan are made. It has no other legal effect and it specifically *does not* affect the rights of an affected landowner to sell the lands to whomever he/she chooses and at whatever price can be obtained.

It does allow additional tools and financing which can be used to protect the lands within the boundary area. This means purchase of land or land rights from willing sellers as land becomes available over the years. The plan consists of a project boundary and recommendations for management of land within the project boundary. The plan is advisory – the purpose being: to help coordinate, combine and target financial, staff and volunteer resources where they are needed most and will have the largest beneficial effect. In this regard, the plan provides the justification, basis and framework for the County to work with these other groups.

The Resource

Black Earth Creek is a high-quality Class I trout stream. The lands within the Resource Area boundary include wetlands, springs and riparian stream corridors, prime farmland, natural and outdoor recreational areas, wooded steep slopes in the upland areas that provide important groundwater recharge and water quality functions in the stream below, as well as natural ridgelines which define and provide the dramatic scenic backdrop along the entire valley.

The upper portion of Black Earth Creek drains a relatively small area (about 10 mi^2) with many steep slopes, resulting in rapid surface water runoff. The groundwater basin is actually considerable larger (Map 3). Much of the basin is characterized by thick deposits of glacial till and outwash. These materials form an excellent aquifer or groundwater source, recharged directly by precipitation and discharged to Black Earth Creek, which provides the baseflow upon which the health of the stream depends.

Natural Resource Buffers

An extremely important function of upland buffer areas is to protect water quality and provide pollution control by allowing natural vegetation to filter sediment and remove contaminants from surface runoff before entering the stream. Allowing vegetation to stabilize the streambank and letting runoff soak into the ground also helps reduce erosion of the bed and banks. This is particularly important where development or agricultural cropping practices causes substantial increases in storm runoff and flood flows. Increased flows destabilize and erode the natural stream channels and drainageways unless efforts are taken to protect such areas.

Buffers also provide opportunities for limited trail-oriented recreational activities such as fishing, hiking, cross-country skiing, and nature study. Upland buffers along streams and wetlands are also important for providing wildlife habitat and connections among significant habitat areas — an important part of a continuous open space corridor system. They also help maintain the aesthetic character and the natural beauty of an area.

A buffer strip width of an average 100 feet on either side of the creek or wetland is indicated on (Map 4). A mapped width of 100 feet should be adequate for water resources protection, and limited recreational purposes such as public access or trail development. In other areas a wider strip might be needed such as where important wildlife habitat, natural resource restoration, or adjacent features such as trail connections, scenic views or unique geologic, biologic or archeologic resources require it. Significant isolated features should also be considered because of their size, quality, location or ecological importance. On intermittent streams and drainageways, the buffer strip width may be less or more varied.

The 100 foot buffer presented here is intended to be somewhat flexible, serving as a guide, and depending largely on an evaluation of each particular site, the circumstances surrounding a specific property, and the agreements that can be reached among the various parties (too detailed and variable to be addressed for each individual property here).

Potential funding sources include Dane County, DNR, the American Farmland Trust, the Natural Heritage Land Trust, as well as various federal and state programs such as the Conservation Reserve Program (CREP), the Wetland Reserve Program (WRP), Wildlife Habitat Incentives Program (WHIP), DNR Targeted Runoff Management (TRM) and Nonpoint Source (NPS) grant programs, among others. These programs provide great opportunities for landowners to participate in voluntary resource protection programs. Specific management objectives include, for example: letting the land revert back to its natural condition, providing wildlife habitat or fishing access, filtering runoff from upstream land uses, wetland restoration or stream improvements, etc. The landowner is compensated for agreeing not to farm or develop these lands, and improve their use or management.

Existing and Historic Wetlands

Over the last half-century, two-thirds of Dane County's wetlands have been drained and are no longer a functioning part of the natural hydrologic system or as wildlife habitat. Most of the drainage activity took place because it was widely believed that wetlands served no useful purpose and that the land could be more productively put to agricultural or urban use. However, it is presently recognized that wetlands are an integral part of a viable and diverse natural resource system. The DNR wetlands that remain are regulated under federal, state or local controls (Map 5). Approximately 447 acres lie within the Resource Area boundary.

