

Executive Summary

The Big Darby Watershed in central Ohio is one of the most biologically diverse aquatic systems in the Midwest, home to 38 state and federally listed aquatic species. Big and Little Darby creeks have been designated as State and National Scenic Rivers.

The Big Darby Accord Plan has been prepared collaboratively among ten jurisdictions within the Franklin County portion of the watershed, covering an area 84 square miles in size. The Big Darby Accord Plan is intended to serve as a multi-jurisdictional guide for development and conservation. The Plan represents a long-term vision and general land use plan for the future that brings together multiple interests in an effort to protect and preserve the watershed while providing guidance for managed growth. The Plan allows for the lifting of a development moratorium that has been in place three and a half years.

The Plan builds upon previous planning efforts and studies including, but not limited to, the External Advisory Group (related to the Environmentally Sensitive Development Area), the Ohio EPA

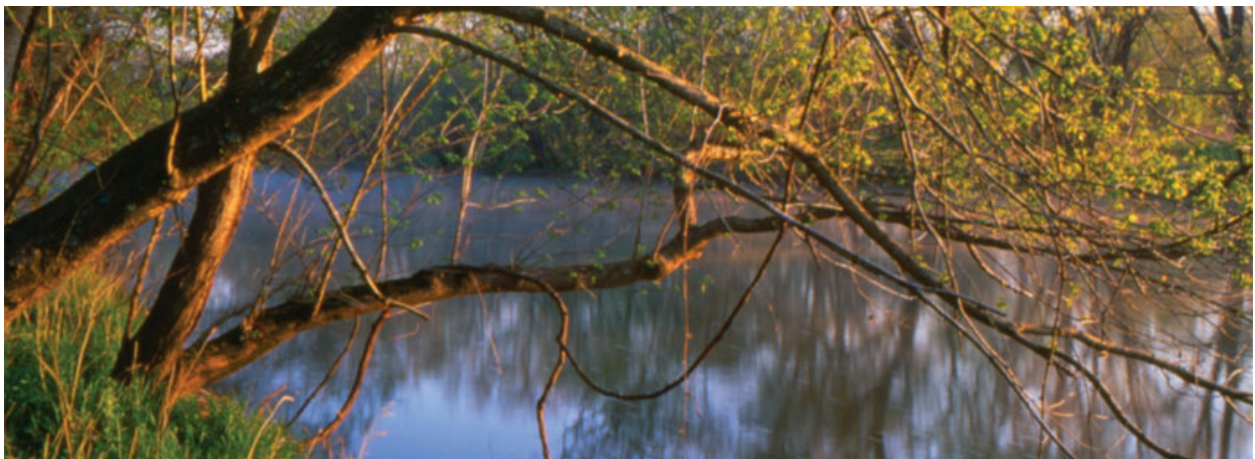
Mission Statement

The Big Darby Accord consists of local governments within the Franklin County area of the Big Darby Creek Watershed. The mission of the Big Darby Accord is to cooperatively develop a multi-jurisdictional plan and accompanying preservation and growth strategies, capable of implementation, oversight, and enforcement, which are designed to:

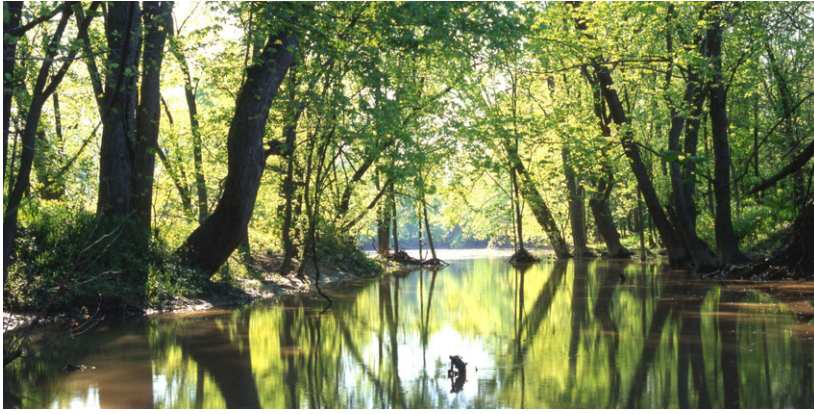
- Preserve, protect and improve, when possible, the Big Darby Watershed's unique ecosystem by utilizing the best available science, engineering and land use planning practices;
- Promote responsible growth by taking measures to provide for adequate public services and facilities and promote a full spectrum of housing choice, as well as adequate educational, recreational, and civic opportunities, for citizens of each jurisdiction and for Central Ohio;
- Create a partnership that recognizes the identity, aspirations, rights, and duties of all jurisdictions and that develops methods of cooperation among the partners through means which include the cooperative utilization of public services and facilities; and
- Capitalize on the results of other efforts by considering local comprehensive plans, as well as the work of the Environmentally Sensitive Development Area External Advisory Group, the Hellbranch Watershed Forum, the 21st Century Growth Policy Team, and other local planning and zoning efforts, in the development of the plan.

Total Maximum Daily Load (TMDL) Report for the Big Darby Watershed, and the Hellbranch Watershed Forum. It is the goal of the Accord that each jurisdiction work towards adoption and implementation of the Plan and its provisions.

A Mission Statement and Plan Principles have guided this planning effort and will continue to lead Accord jurisdictions through plan implementation.



Big Darby Creek Source: Metro Parks/Jim Murtha



Big Darby Creek Source: *The Nature Conservancy*

Plan Framework

Review and analysis of available information resulted in the identification of “plan drivers” which affect the amount, location and type of development recommended in the Plan.

Plan drivers include the level of development that is currently permitted in the planning area (referred to as by-right); accessibility and capacity of centralized sewer and roadway systems; environmental conditions related to sensitive natural resources; and water quality and aquatic habitat conditions related to current and proposed land uses.

The Plan drivers led to the creation of a general land use plan that promotes a sustainable land use pattern and locates the highest amount of development in areas that are less sensitive and within close proximity of centralized sewer and regional transportation networks. A conservation strategy based on natural resource features and a desire to create a connected green infrastructure network balances development with the goal of conserving almost 25,000 acres of land. To achieve the Mission, both elements - development and conservation - need to be pursued simultaneously.

Accord Plan Principles

- Protection of environmentally sensitive areas
- A general land use plan that balances environmental protection and responsible growth
- A general land use plan that recognizes existing sewer and waste water treatment capacities, while taking into account the rights accorded watershed landowners under current zoning
- Growth will be served by adequate public facilities, particularly central sewer
- A development policy that provides for mechanisms to acquire environmentally sensitive areas
- A memorandum of understanding among Accord members to implement the agreed upon plan
- Development without the condition of annexation
- Mechanisms for cooperative revenue sharing among Accord members
- Water quality, biological integrity, and adaptive management

Conservation Category	Acres
Protected	4,310
Existing	6,131
Tier 1	5,790
Tier 2	1,885
Tier 3	7,150
Total	25,266

Acres of Conservation Categories

Conservation Strategy

A system of Tiers identifies land areas of protection based on unique environmental resources that were identified during the environmental sensitivity analysis. A majority of the sensitive features are associated with areas of high potential for groundwater and surface water flow exchange, areas of high groundwater pollution potential, floodplains, wetlands, and stream corridor zones. The Tiers also encompass existing parks and easements totaling over 7,000 acres as well as areas that are already protected under current regulations like floodplains and the calculated stream protection zone. The goal of the Accord is to protect the Tiers through development policies and regulations, and proposed voluntary programs and incentives for conservation.

Tier 1 includes land within the 100-year floodplain, wetlands, and critical groundwater recharge and pollution potential zones. Tier 2 includes areas with highly erodible soils and wooded areas of greater than 3 acres in size. Tier 3 is considered important for protection because these areas allow for the creation of linkages among all the components of the land conservation strategy - as well as suitable areas for parkland.

