



## XIII. SUSTAINABILITY AND CONSERVATION

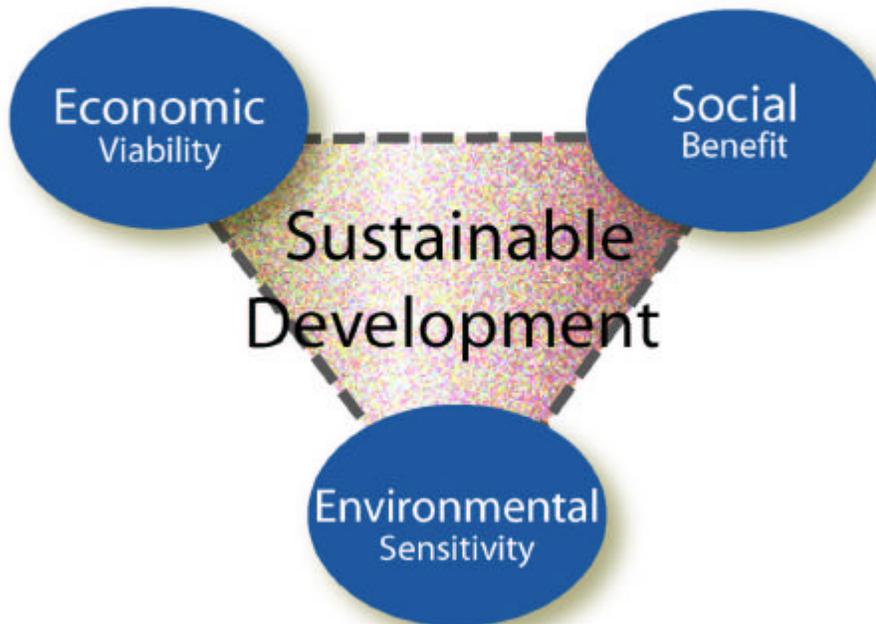
The City of Richmond will continue to treasure its historical, cultural and natural resources, including its buildings, artifacts, rivers, wetlands and streams, topography and geology, water resources, woodlands and urban forestry. The City pledges to preserve and protect these resources with environmentally sound plans that echo its sustainable development philosophy. The City of Richmond will continue to recognize the importance of innovative alternative energy and recycling systems that address appropriate standards within the sustainable development philosophy.

## XIII. SUSTAINABILITY AND CONSERVATION

### A. Introduction

#### Sustainability Definition

Sustainable development or sustainability involves three broad interacting realms: environmental sensitivity, economic vitality, and social benefit. Sustainability is a concept that allows a comfortable way of living by achieving a realistic and achievable balance between the resource demands of these environmental, economical and social requirements. The environmental, economic, and social aspects of our current conception of sustainability have roots in core values common to peoples and cultures around the world. Many religions and traditional cultures have stressed respect for nature and all of humanity, including future generations. This societal model requires a sustainable balance between these three aspects to meet both present and future needs. As the City of Richmond, the Comprehensive Plan Steering Committee and the stakeholders guided the preparation of the Richmond Comprehensive Plan, the challenge of balancing economic growth and environmental sustainability, throughout the projected 15 year life span of the plan, has been paramount in the discussions. Stakeholders and community participators in the planning process, through the surveys and the U-Plan meetings, have identified the intrinsic worth of economic development, effective public transit and connectivity, strong schools and community services, pedestrian and bicycle corridors, parks and recreational amenities, coordinated parking programs, urban design considerations and conservation guidelines, to name a few.



Elements of a "sustainable community" include:

**Environmental Sensitivity:** including satisfying basic human needs such as clean air and water; protecting ecosystems and biodiversity; and pollution prevention strategies while preserving and conserving natural, cultural and historical resources, in addition to allowing for context-sensitive growth and development of such resources where appropriate. Conservation is the protection, preservation, management, or restoration of both natural resources such as forests, soil, and water and municipal resources such as historic preservation of buildings and neighborhoods, cultural monuments and urban green space.

**Economic Viability:** including local reinvestment; meaningful employment opportunities; local business ownership; and job training and education. It is possible for an economy to grow while using fewer resources, using them more efficiently, and producing less waste. Economic growth need not be in conflict with social needs or environmental protection. Social equity and a healthy environment are supported by economic development and support it in turn.

**Social Benefit:** including quality health services; safe well-lit streets and public spaces; housing and education; creative expression through the arts; safety from crime and aggression; respect for public spaces and historic resources; including respect and tolerance for diverse views and values; a viable non-government sector; equal opportunity to participate in decision-making; and, access to government and a sense of place and self-worth.



## B. Goal and Objectives

### Goal

The City of Richmond's future growth will be guided by an overarching philosophy of sustainability. The long-term health and stability of the community will be quantified by the well-being of the residents and individuals frequenting the City, the vitality of the economy, and the healthiness of the environment. The pursuance of this philosophy of sustainability will be guided by a group of Richmond's residents brought together expressly for this purpose and dedicated to this cause.

### Objectives

1. The City of Richmond, through public and private partnering, will work cooperatively to support and strengthen the neighborhoods and conserve and enhance local character by:
  - Planning for appropriate and environmentally sound neighborhood revitalization and housing rehabilitation
  - Revitalizing and creating parks as focal points for economic development and neighborhood renewal
  - Preserving and conserving historic and culturally significant buildings, places and urban objects
  
2. The City of Richmond will implement policies to improve and promote a healthier environment by:
  - Protecting and enhancing biodiversity and wildlife
  - Protecting the quality and supply of water resources.
  - Implementing the proposed aquifer and well head protection districts
  - Improving and conserving soil quality
  - Reducing the amount of waste by expanding the recycling program
  - Developing an urban forestry program
  - Employing green building policies
  - Striving for zero net increase of greenhouse gas emissions
  
3. The City of Richmond will promote the re-use of land and buildings in the following ways:
  - Brownfield redevelopment will be promoted and marketed,
  - Development will be encouraged and promoted within existing growth centers,
  - Urban infill housing developments will be encouraged,
  - Existing structures will be improved to accommodate future use
  
4. The City of Richmond will implement policies to improve and promote the sustainability and integration of the transport infrastructure by:
  - Expanding and developing mass transit and multi-modal transportation systems to lessen the dependence on the automobile
  - Supporting and developing walk-able communities
  - Developing bike-trails that will maintain and expand connectivity to existing byways