"Hydric" soils formed over long periods under saturated (low-oxygen) conditions are a good indication of historic wetlands that may have been ditched, drained, cropped, or altered in some fashion Approximately 1,037 acres lie within the Resource Area boundary. These soils possess and maintain unique or signature characteristics even though the water has been removed. So-called "prior-converted" or "farmed" wetlands provide excellent opportunities to restore these areas back to their original condition, which can usually be accomplished by restoring the hydrologic connections (such as plugging ditches or breaking tiles) and the native vegetation specially adapted to these saturated conditions. Wetland restoration and enhancement is an important strategy being pursued nationwide. The U.S. Fish and Wildlife Service along with various state and local agencies offer financial and technical assistance to encourage and support wetland restoration.

Existing wetlands should be preserved and historic wetlands restored since they are important for the survival of fish and wildlife resources. In addition to providing important food and wildlife habitat, wetlands also provide significant water quality benefits: storing and releasing floodwaters more gradually, reducing streambank erosion, filtering runoff and removing pollutants from both rural and urban areas where these are not excessive. In addition, wetlands represent important groundwater recharge and discharge areas, and provide an important and highly productive transition or hydrologic gradient between ground and surface water resources occurring at the land's surface.

Since wetlands occupy floodplains they should be protected from development to some degree. However, the County may want to obtain fee-simple or easement ownership for some areas for specific use or purposes such as wetland restoration or enhancement projects, water quality improvements, trail connections or public access, wildlife habitat or travel corridors between areas, etc. It is also recommended that an upland buffer of natural vegetation be provided around wetland areas to provide protection from upland land uses and enhance wildlife habitat. Good upland management will help protect wetlands and allow them to enhance water quality overall.

Open Space Corridors

Much work has been done in local and regional plans to develop and promote a countywide system of open space corridors as a basic structure and framework for resource protection and pollution control. These areas include floodplains, wetlands, steep slopes, woodlands, etc., which are typically located along rivers, streams and surrounding valleys and form natural conservation units. The countywide open space corridor system illustrated on Map 6 provides a continuous network of open spaces and environmental resources considered to be most critical for protection that connects across jurisdictional boundaries and have been incorporated into local land use plans. The corridors are used by local, county and state governments and management agencies in making development decisions, as well as providing an underlying basis or framework for coordinated resource management and protection programs, open space planning and outdoor recreation.

Prime Farmland

Prime farmland is located throughout the Black Earth Creek valley (Map 7), dairying and crop production being the most prevalent uses. A few families have been farming here many generations and would like it to remain in agriculture. An increasingly important issue for the farm families who remain is the decreasing numbers of farms and the increasing conflicts with their new suburban neighbors who may not share the same rural values or traditions.

Agriculture is fundamental to the basic economy and character of the towns and rural Dane County. However, once farmland is taken for development, it cannot be reclaimed. The primary competition for agricultural lands is residential development, and the lands most conveniently suited for development are usually those most productive for agriculture. Agriculture preservation districts have been established to help preserve productive farmland for long-term farm use, protect farm operations from the encroachment of incompatible development, maintain rural character, as well as provide property tax relief.

Recognizing this, various programs have been set up to provide landowners compensation for selling their development rights. In other words, realize the development potential of their property (receive cash in hand) yet keep private ownership and continue farming the land as they have before. The development potential or value is defined as the difference in price between the land's market value as developed property compared to its market value as farmland. The greatest difference is near rapidly growing urban fringe areas where agriculture is most threatened. Various programs and real-estate options have been developed by groups such as the American Farmland Trust, the Natural Heritage Land Trust, Dane County, etc. to work with rural landowners to help protect agricultural lands while also recognizing their value to them for retirement, inheritance, or tax reductions.

Steep Wooded Slopes

The hills and steep slopes along Black Earth Creek possess considerable tree cover remaining largely because they present a significant obstacle to agriculture and development in practical terms, engineering and cost (Map 8). On the other hand, forests provide landscape character, scenic beauty and screening. They increase property values, serve as recreation space, and provide usable and renewable products such as wood. Where forests coincide with steep slopes the benefits are multiplied. They protect the slopes from excessive erosion and provide significant infiltration of overland runoff. Forested uplands and hillsides are important groundwater recharge areas in the headwaters, discharging to many seeps and springs that provide the stream baseflow which supports coldwater aquatic communities. Forests also provide wildlife habitat, refuge and access between areas, while fencerows and forested corridors provide travel among fragmented forest blocks.