Development Strategy

The general land use plan, which is based on a development level that is currently permitted by local zoning codes, identifies an additional 20,000 dwelling units of development. When combined with the estimated existing population, the long-term (30 years) build out for the planning area is about 100,000 residents. Figure 1.0, located at the end of this executive summary, identifies the proposed general land use plan for the Big Darby Accord planning area. To manage this growth in a manner that protects water quality and aquatic habitat, the proposed plan is guided by several key concepts:

- Higher density development in a new town center between Interstate 70 and US Route 40 (West Broad Street) that would be served by centralized sewer.
- Additional areas of higher density adjacent to Hilliard and the City of Columbus along the eastern edge of the study area that would be served by centralized sewer.
- Areas of conservation development within Brown, Prairie and Pleasant Townships that cluster development which are served by alternative community-based sewage treatment.
- Site and regional-level application of stormwater best management practices (BMP'S) to control stormwater quantity and quality so that it does not adversely affect the health of the watershed and meets Ohio EPA requirements for pollutant loadings for Total Suspended Solids, Nitrogen and Phosphorus.

The general land use plan proposes a variety of new land use categories for the planning area. In addition to conservation areas, principle land use categories include conservation development and a new mixed-use Town Center.

Conservation Development

Conservation development, also sometimes referred to as cluster development, is recommended as the preferred land use pattern to protect the area's environmental features through open space set asides and to protect the rural character of the area. The Plan identifies two conservation development land use categories; both require that 50% of a development site be placed in a perpetual easement that is managed in a natural state. In the Hilliard expansion area, which will receive centralized sewer, conservation development at 1 dwelling unit per acre is recommended providing for up to 2,000 dwelling units. In Brown, Prairie and Pleasant Townships, conservation development at permitted rural densities is recommended. New standards and regulations pertaining to siting and design criteria, operator and monitoring requirements, and efficiencies of alternative community-based sewage treatment systems will guide rural conservation developments. Incentives to encourage stream restoration and additional open space set asides are recommended.

Conservation developments should reinforce the rural character of the watershed. Housing types should be varied within developments and encourage creativity to meet the needs of mixed incomes. The location of open space in conservation developments should

Proposed Generalized Land Use Categories	Acres	Percent
Agricultural Use	3,356	6%
Commercial	196	0%
Industrial	50	0%
Public / Semi Public	1,053	2%
Mixed Use	357	1%
Res Conservation Devp 50% Open Rural densities	9,406	17%
Res Conservation Devp 50% Open 1 du/ac	1,189	2%
Rural Residential	1,026	2%
Rural Estate	4,805	9%
Suburban Low Density 0.5-3 du/ac	149	0%
Suburban Medium Density 3-5 du/ac	4,073	7%
Urban Medium Density 5-8 du/ac	130	0%
Urban High Density 8+ du/ac	447	1%
Special Residential LEED	328	1%
Town Center*	1,825	3%
Golf Course**	729	1%
Existing Park**	6,266	11%
EC Protected	4,334	8%
Tier1	5,600	10%
Tier2	1,850	3%
Tier3	7,160	13%
Roads & Transportation***	1,701	3%
	56,029	100%

Proposed Land Use Categories

*Excludes identified Conservation areas in Town Center (about 675 acres)

**Excludes Conservation protected area

***Calculation considers only major roads.

be dictated by the location of environmentally sensitive features, and contiguity and connectivity of existing open space features to help achieve a green infrastructure network. The design of conservation developments should be flexible to reserve the best available soils on the site for community-based sewage treatment.

For larger lot developments that occur outside of conservation developments, local jurisdictions should encourage at least 50% of the site be placed in a conservation easement to ensure proper care and native vegetative features.

Town Center

The intention of the Town Center zone is to create a sustainable and highly desirable mixed-use area that includes a full range of residential, retail, office and public uses including parks and open space within a 2,500 acre zone. The Town Center is envisioned as a walkable village that includes retail uses facing key streets to create a lively and visually appealing community.

The Town Center core should be a safe, attractive, efficient, walkable area with convenient connections to residential neighborhoods and nearby transit. The Town Center's outer edges should be designed in a manner that allows for a transition to surrounding uses. The Town Center should evoke special characteristics that set it apart from its surroundings and contribute to its individuality.