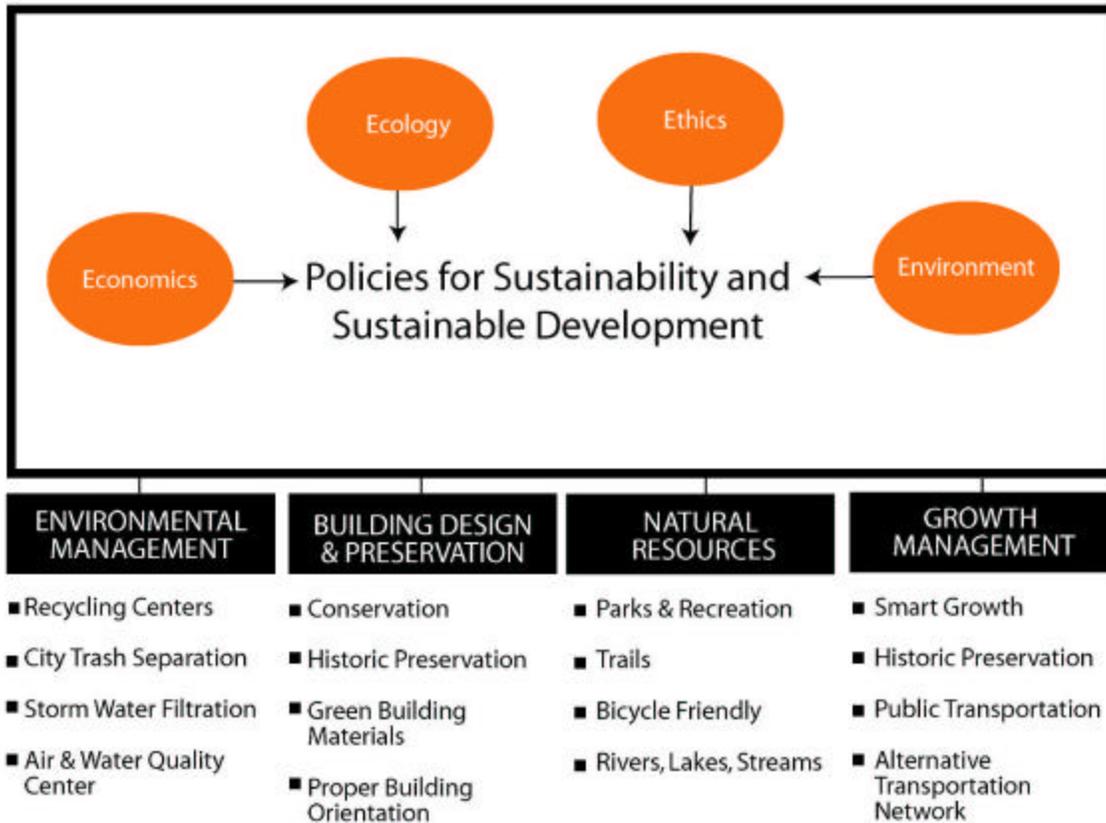
5. The City of Richmond will promote sustainable economic development that will increase the vitality and viability of the city and increase the diversity and viability of the contiguous two mile fringe economy by:
  - Implementing training programs for sustainable business development
  - Where appropriate promote new development that will utilize mixed-use projects and multi-use structures
  - Promoting mixed and balanced developments and facilities that meet the needs of the community
  
6. The City of Richmond's growth policy will support long-term sustainable solutions and promote respect for the city's history and natural systems and where appropriate "Smart Growth" principles will be implemented.
  
7. The City of Richmond will promote social and civic responsibility by :
  - Development of community awareness programs

### **Policies for Sustainability and Sustainable Development**

The City of Richmond firmly believes that sustainable development can help shape a better future for all the citizens of Richmond. It is a practical approach to decision-making that has tangible, long-term benefits for the health, well-being and prosperity of the entire community. The objective is to incorporate the principles of sustainability into Richmond's programs, policies and operations through:

- Leadership: Promote sustainable development through actions, policies and programs.
- Accountability: Define and be held accountable for assigned roles in supporting sustainable development.
- Integrated decision-making: Integrate sustainable development into decision-making rules, processes, and institutions.
- Informed decision-making: Provide the necessary knowledge, information and learning opportunities to support the incorporation of sustainable principles relating to economic, social and environmental considerations into decision making.
- Results-based approach: Take actions to ensure measurable progress towards sustainable development.
- Shared responsibility and cooperation: Work with institutions, agencies, and partners to achieve shared goals and objectives.
- Environmental stewardship and compliance: Meet or exceed federal and state environmental legislation and implement best practices.
- Requirements: Sustainable development is everybody's responsibility. In order to incorporate sustainable development into Richmond's policies, all policy makers must consider economic, social and environmental factors when developing or amending policies, programs, or operational procedures, guides, standards, agreements, and contracts.
- Strategies: Develop appropriate performance measures for Sustainable Development commitments and prepare annual reports on progress made on commitments in the Sustainable Development strategy and demonstrate continual improvement.

Policies for Sustainability and Sustainable Development Diagram



## Principles of Smart Growth

### Definition

Smart Growth is the term used to describe well-planned, well-managed growth that adds new homes and creates new jobs, while preserving open space, farmland, and environmental resources. Smart Growth supports livable neighborhoods with a variety of housing types, price ranges and multi-modal forms of transportation. Smart Growth is an approach to land-use planning that targets the State's resources and funding in ways that enhance the quality of life. Smart growth is defined by the following 10 principles:

1. Mix Land Uses  
Smart growth supports the integration of mixed land uses into communities as a critical component of achieving better places to live.
2. Take Advantage of Compact Building Design  
Smart growth provides a means for communities to incorporate more compact building design as an alternative to conventional, land consumptive development.
3. Create Range of Housing Opportunities and Choices  
Providing quality housing for people of all income levels is an integral component in any smart growth strategy.
4. Create Walkable Neighborhoods  
Walkable communities are desirable places to live, work, learn, worship and play, and therefore a key component of smart growth.
5. Foster Distinctive, Attractive Communities with a Strong Sense of Place  
Smart growth encourages communities to craft a vision and set standards for development and construction which respond to community values of architectural beauty and distinctiveness, as well as expanded choices in housing and transportation.
6. Preserve Open Space, Farmland, Natural Beauty and Critical Environmental Areas  
Open space preservation supports smart growth goals by bolstering local economies, preserving critical environmental areas, improving our communities quality of life, and guiding new growth into existing communities.
7. Strengthen and Direct Development Towards Existing Communities  
Smart growth directs development towards existing communities already served by infrastructure, seeking to utilize the resources that existing neighborhoods offer, and conserve open space and irreplaceable natural resources on the urban fringe.
8. Provide a Variety of Transportation Choices  
Providing people with more choices in housing, shopping, communities, and transportation is a key aim of smart growth.
9. Make Development Decisions Predictable, Fair and Cost Effective  
For a community to be successful in implementing smart growth, it must be embraced by the private sector.