Hilltops and ridgelines areas are important natural features that are often overlooked in comprehensive planning efforts. Hilltops and ridgelines serve to define the horizon. Large structures constructed along these areas break the natural contours and detract from the scenic beauty. They also tend to be visually prominent if they do not blend in with the area's rural character in terms of color, material or style. Man-made structures (overlooks, park shelters, homes, etc.) placed on hilltop and ridgeline areas can lead to a perception of greater development than if they are placed more discretely at the base or sides of hills or screened with vegetation.

The County or other stakeholder groups may want to pursue acquiring scenic easements on properties along hilltops and ridgelines from willing sellers. Using an average width of 100 feet located back from the top of steep slopes, this amounts to about 326 acres within the boundary area (Map 9). This is the approximate distance needed to maintain a tree line to cover and help conceal structures along prominent ridgelines or hilltops. Where trees do not already exist, more buffering may be needed.

Of course not all of this property is suitable. Some lands may already be publicly owned, such as the Ice Age Reserve, or developed. It is also dependent on the number of splits available to a particular landowner and his/her plans for the property. This would need to be determined on a site-specific basis depending on the circumstances surrounding each site, such as visual aspect or prominence from either the highway or Black Earth Creek, development potential, etc. For example, sites located on the end of ridges or those which define the horizon would receive top priority.

There are a few areas of particular note, such as the east end of the north rim near Evergreen Road which serves as an important point overlooking the glacial Mud Lake basin, with the Black Earth Creek Valley on one side and the Lake Middleton Basin on the other. It also serves as an important groundwater recharge area. There is another large area (approx. 110 ac.) located in Section 7 of the Town of Middleton that represents an outstanding wild block of uninterrupted naturally vegetated ravine between two bluffs of prominent scenic and scientific value; especially important for maintaining species of rare birds and plants. This area deserves high priority management and protection without which the rare plant species, birds of prey and outstanding natural and historic scenic views and landmarks there could be lost. An oak savanna fringe above the Hideaway Landfill provides another important viewpoint and an east-west corridor link above the landfill for a trail, possibly in connection with the Ice Age Trail. Along Rocky Dell Road, a unique walnut invasion of oak forest forms an unbroken, highly diverse and scenic corridor especially supportive of wildlife. Along the south rim, steep forested slopes provide an outstanding scenic backdrop with numerous vistas as well as shelter for a variety of upland plants and animals.

Finally, it may be helpful to provide some design guidelines to developers and new homeowners on how to preserve the integrity and scenic beauty of the area – probably one of the reasons they moved here (and choose to stay) – related to screening, natural materials, colors, vegetation, etc.

Historic Natural and Cultural Resources

Remnant Native Prairie and Oak Savannas are widely valued for aesthetic as well as wildlife habitat reasons. Grasslands provide habitat for unique birds, insects, and animals as well as providing a pleasing visual setting. They provide habitat diversity and contribute to the stability of that diversity. Prairie grasses are also excellent soil conditioners, and they provide erosion control and infiltration of runoff as well. They also function very well in preserving a low-maintenance strategy for open space preservation. Prairie vegetation, if undisturbed, is maintenance-free and salt-tolerant in conditions such as those along roads. Landowners are generally willing to help manage property to preserve sites, or can work around sites if they are aware of the resource.

The most common prairies remaining today in the Black Earth Creek watershed and elsewhere are the "goat prairies" on the steep-sided hills, characterized by red cedar and junipers with an understory of prairie grass. These are the sites that were too difficult to plow and often too steep for grazing. Goat prairies support a diversity of interdependent prairie species, raptors, and invertebrates, as well as scientific benchmark and distinctive regional signature. Without protection, or via neglect, plant species and birds of prey, as well as scenic and historic landmarks may be lost to vandalism or alien plant species. The County can help provide consistent management and oversight for these areas.

Rare Species Occurrences

DNR's Natural Heritage Inventory program maintains data on the general location and status of rare, threatened, or endangered plant and animal species. Because they are rare species, vulnerable to collection and destruction, the exact locations and type of rare species is not made readily available. Although, known occurrences of rare species and natural communities occur throughout the area.

Archaeological Resources
According to the State Historical Society, there are 25 archaeological and cultural sites located in the Black Earth Creek Resource Area. Given the variety and types of sites and the results of other surveys in similar environments, there is a high potential for archaeological sites throughout the area as well. Archaeological information should be incorporated into the management of lands as this information becomes available.