The City of Columbus has identified an initial sewer capacity for the Town Center of 5,000 equivalent dwelling units. The total amount of development may increase depending on sewer

service availability. Development within the Town Center should follow design standards and guidelines that are developed in a more detailed planning effort. A minimum base density should be established to allow for 8 to 15 dwelling units per acre.

Water Quality

The water quality modeling analysis was successful in duplicating the results from the TMDL study, in particular for the Hellbranch Run watershed. Water quality modeling of the proposed Big Darby Accord general land use plan shows there will be a reduction in the level of specified pollutants that are contained in stormwater runoff and discharged to the Hellbranch Run or directly to the Big Darby Creek main stem. The Ohio EPA TMDL sets specific targets for reductions in loadings of Total Suspended Solids and Phosphorus at 95% and 81% respectively. The general land use plan achieves a significant improvement in the direction of reaching Ohio EPA targets attributed to conservation strategy and land use pattern.

To achieve the goals of the TMDL, the Plan identifies appropriate and innovative best management practices (BMPs) for site development in the form of a BMP toolkit. A BMP planning process is also proposed to provide guidance in determining the appropriate application for site development. The use of Low Impact Development (LID) design techniques is recommended to reduce the amount of impervious cover on a site and allow for more natural areas and infiltration.

Policies

The Plan identifies supporting policies that each jurisdiction should adopt to ensure the watershed is protected. These policies are more fully explained in the Big Darby Accord Plan. Major policy recommendations associated with environmental components, conservation development, the Town Center, open space, water quality, best management practices and sewer service are summarized below.

Environmental Resources

The main goals of the Big Darby Accord planning effort are to preserve and protect areas that contribute the most to water quality and to improve the overall aquatic habitat within the Franklin County portion of the Big Darby watershed. These areas, associated with Tiers 1, 2 and 3, in some cases already have protective status related to state or federal regulations. The Plan recognizes these requirements and provides additional guidance. Key Plan provisions include the protection of riparian corridors through the application of a stream corridor protection zone (SCPZ) and reinforcing the protection of existing wetlands. The SCPZ precludes certain activities from occurring within a certain distance of all stream channels. In addition, the Plan recommends preserving existing wetlands to the extent possible. Any mitigation required in meeting the needs of environmentally sensitive resources should create stream and wetland restoration opportunities, or other similar benefits.

Conservation Areas

The Plan recommends requiring permanent easements for areas that are intended for conservation, including stream corridor

protection zones and land that is set aside as part of conservation development requirements. Easements can provide economic benefits to property owners. All easements should be held jointly by home owners associations, governmental entities or conservation groups to ensure that they are properly maintained and managed over the long term. Consistent guidelines for the maintenance and care for privately held open space lands or land held within easements will need to be developed to ensure the areas are planted with native vegetation. Developers should be required to work with Franklin Soil and Water Conservation District and the local jurisdiction to develop a planting plan for any open space easement, plant the initial cover and ensure a successful outcome for a specified number of years.

Development

Policies related to development are aimed at creating a more sustainable land use pattern that can be served by infrastructure, protects sensitive resources, and create places that increase the quality of life for residents and visitors. The Plan discourages conventional subdivisions, which are inconsistent with the goals of the Plan, and proposes development patterns that cluster housing in conservation developments or in a new mixed-use Town Center. The Plan encourages the application of Leadership in Energy and Environmental Design (LEED™) building principles, particularly LEED™ Neighborhood Design (ND) principles which are under development.

Development proposals will need to include an evaluation of environmental site conditions,

required best management practices to meet water quality goals, environmental policies, and the availability of utilities. The Plan recognizes that flexibility may be needed to meet all requirements and suggests incentive opportunities to help reach the overall goals of the Plan.

Stormwater

Development in the Accord planning area will need to meet a new standard in order to meet water quality goals of the Ohio EPA and of this Plan. Stormwater management policies for the Big Darby Accord Plan are tied to maintaining and improving water quality and aquatic life use attainment within planning area watercourses. The Plan recommends a regional approach to stormwater management in the Town Center to provide sufficient treatment and pollutant removal.