10. Encourage Community and Stakeholder Collaboration  
 Growth can create great places to live, work and play if it responds to a community's own sense of how and where it wants to grow.

**Smart Growth Issues**

Smart growth issues can be further researched at the following organizations:

**Smart Growth Issues**

<a href="#"><u>American Planning Association: Growing Smart</u></a>		<a href="http://www.planning.org/growingsmart/">http://www.planning.org/growingsmart/</a>
<a href="#"><u>Building America</u></a>		<a href="http://www.nbm.org/">http://www.nbm.org/</a>
<a href="#"><u>Carfree Cities</u></a>		<a href="http://www.carfree.com/">http://www.carfree.com/</a>
<a href="#"><u>CEOs for Cities</u></a>		<a href="http://www.ceosforcities.org/">http://www.ceosforcities.org/</a>
<a href="#"><u>Congress for the New Urbanism</u></a>		<a href="http://www.cnu.org/">http://www.cnu.org/</a>
<a href="#"><u>Environmental Protection Agency: Encouraging Smart Growth</u></a>		<a href="http://www.epa.gov/smartgrowth/">http://www.epa.gov/smartgrowth/</a>
<a href="#"><u>Housing Zone</u></a>		<a href="http://www.housingzone.com/">http://www.housingzone.com/</a>
<a href="#"><u>International City/County Management Association</u></a>		<a href="http://www.icma.org/">http://www.icma.org/</a>
<a href="#"><u>KnowledgePlex</u></a>		<a href="http://www.knowledgeplex.org/">http://www.knowledgeplex.org/</a>
<a href="#"><u>Lincoln Institute of Land Policy</u></a>		<a href="http://www.lincolninst.edu/">http://www.lincolninst.edu/</a>
<a href="#"><u>Smart Growth America</u></a>		<a href="http://www.smartgrowthamerica.org/">http://www.smartgrowthamerica.org/</a>
<a href="#"><u>Smart Growth Gateway</u></a>		<a href="http://www.smartgrowthgateway.org/">http://www.smartgrowthgateway.org/</a>
<a href="#"><u>Smart Growth Online</u></a>		<a href="http://www.smartgrowth.org/">http://www.smartgrowth.org/</a>
<a href="#"><u>SprawlWatch Clearinghouse</u></a>		<a href="http://www.sprawlwatch.org/">http://www.sprawlwatch.org/</a>
<a href="#"><u>Sustainable Communities Network</u></a>		<a href="http://www.sustainable.org/">http://www.sustainable.org/</a>
<a href="#"><u>Urban Land Institute</u></a>		<a href="http://www.uli.org/">http://www.uli.org/</a>
<a href="#"><u>UrbanFutures.org</u></a>		<a href="http://www.urbanfutures.org/">http://www.urbanfutures.org/</a>

## Community Resources

The following list is offered as a resource for both government and citizens in developing a sustainable community:

Action Coalition for Global Change. **Building A Sustainable Community: An Organizer's Handbook**. (California: Action Coalition for Global Change ). This handbook can be used as a primer to educate people on sustainability or as a guide to create a full sustainable community project. To obtain this resource contact ACGC at: 415.341.1126.

Ames, Steve C. **Guide to Community Visioning**. (Chicago, IL: APA Planners Press, 1998; rev. ed.). This book, a product of the Oregon Visions Project, helps citizens understand the connection between the kind of place they want their community to be and the policies that will support their vision. It shows how to design and implement an effective visioning process, while providing ideas on how to use graphics in visioning. To obtain this resource contact Planners Book Service, 122 S. Michigan Avenue, Suite 1600, Chicago, IL 60603; Tel: 312.786.6344; Fax: 312.431.9985; Website: <http://www.planning.org/bookstore>.

Bernstein, Scott. **Using the Hidden Assets of America's Communities and Regions to Ensure Sustainable Communities**. This paper discusses the benefits to communities that can be achieved by recognizing the assets of cities and regions, removing the barriers to asset valuation, and implementing new tools to gain marketplace recognition of these assets held in common. This resource can be found online at: <http://www.cnt.org>.

Berry, Wendell. **Community in 17 Sensible Steps**. In this speech delivered in November 1994 Wendell Berry suggests a set of rules for a sustainable local community to follow in order to function. This resource can be found online at: <http://www.utne.com>.

Calthorpe, Peter. "Ahwahnee Principles". (Sacramento, CA: Local Government Commission, 1990). This is a statement of community and regional principles of sustainability and implementation strategy. This resource can be found online at: [http://www.lgc.org/freepub/land\\_use/principles.html](http://www.lgc.org/freepub/land_use/principles.html).

English, Mary R., Jean H. Peretz and Melissa J. Manderschied. **Smart Growth for Tennessee Towns and Counties: A Process Guide**. (Knoxville, TN: University of Tennessee, 1999). This guide summarizes the basic steps in a smart growth visioning and planning process and includes two case studies and an extensive list of resources. To obtain this resource contact the Energy, Environment and Resources Center, 311 Conference Center Building, University of Tennessee, Knoxville, TN 37996-4134; Tel: 423.974.4251; Fax: 423.974.1838; Email: [menglish@utk.edu](mailto:menglish@utk.edu). This resource can be found online at: <http://eerc.ra.utk.edu/smart.htm>.

Fodor, Eben V. **Better Not Bigger: How to Take Control of Urban Growth and Improve Your Community**. (Gabriola Island, BC: New Society Publishers, 1998). This resource provides insights, ideas and tools to empower citizens to resist rapid growth and develop a sustainable vision for their community that is an attractive alternative.

Hempel, Lamont C. **Sustainable Communities: From Vision to Action**. (Claremont, CA: Claremont Graduate University, 1998). This booklet addresses the role of healthy communities in restoring social and ecological balance in our individual lives and in our collective search for enduring forms of justice, prosperity, security, and environmental quality. It is about a vision of sustainability and its application to community. To obtain this resource contact the School of Politics and Economics, Claremont Graduate University, Claremont, CA 91711-6163.

Hempel, Marilyn. **Community Sustainability Survey: Is Your Community Becoming More -- Or Less -- Sustainable?**. (Claremont, CA: League of Women Voters Population Coalition, 1996). To obtain this resource contact the LWV Population Coalition, 1476 N. Indian Hill Boulevard, Claremont, CA 91711.

Hesselbein, Frances, Marshall Goldsmith, Richard Beckhard, Richard F. Schubert, eds. **The Community of the Future**. (San Francisco, CA: Jossey-Bass, 1998). This collection of essays explores what is important about our communities today, how they will look tomorrow, and what we can do to prepare for the challenges of the future.