Other Proposed Trails and Corridor Lands

These include the Black Earth Creek Fishery Area, the Ice Age Trail Corridor, the Ice Age Scientific Reserve, various federal, state and county lands, parks and easement properties including proposed trails which provide linkage and access among these areas and between communities (Map 10). The County is an important partner and plays a significant role in cooperation with the various public and private individuals and groups.

Alternative Resource Management Tools

Overall, it is not too surprising that many of these resources coincide, or overlap. This presents a good opportunity to prioritize the most critical areas and promote strategies for achieving a variety of resource management objectives, simultaneously.

Acquisition plays an important role. Typically, public acquisition and incentives are needed for sensitive resource areas which cannot be adequately protected through existing laws or regulations. As such, various alternative acquisition techniques are available, depending on the specific circumstances surrounding a property, as the basis for mutual agreements that can be reached with individual property owners.

Acquisition of property rights or partial rights from willing sellers may be accomplished in several ways, typically: (1) Purchase of a fee-simple interest in a property; (2) Purchase of lesser interest in the property (e.g., access or conservation easements, purchase or transfer of development rights, etc.); (3) Dedication of lands by developers; or (4) Gifts or donations, such as for tax purposes. These agreements only work when they satisfy the interests of both parties.

Acquisition Guidelines

The goal is to acquire the minimum necessary public interest in property to protect, restore and enhance the resource, while accommodating the needs of landowners. This is achieved through mutual agreements between the County, willing landowners, and possibly other local, state and federal resource management agencies or private groups that may also want to contribute.

Fee simple purchase is preferred for high priority natural resources protection areas. Most resources have some zoning protection, which is adequate. However, key areas that are especially important for the resource functions they provide need greater protection, management, or possibly limited public use. Public ownership is recommended in these cases. For example, the County should use fee simple acquisition for most park areas and trails. These areas are intended for permanent public use and fixed improvements, so public ownership is generally needed. Prime farmland should only be purchased if it appeared that the land would be converted to non-agricultural use.

Conservation easements or purchase of development rights should be used in areas where fee simple purchase is not necessary and public access is not required. Easements are appropriate to provide buffer areas adjacent to permanent open space.

This method allows the land, with deed restrictions, to remain in private ownership. For example, purchase of prime farmland may be avoided by acquiring conservation easements that allow farming but prevent development or other land uses that might conflict with open-space agricultural use. The landowner receives cash payment for the development potential of his/her property and can continue to farm it, as previously, as well as provide for future generations.

Partnerships, Roles and Responsibilities

Dane County plays a special role in the partnership among state, county and local units of government as well as private groups in meeting the recreational needs and resource protection goals of Dane County residents. The *Dane County Parks and Open Spaces Plan* defines that role and also recommends how Dane County works as a partner with government agencies and private groups. More specifically, the adoption of the *Parks and Open Space Plan* enables Dane County to participate in various state and federal grant programs and to work with individual property owners.

Partnerships have been an invaluable component of Dane County's Parks and Open Space Program. The state of Wisconsin has been the County's primary partner. The State Stewardship Program, managed by DNR, has been the major source of outside revenue for Dane County. Other governmental agencies have also entered into partnership agreements with Dane County. The County strives to involve local units of government when a project falls within or adjacent to its municipal boundary.

Non-profit Conservation Organizations can also assist. At times they are able to react more quickly to opportunities than government agencies, providing a direct fund-raising link to the private sector and sometimes being eligible for certain state cost-share programs not available to the County. For example, flexibility is a key aspect of land trusts. Their principal advantage is that they can offer alternatives to fee simple acquisition and perpetual easements through sophisticated financial approaches and complex arrangements tailored to meet the individual needs of the landowner. In addition to their fund-raising and technical support, these groups have also accepted certain operation and maintenance responsibilities for land identified in county-approved plans.

The resource area inventory presented in this plan provides a useful screening tool for the County to work with other units of government, conservation organizations, landowners and other partners in land acquisition and protection activities. Where these areas coincide or overlap represents the highest priority for protection, offering the greatest appeal to different partners. Some areas may be high priority because of their uniqueness or importance. Taking a long-term view, some areas may become high priority because lands become available through agreements with landowners who want to take advantage of the opportunities offered to them. Depending on the circumstances surrounding a particular property or site, responsibility for implementing the plan should be shared among the appropriate agencies/groups depending on their special skills, resources and support base.

Management Recommendations

The area possesses a maximum diversity of topographic, natural and rustic rural landscapes which are outstanding on all scales. It provides high quality vistas and major potential for outdoor recreational uses. It contains areas of prime farmland, restorable wetlands, forests and prairies. It also includes glacial features of statewide significance in the headwaters of a world-class trout fishery.