Best management practices are structural or non-structural practices, management practices, or a combination of these techniques, that minimize the impacts of agricultural or urbanized land uses on water quality by removing or reducing pollutants. BMPs capture and treat pollutants found in runoff and manage the frequency, volume and energy of the runoff so that water resources are not degraded.

The Plan summarizes information on design criteria, benefits and limitations, pollution removal efficiency, site design factors, depth to the water table, and the scale at which each BMP is most effective.

Planning for stormwater management BMPs within a development begins with the collection of data on the local receiving waters and information regarding pollutants of concern

within the downstream watershed area. The Plan outlines an eight step BMP planning process to select appropriate BMPs that address both the proposed development and the pollutants of concern listed in the TMDL. Practices such as green roofs, pervious pavement, rain water harvesting, filtration devices, hydrodynamic devices, bioretention, grass channels, dry swales, wet swales, infiltration basins, infiltration trenches, dry wells, and underground detention are discussed. It is important to review stormwater policies as science, technologies, industry, and design will likely evolve.

Utilities

Centralized sewer will be provided to the Town Center and the identified development corridor within the Hilliard expansion area. Current capacity constraints limit development in the proposed Town Center to 5,000 equivalent dwelling units and 2,000 dwelling units in the Hilliard expansion area. Centralized sewer service will also be provided to the LEED area east of Alton and Darby Creek Road. Capacity exists for approximately 1,400 equivalent dwelling units in this area. Central sewer service may also be provided in a manner consistent with the Accord general land use plan to some sites closer to the existing system that were previously annexed or are zoned for development.

To avoid a proliferation of household sewage treatment systems (HSTS), other areas would utilize alternative community-based sewage systems such as drip or spray irrigation. Management, operation, design, maintenance and other requirements for community-based systems are being evaluated.

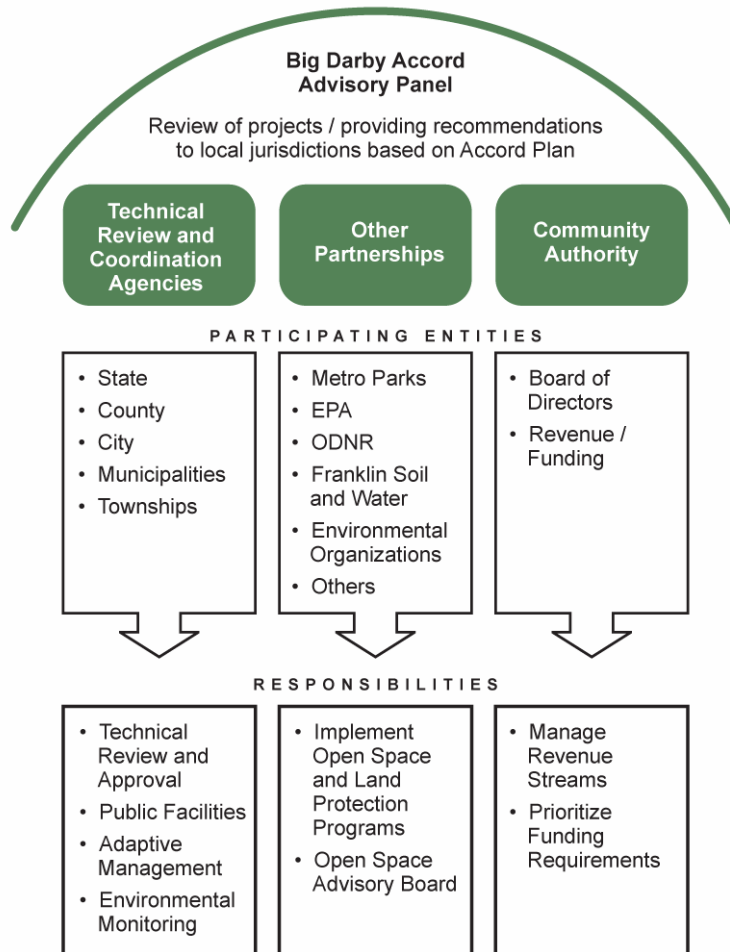
BIG DARBY ACCORD

Implementation

Implementation of the Big Darby Accord will require coordinated effort among a number of key stakeholders, including local governments, state agencies, landowners, conservation organizations, and developers. A Memorandum of Understanding between the jurisdictions is being pursued to solidify the commitment to work together to implement the Plan. To help jump start efforts, the Accord jurisdictions should consider appointing or jointly hiring staff to coordinate efforts.