Hren, Benedict J. and Nick Bartolomeo. "Coming to Terms with Sustainability". *Environments for Life Conservation Issues Forum Series*. (Izaak Walton League of America, March 1997). The Izaak Walton League of America created this conservation issues guide to help people organize and conduct a discussion about sustainability.

Hannum, Hildegard, ed. **People, Land, and Community: Collected E.F. Schumacher Society Lectures**. This collection features works by various prophets of citizen initiative in response to environmental and economic degradation. Topics explore the importance of sustainability, community, and healthy, local economies. To obtain this resource contact The CED Bookshop, CCE Publications, PO Box 1161, Port Alberni, B.C. V9Y 7M1, Canada; Tel: 888.255.6779; Fax: 250.723.1922.

Krizek, Kevin. **A Planners Guide to Sustainable Development (Planning Advisory Service Report Number 467)**. (Chicago, IL: American Planning Association, 1998). This report serves to describe sustainable development, overview global progress, propose strategy for local initiatives, and serve as a reference to more specific reviews of this topic. To obtain this resource contact the American Planning Association, 122 S. Michigan Avenue, Suite 1600, Chicago, IL 60603; Tel: 312.431.9100; Fax: 312.431.9985.

Les Cheneaux Economic Forum 1998. **A Plan for Les Cheneaux: Where Nature, Economy and Community Come Together**. This booklet traces the development of the Les Cheneaux Economic Forum project, which was formed in 1996 to protect and improve the quality of life in Les Cheneaux in the Great Lakes region of Michigan. To obtain this resource contact Linda Hudson or John Griffin, Les Cheneaux Economic Forum, P.O. Box 10, Cedarville, MI 49719; Tel: 906.484.3935.

Maser, Chris. **Sustainable Community Development: Principles and Concepts**. (Delray, FL: St. Lucie Press, September 1996). This publication describes sustainable community development as a community-directed process of development that is based on human values, active learning, shared communication and cooperation, within a fluid system, void of quick fixes.

Morrish, William R and Catherine R Brown. **Planning To Stay: Learning to See the Physical Features of Your Neighborhood**. (Milkweed Editions, 1994). This handbook helps neighborhoods understand their physical surroundings and create a vision for future development and change.

National Center for Environmental Decision-Making Research (NCEDR), University of Tennessee. **Community Sustainable Development: Assets, Challenges, and Needs.** (Knoxville, TN: 1999). This report presents the results of interviews conducted with representatives from eleven communities to determine the assets and challenges of sustainable development initiatives and project strategies, and to assess community needs during all phases of sustainability-related projects. To obtain this resource contact NCEDR, 314 Conference Center Building, Knoxville, TN 37996-4138; Tel: 423.974.3939; Fax: 423.974.4609. This resource can be found online at: <http://www.ncedr.org/pdf/ncedr98-17.pdf>.

National Civic League. **The Community Visioning and Strategic Handbook.** (1996). This 53-page handbook explains the community visioning process, both the rationale behind it and how to do it. To obtain this resource contact the National Civic League, 1445 Market Street, Suite 300, Denver, CO 80202; Tel: 800.223.6004.

The National Council for Science and the Environment (NCSE). **Achieving Sustainable Communities: Science and Solutions.**(2002). A Report from the second National Conference on Science, Policy, and the Environment released by The National Council for Science and the Environment (NCSE). This far-reaching document underscores new approaches for creating strong economies and healthy communities and provides constructive approaches to address complex issues such as economic development versus ecosystem protection. Available online at [cnie.org/NCSEconference/2001conference/report/page.cfm?FID=1692](http://cnie.org/NCSEconference/2001conference/report/page.cfm?FID=1692). Editors of the report have also created a list of the "[Top 10 Keys To Sustainable Communities.](#)" These "Keys" identify the crucial aspects of achieving sustainable communities at the local, regional and national levels. To receive a printed copy of the conference report, send your name and mailing address to [conference@NCSEonline.org](mailto:conference@NCSEonline.org).

The Nature Conservancy, Center for Compatible Economic Development. **Pathways: Building a Local Initiative for Compatible Economic Development.**(1999). This publication, based on a successful approach in Northampton County, VA, and other communities, describes how to build a collaborative, broadly-based vision for enhancing a community's quality of life. It shows how to develop strategies that address key threats, build on local comparative advantages and increase the community's capacity to meet the needs of all citizens. To obtain this resource contact CCED, 7 East Market Street, Suite 210, Leesburg, VA 20176; Tel: 703.779.1728; Fax: 703.779.1746; Email: [cced@tnc.org](mailto:cced@tnc.org). This resource can be found online at: <http://www.cced.org/Pathways.htm>.

Study Circles Resource Center. **Building Strong Neighborhoods: A Study Circle Guide for Public Dialogue and Community Problem Solving.** (Pomfret, CT: Topsfield Foundation, Inc., 1998). This guide helps organizers use study circles - small-group, democratic discussions - to help people address ways to strengthen their sense of community and build better neighborhoods. To obtain this resource contact the Study Circles Resource Center, P.O. Box 203, Pomfret, CT 06258; Tel: 860.928.2616; Fax: 860.928.3713; Email: [scrc@neca.com](mailto:scrc@neca.com).

## **C. Natural Resources**

### **Issues and Findings**

The environmental resources of the City of Richmond include topography and geology, rivers and streams, floodplain, water resources, wetlands, soil quality, woodlands and urban forestry. These environmental resources help to define the character and unique identity of the community, support the natural systems that provide for wildlife and a healthy environment and provide opportunities for recreation. Consideration of the natural environment and its relationship to economic development and social benefit reveals these issues:

- The interests of the property owners and development needs must be balanced with environmental conservation and preservation.
- The Citizens of Richmond must be safeguarded from the adverse impacts that result from flooding and pollution of the land, air and water.
- Water quality must be valued as important to the health of the community. Ground water resources are a critical source of support for the City's potable water system and should be protected from inappropriate land use activities. Aquifer and well heads must be protected.
- Reduction of damaging storm water runoff throughout the city can be achieved through urban reforestation.
- Wetlands are a critical component of Richmond's natural environment and play an important role in the management of storm water. Wherever feasible they should be preserved.
- Species habitat preservation should be considered as an integral part of open space preservation.
- The City of Richmond needs to consider soil quality as an important natural resource and essential element to the natural ecosystem of the community. Soil erosion prevention and quality improvement issues need to be addressed.

### **Wayne County Natural Resources Summit, February 15, 2005**

Representatives from the below organizations met on February 15<sup>th</sup> 2005 to discuss focus points related to the preservation of Wayne County's natural resources.

#### **Wayne County Strategy:**

The people of Wayne County will protect, preserve, and develop our land, homes, building and environment to enhance our future while honoring our heritage.