The overall purpose of the *Black Earth Creek Resource Area Plan* is to protect, restore and enhance the natural, cultural and outdoor recreational resources associated with Black Earth Creek. Management of the resource will continue to focus on protecting Black Earth Creek as a premier trout fishery in south-central Wisconsin. Also noteworthy are the surrounding valley and upland areas which are equally important.

Priority management objectives include:

- Water quality protection and protection from extreme conditions such as flooding or droughts
- Farmland preservation and protection of soil fertility
- Protection and enhancement of native plant and animal species
- Integration of land uses emphasizing natural, cultural and scenic landscape features
- Public access, recreation, education and research

The following priority areas and management recommendations provide general guidance in managing these resources and coordinating efforts.

Black Earth Creek Priority Areas

The Black Earth Creek Resource Area is characterized by a nearly flat valley floor draining westward between north and south rims of 200-foot bluffs, two island bluffs, side valleys and many ravines. On the valley floor there are prime farmlands, native tallgrass prairies, marshlands, peatlands, and kettle ponds. Groundwater flow discharges to the creek and the springs and seeps lying below the bluffs. On the south-facing slopes there are native prairies and oak savannas; with mixed forest on the north slopes and in the ravines. Along the bluff tops there are wooded areas, partly cleared for agriculture and residences.

The Black Earth Creek Resource Area is comprised of two Resource Sites: 1) the Black Earth Creek Valley (Map 11a); and 2) the Upper Black Earth Creek Watershed (Map 11b). These areas include the following features and associated management recommendations:

The Stream Corridor (approximately 1,350 acres) traverses both resource sites and includes existing wetlands as well as historic wetland areas (hydric soils) located along the stream. It also includes an approximate 100 foot easement acquisition area on each side of the creek or wetland. This is intended to serve as a protective buffer along the land/water's edge. It may be possible to expand this corridor to include significant tributary wetland areas, such as along Garfoot and Vermont Creeks or along north/south CTH KP in cooperation with other partners. Existing and eligible state acquisition lands are currently located within this corridor. Water quality/quantity measures should also be taken to protect the stream from impacts resulting from future development.

Farmland Preservation Areas (approximately 3,500 acres) include areas of prime farmland and farmland of statewide significance as determined by the USDA Natural Resources Conservation Service. They also contain areas of existing remnant and restorable native prairie lands. Roadside right-of-way could also be used to increase prairie species acreage, decrease maintenance, and provide more pleasant scenery.

Potential Trail Linkages exist throughout the area, for example: easements along the stream for fishing access, linkages with the Ice Age Trail which intersects here, as well as a proposed trail along the length of the corridor linking all the communities in between. Carefully designed parking, elevated walkways, boardwalks and trails can help promote controlled or limited public access.

Recommendations:

- Public and private purchase of property or easements for restoration and protection:

  Stream Corridor – including upland buffers for water quality protection, wildlife habitat and limited public access.

  Wetlands – restore appropriate water levels and vegetation on prior-converted and farmed wetlands (hydric soils) including upland buffer areas.

  Farmland – purchase of development rights to maintain agriculture; promote clustering of future development following resource conservation guidelines.

  Prairies – native prairie restoration and management to control alien species and invading brush, including roadside right-of-way; grassland wildlife requires larger acreages of meadow or hayfield but does not require native plant species.

  Trail Linkages – developed through the corridor which would link to Middleton in the east, Mazomanie to the west, the Ice Age Trail system and various communities in between.

- Aggressive implementation and enforcement of erosion control and stormwater management requirements.
- Pumping more water from municipal wells located closer to the Yahara Lakes (Middleton and Madison).

North Rim Upper Black Earth Creek is a long continuous savanna corridor of mostly south-facing, hot, dry, rocky, steep slopes with ridges alternating with ravines (Map 9). The predominant vegetation includes oak forests (mostly thin and stunted), oak savannas, and goat prairies on south-facing bluffs. The east end of the North Rim serves as an important point overlooking the glacial Mud Lake basin and is an important focal point with the Black Earth Creek Watershed on one side and the Lake Middleton Basin on the other. It also serves as an important groundwater recharge area. Farther west (Sec. 7), there is another large, outstanding block of wild, vegetated ravine with prominent scenic value. This area deserves high priority management and protection without which the rare plant species, birds of prey and outstanding natural and historic scenic views and landmarks there could be lost. The oak savanna fringe above the Hideaway Landfill provides another important viewpoint as well as an east-west corridor link above the landfill for a trail, possibly in relation to the Ice Age Trail. Along Rocky Dell Road, the oak forest forms an unbroken, highly diverse and scenic corridor that is especially supportive of wildlife.