Development Review and Coordination

Adoption of the Plan will require updates to local comprehensive plans, zoning and subdivision regulations, and related policies. These efforts should be coordinated whenever possible to promote efficiency. Future zoning and site development review processes must be consistent and apply evenly to all areas of the planning area. The Plan recommends the formation of a Big Darby Accord Advisory Panel to fulfill an oversight function to the review process and create a mechanism for collaboration. The recommended structure is similar to the Rocky Fork-Blacklick Accord Panel. Development and rezoning proposals will proceed through review at the local jurisdiction level aided by the use of a development review checklist that identifies requirements for Accord Plan consistency. The Big Darby Accord Advisory Panel will review completed development and zoning proposals prior to local jurisdiction technical review. Following the technical review and review of staff reports, the Big Darby Accord Advisory Panel will provide a non-binding



Various Roles and Responsibilities for Plan Implementation

recommendation regarding the proposal to the local jurisdiction. Final approval resides with the local jurisdiction.

Funding

Funding the Plan will require several existing and new mechanisms including a new community authority, tax increment financing (non-school) program, and a \$2,500 per unit developer contribution. Based on a number of assumptions, these mechanisms could collectively generate upwards of \$430 million (present value) dollars over time. Revenues will also be leveraged with other available resources to fund plan improvements related to

infrastructure and utilities, land acquisition and conservation, stream restoration, community facilities, stormwater management, and water quality monitoring. Accord jurisdictions should allow flexibility in meeting plan requirements, particularly if opportunities arise for regional solutions such as large scale stream restoration, regional stormwater facilities, and alternative community based sewage systems.

Town Center Master Plan

A recommendation of the Big Darby Accord Plan is to prepare a detailed master plan for the Town Center area as identified within the Plan. A master plan would help

establish a more specific vision for the development of the Town Center and would provide a detailed set of recommendations including level of development, infrastructure requirements, design guidelines, and phasing. The master plan should address public and private properties within the Town Center and incorporate the adjacent areas as part of the analysis to ensure the Town Center complements and is compatible with the surrounding areas.

There are a number of steps required in the preparation of the master plan. At a minimum Brown and Prairie Townships should lead the master plan effort, in coordination with other members of the Accord.

Programs

The Plan identifies a variety of new programs for reaching the goals of the general land use plan and creating a conservation network of 25,000 acres. Priorities for conservation efforts should be linked to the Tiers with acquisition efforts focused on Tiers 1 and 2. The Accord should work closely with organizations like Metro Parks, the Nature Conservancy (TNC), Darby Creek Association, Ohio Department of Natural Resources (ODNR), Franklin Soil and Water Conservation District, Natural Resources Conservation Service (NRCS) and The Ohio State University (OSU) to provide increased visibility to conservation efforts and to pursue and leverage funding sources. In addition, the Accord should establish an Open Space Advisory Council to guide and coordinate conservation efforts. Programs should be established to allow for land acquisition, density transfers, nutrient reduction on farmland, backyard conservation, and outreach to landowners.