**Participating Organizations:**

Cope Environmental Center  
Earlham College  
Friends of the Middlefork  
Geographic Information System Office (GIS)  
Hayes Arboretum  
I.U. East  
Red Tail Conservancy  
Resource Inventory Council  
Richmond Parks Department  
Richmond Power & Light  
Richmond Sanitary District  
Richmond-Wayne County Environmental Awareness Council  
Soil & Water Conservation District  
SPUR  
Wayne-Union Solid Waste District  
Wellhead Planning Team

**Strategic Points and Focus that came from the Summit:**

**Enhanced Infrastructure for Recreation**

- The support of the Rails to Trails project that aligns along the Historic National Road.
- Expansion of the Cardinal Greenway through Wayne County.
- Encourage a County-wide Park System that will be able to assist the expansion of recreation opportunities for Wayne County residents. This links into healthier lifestyles as well as a quality of life piece.

**Land Conservation**

- Bio-diversity (conservation of forest, various habitats, encourage native plantings, conserve wetlands ).
- Greenspace; Save and encourage growth of greenspace.
- Conserve farm land.
- Continue to encourage and educate the agriculture community on environmentally sound agricultural practices. The group acknowledged that there has been great improvement in this area; it just needs to expand the educational process.
- Confined Animal Feeding (CAFO's) ordinance or codes in place for Wayne County to limit type of development when it occurs in Wayne County.
- Soil Quality—includes erosion concerns and contamination concerns.

**Water Quality**

- Wellhead Protection – make sure our ordinances are strong enough to protect the wellheads.
- Buffer Zones.
- Continue and expand current Watershed Planning
- Clean rivers and streams (no mercury, etc)
- Confined Animal Feeding (CAFO's)—same concern listed in Land Conservation.

### **Solid Waste Management**

- Recycling program; continue to promote and expand the recycling program in the County.
- Hazardous waste; help organizations and individuals understand the process with using and disposing of hazardous waste.
- Waste reduction; provide communication and education regarding waste reduction.

### **County-wide Aesthetics Plan**

- Buried power lines to clean up the “look” of the County.
- Trees; keeping trees and encourage planting of trees along visual areas.
- Flowers; planting of flowers along US 27 and US 40. Visually enhance the feel and look of the County.
- Enhanced landscaping requirements on new businesses locating in the County (similar to what Richmond did about 5 years ago).

### **Public Education and Health**

- Data Collection; gather data and information on lead paint, radon, asbestos, indoor air quality. Distribute information regarding existing older buildings and how to help residents or businesses effectively deal with these challenges. Follow this up with educating the public officials, home owners and business representatives.
- Remediation of contaminated buildings.
- Public Education; assist the Wayne County Environmental Awareness Council in the public education arena.

### **Mass Transportation**

- Create a county-wide mass transportation system.
- Inter-city bike access and/or the creation of bike lanes along US 40.

### **Sustainable Economic Growth**

Assist existing/new businesses and industries to strive for the following points:

- Clean energy production or utilize alternative energy sources.
- Encourage the movement to become Certified ISO 14001.
- Businesses become recycling friendly.
- Adoption of being a partner with beautification efforts.

### **Natural Resource Description**

#### **Slope**

The 2-mile fringe of the Richmond area ranges in slope from 0-25%. The area mostly has a slope of 0-10%. This slope is located within the city limits encompassing the more urban area of the downtown and the commercial/agricultural area in the northwest quadrant. The northeast quadrant is where the more critical slopes can be found within the city limits. North and south, just outside the city limits, is where more varying slopes continue. The slopes show that the Richmond area drains into creeks and rivers flowing into the Whitewater River. The Slope Analysis Quadrant maps are located at the end of this chapter.

## Topography

Topography is the surface elevation of natural and man-made features of the earth. The topography of Richmond is generally flat within the city limits. The northeast and the south part of the 2-mile fringe have varying elevations with ridges and valleys with a generally flat area between the Whitewater River and the Clear Creek in the southern part of the 2-mile fringe area. The Northwest quadrant is generally flat making it good for commercial development or farming except along Clear Creek. The downtown area and directly across the Whitewater River are predominantly level probably due to existing development. The areas with varying elevations are along the rivers and creeks with some higher areas in the proximity of the intersections of Garwood Road and A Street within the city limits and south of Smyrna Road and northeast of Interstate 70. The area within Smyrna Road and Interstate 70 has the highest elevations in the 2-mile fringe. This could be due to the Richmond Landfill. The lowest elevations in the Richmond area are along the Whitewater River and the Clear Creek. The Topography Map is located at the end of this chapter.

## Geological Rock Formations

A great concentration of rock known as “The Richmond” is exposed throughout the area. Named after the City of Richmond this rock has been thoroughly studied and is 200 feet thick where developed. A rock formation is a body of rock of substantial proportions with distinguishing characteristics that allow geologists to map, describe, and name it. Rocks and rock formations are a result of natural processes. The rock cycle is a process involving the formation, alteration,



*Layers of limestone and shale at the White Water Gorge*

Source: waynet.org

destruction, and reformation of rocks. This cycle occurs at or near the Earth's surface. Most of the Richmond rock has clean cuts of limestone and shale. The lowest formation is shale called Arnheim and is about eighty feet thick. The next formation is the Waynesville shale that consists of about 50 feet. Above that is limestone called Liberty that is colored gray and blue, which varies from 2 to 10 inches in thickness. The Liberty is in the Whitewater formation.

Most of the Richmond rock is even-bedded, with clean cut alternations of limestone and shale, in this respect strongly resembling the Maysville formation. The limestone beds vary in thickness from two to ten inches (generally less than six inches) and comprise less than half of the whole mass, perhaps not more than one-fourth. On the whole the color of its limestone is less blue and grayer or dove colored than that of the Maysville. The various layers of Richmond's limestone strata are primarily identifiable by the fossils contained within it.

The lowest formation in the Richmond group is the Arnheim shale. It rests on the Mount Auburn formation and is about eighty feet thick. It consists largely of dark bluish shale with a subordinate amount of blue limestone. In part it is even-bedded like most of the lower formations, but it has other portions, especially near the top, which look like the Mount Auburn. In these the limestone occurs in rough irregular beds, or nodules with scraggy masses of indurated clay, strongly contrasted with the regular bedding above and below.