While many of these areas are largely protected from development, because of the steep slopes, the County may want to acquire additional property interest in some areas for special management needs or purposes, such as large blocks of forest, sensitive habitat areas, or scenic views along the ridgelines. Eligible lands are represented by a scenic easement area of approximately 100 feet back from the upland boundary of the steep, usually wooded, slopes. The easement area is intended to preserve the ridgelines and help maintain the scenic beauty, but may also be expanded to include additional sites for prairie and oak savanna restoration and maintenance, historic and scenic landmarks, trails and vistas as opportunities occur.

Recommendations:

- Public and private purchase of property or easements – maintain as an uninterrupted block in its natural state as much as possible. Also, public and private purchase of land or easements to protect scenic views, create public parks and ancillary trails with limited access.

- Investigate portions of Town of Middleton Sec. 7 as a possible Big Ravine Scientific Area or Reserve, paying special attention to potential impacts on rare plants and animals, control pest species.
- Restoration program for oak regeneration and the reintroduction of missing savanna and prairie species. Selective thinning in some areas to favor scattered oaks interspersed among restored prairie grasses and removal of brush, especially all of the alien shrubs.
- Careful siting of structures including setbacks for slopes, ridgelines, and forest edges to help protect the visual qualities.
- Erosion control and stormwater management, especially gullyheads and areas of broken groundcover.

South Rim Upper Black Earth Creek is a corridor of steep, mostly wooded slopes along the south side of the Upper Black Earth Creek Watershed including some old open fields and pastures, small residential areas, and a stone quarry (Map 9)**.** The South Rim provides an outstanding scenic backdrop with numerous vistas. When not disturbed, the area conserves both soil and water. Outstanding forested areas provide shelter for a variety of upland plants and animals. The cleared gaps in, and the upper edges of the South Rim forest corridor are ideal for this along with maintaining views among the growing trees. Many birds benefit from edge habitats allowing them to move out into the old fields and pastures.

While many of these areas are largely protected from development, because of the steep slopes, the County may want to investigate acquiring additional property interest in some areas for special management needs or purposes, such as large blocks of forest, sensitive habitat areas, or scenic views along the ridgelines. Eligible lands are represented by a scenic easement area of approximately 100 feet back from the upland boundary of the steep, usually wooded, slopes. The easement area is intended to preserve the ridgelines and help maintain scenic beauty, but may also be expanded to include additional sites for forest restoration and maintenance, historic and scenic landmarks, trails and vistas as opportunities occur.

Recommendations:

- Public and private purchase of property or easements – preserve in its natural state as much as possible; maintain an unbroken scenic and wildlife corridor along the south rim, especially the steep slopes northwest of the golf course. Preserve areas along the ridgelines to maintain the scenic beauty.
- Development of public parks and trail corridors with limited access, as well as linkages with the Ice Age Trail and Scientific Reserve.
- Forest regeneration along edges and steep clearings, control of nuisance species such as deer and buckthorn.
- Low-density residential use is acceptable provided necessary design steps are taken (clustering, setbacks, screening, vegetation, etc.) to maintain the wooded slopes, corridor, and preserve the aesthetic qualities.
- Erosion control and stormwater management, especially gullyheads and areas of broken groundcover.

Quarry and Deer Run Islands
Quarry Island is a dolomite bluff with a quarried west face which exhibits a wide diversity of plant and animal species (prairie, oak savanna, mixed forest, wet forest), as well as an important vista and geologic feature. Priority land use objectives include public acquisition of park space including recreational and educational features.

Deer Run Island presents an example of good landscape design that recognizes the need for natural groundcover to improve habitat and allow for wildlife observation and appreciation by residents. The landowners have left natural groundcover intact, especially on slopes, and moderate forest thinning has allowed for diverse tree regeneration. Oak regeneration is a beneficial result of natural landscaping along with soil and water management.