To allow for ongoing study and to adapt to changes over time, the Plan recommends establishing a comprehensive water quality monitoring program at both the watershed level and the development site level. The primary purpose of the watershed level monitoring is to ensure that the aquatic life use designations for all reaches of a stream are being met. The purpose of the development site level monitoring is to ensure development sites are not exceeding determined allowable release rates for the pollutants of concern as defined by the Ohio EPA in the TMDL. To establish the protocols, process and details of the monitoring program (and to help establish goals, consistency and coordination for stream restoration efforts), an Environmental Monitoring Group (EMG) should be established with representatives from The Ohio State University, Ohio EPA, Ohio Department of Natural Resources, Franklin Soil and Water Conservation District, and one outside conservation group representative. The EMG should prepare a "State of the Darby" report every two to five years to report on water quality trends within the watershed compared to the TMDL and Plan goals. This report should state concerns and identify any recommended action for mitigating impacts.

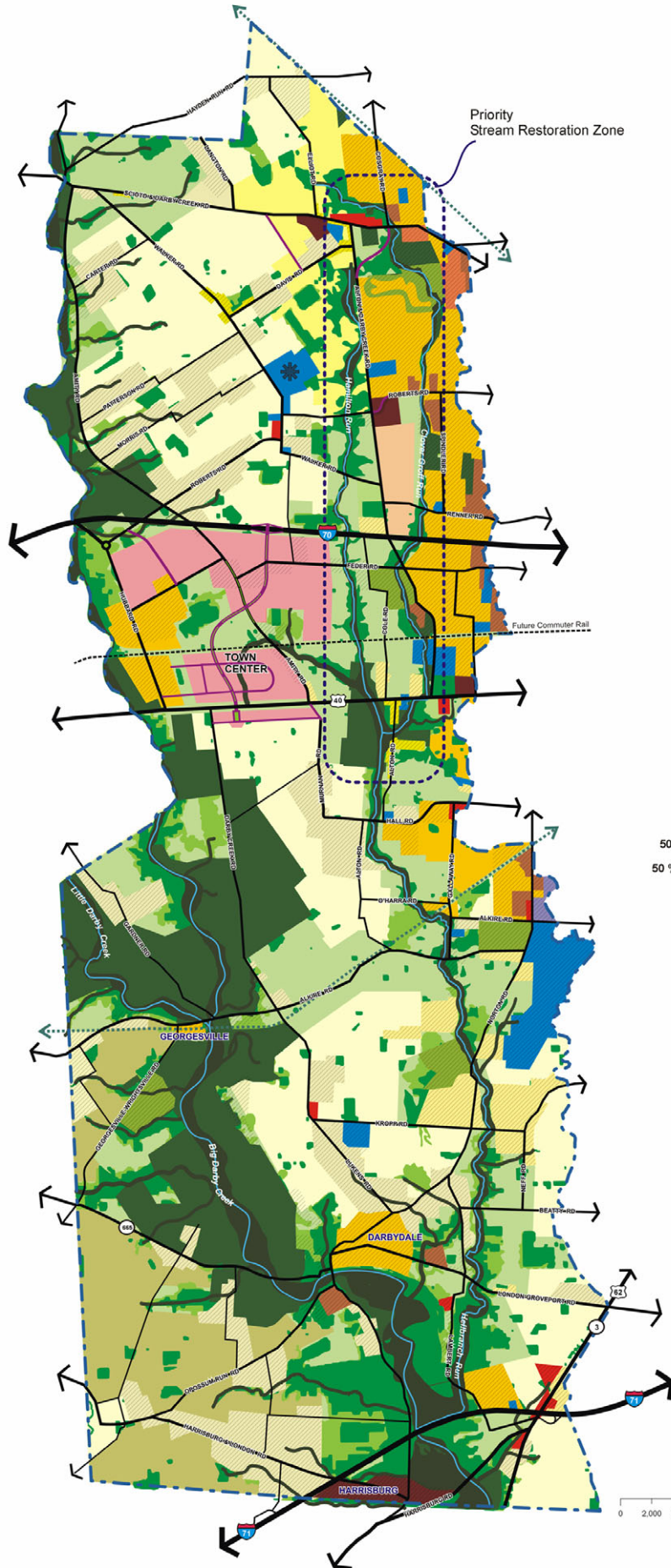
Early Actions

The Accord Plan is a living document that, over time, will need to be updated. Several of the programs recommended in the Plan are intended to provide feedback that will be used to adapt policies, programs, and standards to ensure that actions today and in the future are still meeting the Mission of the Accord. New technologies related to best management practices, new tools and open space programs may arise. Several early actions are identified for the Accord jurisdictions to move the planning process into action. These actions are further refined in an emerging Memorandum of Understanding among the jurisdictions:

- Adopt the Plan (1-4 months)
- Complete and Adopt a Memorandum of Understanding (1-4 months)
- Update local regulations (2-6 months)
- Establish a Darby Accord Advisory Panel (4-6 months)
- Identify staff resources to facilitate implementation of plan elements (6-9 months)
- Perform facilities planning for services (6-12 months)
- Initiate Town Center Master Plan process (6-12 months)
- Set up Community Authority and non-school TIF (6-18 months)
- Begin an environmental monitoring program (6-18 months)
- Continue public education and outreach (ongoing)

The Big Darby Accord Plan has brought together ten jurisdictions and created a Plan that serves as a model for regional planning throughout the entire Big Darby Watershed and the State of Ohio. Working together has increased benefits for all communities in the watershed. The jurisdictions of the Accord and their partners have raised the bar in a spirited commitment to protect the Big Darby Watershed for generations to come.

Proposed General Land Use Map



- POTENTIAL NEW SCHOOL SITES * (Blue star symbol)
- PROPOSED MAIN ROADS (Thick black line with arrow)
- EXISTING MAINROADS (Thin black line)
- TRAILS (Dotted line)
- EXISTING DEVELOPMENT (Hatched pattern)

- TOWN CENTER ZONE (Pink)
- RESIDENTIAL URBAN HIGH DENSITY > 8 DUs/acre (Brown)
- RESIDENTIAL URBAN MEDIUM DENSITY 5 - 8 DUs/acre (Orange)
- RESIDENTIAL SUBURBAN HIGH DENSITY 3 - 5 DUs/acre (Yellow-Orange)
- RESIDENTIAL SUBURBAN 0.5 - 3 DUs/acre (Yellow)
- RESIDENTIAL RURAL 0.2 - 0.5 DUs/acre (Light Yellow)
- RURAL RESIDENTIAL ESTATE (> 5 ac Lots) (Light Green)
- SPECIAL PILOT (LEED) RESIDENTIAL* 3 DUs/acre (Light Orange)
- COMMERCIAL (Red)
- PUBLIC / INSTITUTIONAL (Blue)
- INDUSTRIAL (Purple)
- MIXED USE (Dark Brown)
- AGRICULTURE (Light Green)
- GOLF COURSE (Dark Green)

ENVIRONMENTAL CONSERVATION ZONES

- PROTECTED ** (Dark Green)
- EXISTING PARKS & EASEMENTS (Medium Green)
- TIER 1 (Light Green)
- TIER 2 (Lighter Green)
- TIER 3 (Very Light Green)

CONSERVATION DEVELOPMENT OVERLAYS

- 50 % OPEN SPACE based on existing zoning RURAL DENSITY (Light Yellow)
- 50 % OPEN SPACE with 1 du/ac (sewer required) LOW DENSITY (Yellow)

Important Note:

This map is a general land use map. It is recognized that application of the general land use plan map at the local level may require flexibility to allow for varying and unanticipated circumstances. Site by site analysis will be required to verify local conditions and requirements to ensure consistency with the provisions of the Big Darby Accord Plan

Land use categories shown represent maximum densities suggested for a particular area. The land use information shown is for planning purposes only.

Land Use Category Notes:

* Special Pilot Residential denotes State-of-the-Art LEED certified sustainable development to be implemented as a special project conditional to specific performance standards

** Protected: Environmental conservation areas protected by current regulations

Existing : Existing Metro Parks, community parks and easements that are already conserved as open space

Tier 1: Important hydro-geologic considerations - 100 year Floodplains, wetlands, in-stream sensitive habitat areas, critical groundwater recharge and pollution potential zones

Tier 2: Important resource considerations - Highly erodible soils, woods > 3 ac

Tier 3: Parks, open space corridors and buffers based on habitat sensitivity, connectivity and other planning considerations