The next fifty feet of the Richmond is called Waynesville shale. To a casual view it is not unlike most of the other formations but at many places its gray or dove colored limestone, associated with strikingly blue or greenish-blue shales, gives something of distinction to its appearance. Its shales are sometimes highly calcareous or marly. It is well-exposed near Oxford. Above the Waynesville are thirty-five feet of beds, known as the Liberty limestone, which differ little from the Waynesville except in fossils, though the limestone layers are more abundant and bluer. All that lies above the Liberty in this area is included in the Whitewater formation. The physical characteristics of this are not unlike those of the Mount Auburn beds of the Maysville. It lacks the clean-cut even bedding of the formations immediately below it. Both the limestone and shale from the Whitewater formation have a rough concretionary or nodular appearance. While blue in places, the color is more generally brownish or yellowish. Much of the limestone is very impure.

### **Floodplain**

The City of Richmond including the two mile fringe contains numerous areas of floodplains running north to south. The most predominant floodplain runs along the three forks of the Whitewater River. Other areas include Clear Creek, O'Brian Ditch, and Lick Creek, along the west side of the city. To the southeast there is a floodplain shown around the Short Creek. The larger floodplains include the southern part of the Whitewater River and the northern part of the Middle Fork, Whitewater River. All floodplains in Richmond are considered 100-year floodplains (defined below). The likelihood of flooding can be increased due to increased development and paving which speeds up the rate in which storm waters run off the land. Wetlands are involved in recharging the underlying groundwater system which is a source of drinking water for many communities.

### **National Flood Insurance Program (NFIP)**

The U.S. Congress established the National Flood Insurance Program (NFIP) with the passage of the National Flood Insurance Act of 1968. The NFIP is a Federal program enabling property owners in participating communities to purchase insurance as a protection against flood losses in exchange for State and community floodplain management regulations that reduce future flood damages. Participation in the NFIP is based on an agreement between communities and the Federal Government. If a community adopts and enforces a floodplain management ordinance to reduce future flood risk to new construction in floodplains, the Federal Government will make flood insurance available within the community as a financial protection against flood losses. This insurance is designed to provide an insurance alternative to disaster assistance to reduce the escalating costs of repairing damage to buildings and their contents caused by floods.

The Federal Emergency Management Agency (FEMA) manages the National Flood Insurance Program. The three components of the National Flood Insurance Program (NFIP) are:

- Flood Insurance
- Floodplain Management
- Flood Hazard Mapping

Nearly 20,000 communities across the United States and its territories participate in the NFIP by adopting and enforcing floodplain management ordinances to reduce future flood damage. In exchange, the NFIP makes federally backed flood insurance available to homeowners, renters, and business owners in these communities. Community participation in the NFIP is voluntary.

Flood insurance is designed to provide an alternative to disaster assistance to reduce the escalating costs of repairing damage to buildings and their contents caused by floods. Flood damage is reduced by nearly \$1 billion a year through community implementation of sound floodplain management requirements and property owners' purchase of flood insurance. Additionally, buildings constructed in compliance with NFIP building standards suffer approximately 80 percent less damage annually than those not built in compliance. Every \$3 paid in flood insurance claims saves \$1 in disaster assistance payments.

In addition to providing flood insurance and reducing flood damages through floodplain management regulations, the NFIP identifies and maps the Nation's floodplains. Mapping flood hazards creates broad-based awareness of the flood hazards and provides the data needed for floodplain management programs and to actuarially rate new construction for flood insurance. The three basic components of the NFIP Program include: identifying and mapping flood-prone communities, the requirement that communities adopt and enforce floodplain management regulations, and the provision of flood insurance.

#### **The "100-year" Standard**

The NFIP would not be able to offer insurance at affordable rates without the existence of risk management (floodplain management) to reduce flood losses. In order to assess and manage the flood risk, a national standard was needed. After extensive study and coordination with Federal and State agencies, this group recommended the 1-percent-annual-chance flood (also referred to as the 100-year or "Base Flood") be used as the standard for the NFIP.

The 1-percent-annual-chance flood was chosen on the basis that it provides a higher level of protection while not imposing overly stringent requirements or the burden of excessive costs on property owners. The 1-percent-annual-chance flood (or 100-year flood) represents a magnitude and frequency that has a statistical probability of being equaled or exceeded in any given year, or stated alternatively, the 100-year flood has a 26 percent (or 1 in 4) chance of occurring over the life of a 30-year mortgage.

The 1-percent-annual-chance flood is a regulatory standard used by Federal agencies, and most States, to administer floodplain management programs. The 1-percent-annual-chance flood standard has been used since the inception of the NFIP and is used for floodplain management purposes in all of the 19,200 participating communities that have been issued flood hazard maps.

#### **Floodplain Management**

Section 1315 of the 1968 Act prohibits FEMA from providing flood insurance to property owners unless the community adopts and enforces floodplain management criteria established under the authority of Section 1361<sup>©</sup> of the Act. These criteria are established in the NFIP regulations at 44 CFR §60.3. The community must adopt a floodplain management ordinance that meets or exceeds the minimum NFIP criteria. Under the NFIP, "community" is defined as:

"any State, or area or political subdivision thereof, or any Indian tribe or authorized tribal organization, or Alaska Native village or authorized native organization, which has authority to adopt and enforce floodplain management regulations for the areas within its jurisdiction."

The Program has served as an important impetus for the establishment of floodplain management programs nationwide in the approximately 19,700 participating communities and most States and territories. Community participation in the NFIP is voluntary.

**Minimum NFIP Floodplain Management Requirements**

Under the NFIP, the minimum floodplain management requirements that a community must adopt depends on the type of flood risk data (detailed FIS and FIRMs with BFEs or approximate A Zones and V Zones without EFEs) that the community has been provided by FEMA. Under the NFIP regulations, participating NFIP communities are required to regulate all development in SFHAs. “Development” is defined as:

“any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials.”

Before a property owner can undertake any development in the SFHA, a permit must be obtained from the community. The community is responsible for reviewing the proposed development to ensure that it complies with the community’s floodplain management ordinance. Communities are also required to review proposed development in SFHAs to ensure that all necessary permits have been received from those governmental agencies from which approval is required by Federal or State law, such as 404 wetland permits from the Army Corps of Engineers or permits under the Endangered Species Act.

Under the NFIP, communities must review subdivision proposals and other proposed new development, including manufactured home parks or subdivisions to ensure that these development proposals are reasonably safe from flooding and that utilities and facilities servicing these subdivisions or other development are constructed to minimize or eliminate flood damage.

In general, the NFIP minimum floodplain management regulations require that new construction or substantially improved or substantially damaged existing buildings in A Zones must have their lowest floor (including basement) elevated to or above the Base Flood Elevation (BFE). Non-residential structures in A Zones can be either elevated or dry-flood proofed. In V Zones, the building must be elevated on piles and columns and the bottom of the lowest horizontal structural member of the lowest floor of all new construction or substantially improved existing buildings must be elevated to or above the BFE.