Recommendations:

- Promote opportunities to develop natural resource parks with overlooks, scenic vistas and points for interpreting the special geologic and biotic features, as well as connection with the Ice Age Trail and Scientific Reserve.
- Careful siting of structures including setbacks for slopes, ridgelines, and forest edges to help protect the visual qualities. Attention to roads and parking design can minimize runoff and pollutants.
- Erosion control and stormwater management.

Recommended Actions

The *Black Earth Creek Resource Area Plan* is not a land use plan or zoning ordinance and does not supercede or replace existing regulations. The plan has been designed to be consistent with adopted county, city, village and town plans so that implementation actions will aid in achieving adopted land use, water quality, parks and open space goals and objectives. The plan offers options for land acquisition and preservation easements at fair market value in cooperation with willing landowners as a means of implementing the plan. Land values and local business revenues should also benefit from such a plan.

Rather than specifying which groups or agencies should carry out a particular strategy, the organization of this plan is to highlight what groups are doing so that efforts can be better coordinated. These groups are encouraged to make use of the plan in reviewing and developing their own management strategies and programs in relation to the other groups (defining priorities, guiding planning and activities, finding collaborative solutions and cost-sharing, etc.), depending on their special skills, resources and support base. It is hoped the plan will provide a common understanding and framework by which the various strategies presented here can be successfully coordinated and implemented.

Recommended actions include:

1. Provide/promote cost-share funding and other incentives to acquire lands or property rights for priority areas identified in the Resource Area Plan, for example:

    - Dane County Conservation Fund and Grant Program funding to promote resource protection and outdoor recreation objectives identified in the plan.
    - State Stewardship and Trout Stamp funding for easements, such as for lands in the Black Earth Creek Fishery Area.
    - Various federal programs/funding for buffer strips (CREP), wetland restoration (WRP), and wildlife habitat (WHIP) along the creek and upland areas.
    - State grant programs to improve/restore streambank and in-stream habitat as well as address nonpoint source pollution.
    - Partnerships with various local units of government and conservation groups to protect and acquire areas such as the Ice Age National Scenic Trail and Scientific Reserve, and other critical sites such as scenic views along hilltops and ridgelines, archaeological sites, or special or unique geologic features or biological communities.
    - Cooperation with local land stewards and donors.

2. Encourage/promote participation in the farmland preservation programs offered by various public and private groups, such as the American Farmland Trust, Pheasants Forever, etc.

3. Protect upland wooded areas, especially steep slopes to prevent soil erosion, promote infiltration, provide wildlife habitat, resource connectivity and scenic beauty, such as through easements along ridgelines and hilltops.

4. Promote trail linkages between various sites and across jurisdictional boundaries, such as a trail along the length of the creek corridor between Middleton and Mazomanie, connecting with the Ice Age Trail as well as neighboring communities.

5. Use public access areas as stepping stones connected with and along the trail to enhance outdoor recreation and educational opportunities, including exhibits and displays.

6. Restore glacial Mud Lake west of the Middleton business park as a controlled surface and groundwater facility to help protect Black Earth Creek.

7. Promote infiltration practices as a means of protecting groundwater discharge to Black Earth Creek (e.g., grass swales, retention areas, and rain gardens; rooftop storage/runoff directed to lawns and other more pervious areas instead of driveways, parking lots and streets).

8. Incorporate natural resource elements as specific conservation design features.

9. Provide advice to farmers, developers and homeowners on opportunities they can take to help protect Black Earth Creek.

10. Investigate the feasibility of pumping more water from municipal wells located closer to the Yahara Lakes (Middleton and Madison).

Conclusion

The Upper Black Earth Creek watershed, with its diverse interests, requires a strong partnering effort, both public and private, as well as a creative mix of real estate management tools. Various opportunities include fee title purchase, purchase of development rights, conservation easements, as well as various other arrangements that may be reached through mutual agreement among the various interests. Dane County and the DNR have a long standing policy of only purchasing lands from willing sellers with acquisition funding provided through the Dane County Conservation Fund, the State Stewardship Program, various federal sources (CREP, WRP, WHIP, etc.), local government and private conservation group activities and contributions.

The various public agencies and private groups highlighted in the plan should develop cooperative partnerships for managing the lands within the Black Earth Creek Resource Area depending on their special skills, resources and support base. It is hoped the plan will provide a common understanding and framework by which the various strategies presented here can be successfully implemented. The purpose being: to combine and target resources where they are needed most and have the most beneficial effect in order to protect, restore and enhance the significant natural and outdoor recreational resources associated with Black Earth Creek.

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