**Ordinance Adoption**

Once FEMA provides a community with the flood hazard information upon which floodplain management regulations are based, the community is required to adopt a floodplain management ordinance that meets or exceeds the minimum NFIP requirements. FEMA can suspend communities from the Program for failure to adopt once the community is notified of being flood-prone or for failure to maintain a floodplain management ordinance that meets or exceeds the minimum requirements of the NFIP. The procedures for suspending a community from the Program for failure to adopt or maintain a floodplain management ordinance that meets or exceeds the minimum requirements of the NFIP are established in the NFIP regulations at 44 CFR §59.24(a) and (d).

### Community Rating System

The NFIP's Community Rating System (CRS) provides discounts on flood insurance premiums in those communities that establish floodplain management programs that go beyond NFIP minimum requirements. Under the CRS, communities receive credit for more restrictive regulations, acquisition, relocation, or flood proofing of flood-prone buildings, preservation of open space, and other measures that reduce flood damages or protect the natural resources and functions of floodplains.

The CRS was implemented in 1990 to recognize and encourage community floodplain management activities that exceed the minimum NFIP standards. Section 541 of the 1994 Act amends Section 1315 of the 1968 Act to codify the Community Rating System in the Community Rating System in the NFIP, and to expand the CRS goals to specifically include incentives for reducing the risk of flood-related erosion and for encouraging measures that protect natural and receive credit towards premium reductions for activities that contribute to them.

Under the CRS, flood insurance premium rates are adjusted to reflect the reduced flood risk resulting from community activities that meet the three goals of the CRS:

1. Reduce flood losses:
  - Protect public health and safety
  - Reduce damage to property
  - Prevent increases in flood damage from new construction
  - Reduce the risk of erosion damage
  - Protect natural and beneficial floodplain functions
2. Facilitate accurate insurance rating
3. Promote the awareness of flood insurance

### Wetlands

Wetlands are lands where the nature of soil development and the types of plant and animal communities living in the soil and on its surface are determined by the saturation with water. Wetlands are a precious ecological resource and are home to a varying combination of plants and animals. Wetland habitats contain the highest diversity of plants and animals, including endangered species, in Indiana. There are six different classifications that make up the wetlands that are taken from the Classification of Wetlands and Deepwater Habitats of the United States. Richmond has several areas of wetland located primarily adjacent to the rivers and creeks as identified in the Natural Features Maps at the end of this chapter. Included in the Richmond area are artificially flooded, intermittently exposed, seasonally flooded, semi-permanently flooded and temporarily flooded areas. These classifications are all non-tidal which are not influenced by oceanic tides but characteristically may be affected by wind or surface waves in lakes.

The artificially flooded classification is controlled by means of pumps or pipes in combination with dikes or dams. Intermittently exposed classification areas have surface water present



Source: [www.bsu.com](http://www.bsu.com)

throughout the year except in years of extreme drought. This classification is located sparingly around lakes with a larger patch north of Interstate 70 and south of Nolansfork Road. Seasonally flooded classification areas have surface water present for extended periods especially early in the growing season, but is absent by the end of the season in most years. This classification is primarily located in concentrated areas along the East Fork Whitewater River just before the Ohio/Indiana State line. Semi-permanently flooded areas have surface water persistent throughout the growing season in most years. Lastly, temporarily flooded has surface water

present for brief periods during the growing season, but the water table generally is well below the soil surface for most of the season. This classification is located along the rivers and creeks with the majority along the West and East Fork Whitewater River and the southern part of the Whitewater River just outside the city limits. Careful exploration and examination should be conducted prior to development in these areas and special emphasis to protect the wetlands should be considered.

## Waterways

### Rivers

The main waterways in the City of Richmond are the Whitewater River and the 3 tributary rivers that flow into it, the West Fork Whitewater River, Middle Fork Whitewater River, and the East Fork Whitewater River. The East Fork flows into the Middle Fork just before Chester Boulevard. The West Fork flows into the Middle Fork forming the Whitewater River just north of the Norfolk Southern Railroad.



White Water River

Source: [www.inwater.usgs.gov](http://www.inwater.usgs.gov)

### Whitewater Gorge

Formed during the ice age and positioned where the West, Middle, and East Fork Whitewater River come together, the Whitewater Gorge has many exceptional and beautiful natural features. The gorge can be explored either by boat or by hiking trails. The main gorge trail is about 3 ½ miles long and winds through waterfalls, cliffs, quarries, and over numerous bridges. Trails run from Industries Road South to Test Road. The gorge is a significant physical feature of Richmond and as such is an attraction for both residents and visitors with many points of interest and opportunities for recreation. Due to the age of the geological formation this is a prime location for fossil hunting and exploration of the physical history of the area.

**Creeks and Ditches**

East of the Whitewater River is the Short Creek, A.F. Scott Ditch, Quigg Ditch, Comers Run Creek, and the South Richmond Ditch. West of the Whitewater River is the Clear Creek, O'Brian Ditch, and the Lick Creek. Locations of Richmond's primary creeks and ditches can be found on the Natural Resources Maps at the end of this chapter.

**The Middlefork Reservoir**

The Middlefork Reservoir, just east of the city boundary of the upper part of the Northeast quadrant, is home to many recreational activities. The Indiana-American Water Company supplies Richmond with an average of 6.6 million gallons of water a day. The Middlefork Reservoir Park is a 405-acre facility including a 177-acre stream and spring-fed lake. In addition to fishing (lake is stocked by the Indiana Department of Natural Resources) and boating (six-horsepower limit), the park also hosts indoor and outdoor picnic areas, remote control airplane strip, large playground and hiking trails.



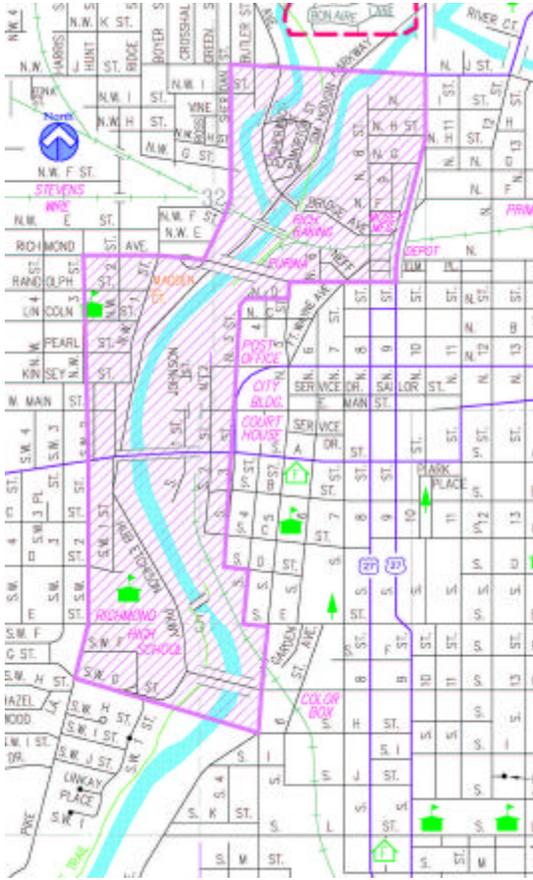
*Middlefork Reservoir*  
Source: waynet.org

**Proposed Aquifer and Well Head Protection Areas**

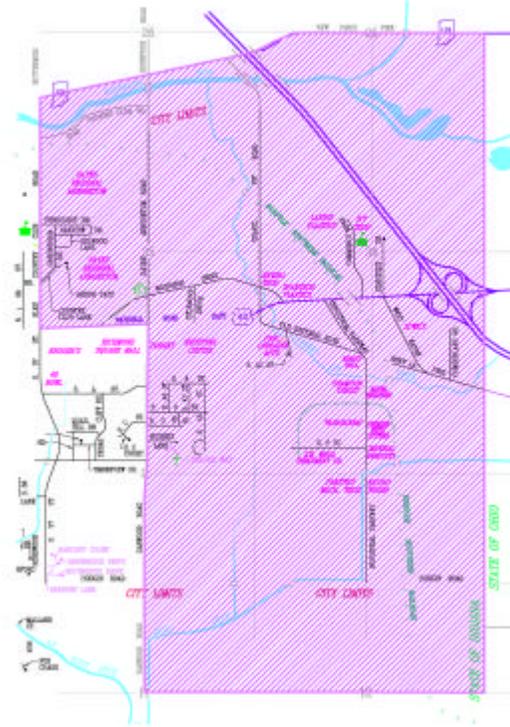
The sand and gravel aquifer in the City of Richmond is the water source for the majority of the City's residents and businesses. If this resource were to become contaminated and no longer potable, securing an alternative source of water would be a great financial burden to the residents and businesses of the City. Therefore, aquifer protection must be a priority for all land use decisions within the aquifer or aquifer recharge area.

A well head refers to the surface and subsurface area which surrounds water well or well field that supplies a potable water supply system, through which pollutants are reasonably likely to move toward and reach such water well or well field.

The City of Richmond should support the development and implementation of the Aquifer and Wellhead protection programs for all public supply wells, and encourage the siting and construction of individual wells in a manner which protects existing water users and ground water supplies.



Proposed Aquifer Protection District West



Proposed Aquifer Protection District East

**Soils**

*The Soil of Wayne County (excerpt)*, prepared by Dr. Ansel Gooding from [www.wayne.net.org](http://www.wayne.net.org). Soils of Wayne County are derived from mixtures of limestone, shale and crystalline rock materials that were scraped up and crumbled by continental glaciers and deposited 15,000 to 20,000 years ago. The glacial deposit, known as "glacial till", in Wayne County, is a nearly ideal mixture of sand, silt and clay particles, well supplied with mineral plant nutrients. When the glacier was melting away, great floods of water flowed south-southeastward across the county and formed the valleys of the East and West Forks of the Whitewater River and their several tributary streams. The glacial floodwaters deposited sheets of gravel, sand and silt along the stream courses, and these sediments were later weathered to form good soils. Since glacial times the Whitewater and its tributaries have cut floodplains into the gravel beds, leaving the latter as a series of nearly level river terraces. The present floodplains have interbedded layers of sand, silt and clay, which make excellent soils, and they continue to receive silty sediments washed from cultivated fields of the uplands.

### Primary Soil Classification Characteristics

The soil survey is an inventory of the soils found in the city. The survey indicates, among other things, the type of soil, the slope gradient, the suitability of the soils to support certain uses and the degree and kind of limitation of each soil type for certain uses.

The maps that accompany the soil survey are useful as a planning tool since one is able to determine those areas that present problems for development. While the soil maps are reasonably accurate, it is still recognized that unmapped pockets of different soil types can exist within a designated soil boundary line. Therefore, these soil maps do not eliminate the need for soil sampling and testing on each building site.

The soil survey for the City of Richmond concluded that there are 52 different types of soil located in the planning area. The two most common soil types are Crosby silt loam (CrA) and Urban land-Miami complex (UoA) which are primarily located in the northwestern part of the city. Richmond's key soils types are identified and located in the Soils Analysis Map located at the end of this chapter.

CrA Crosby silt loam – This is a moderately poorly drained soil and has a seasonal high water table at 0.5 to 2.0 ft. and is on rises on uplands. The surface layer is silt loam and has moderately low or moderate organic matter content (1.0 to 3.0 percent). Available water capacity is moderate (6.2 inches in the upper 60 inches). Droughts and wetness are management concerns for crop production. This soil responds well to tile drainage. Slopes are 0 to 2 percent.

UoA Urban land-Miami complex – Urban land and Miami soil are so intricately mixed in this complex that showing them separately is not practical. Urban land soil is covered by streets and buildings, obscuring the soil identification. Miami has a high water capacity while surface runoff is slow. Miami soil is used for parks, open spaces, building site development, lawns, etc. The water table is high at greater than 6.0 ft.

### Hydric Soils

Definition: “A hydric soil is a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part” (59 Fed. Reg. 35680, 7/13/94)

Soils that are considered hydric are indicated on Soils Analysis Map located at the end of this chapter. These soils due to their slow rate of water transmission are not considered good for development. The Hydric Soils map is located at the end of this chapter.

### Future Development

Based on soil and slope analysis for the city, several areas may be identified as potentially hazardous for urban development. Some areas which are limited for development are desirable for public recreation, open spaces, conservation of existing natural features, and maintenance of valuable biological communities and protection of natural storm drainage system. Changes in existing soil characteristics because of development, grading, increased runoff and removal of vegetation may cause severe erosion, water pollution and flooding with subsequent damage to public and private property. In order to build, a reconnaissance survey is one step that should be employed. This survey should be done particularly when the site is on virgin or unknown territory. A reconnaissance survey includes fieldwork observing vegetation, extent and nature of rock outcrops, evidences of soil erosion and gulying, the character of the landscape, the presence or absence of boulders at the surface, and many other details of the terrain.

### Wooded Areas

While much of Richmond's natural vegetation has been cleared for development or agriculture, significant amounts of woodland remain, particularly along stream corridors, in wetland and conservation areas, and in the northern quadrant of the city. In addition to providing environmental benefits such as habitat for wildlife and improved air and water quality, woodlands make important contributions to Richmond's visual character.



Source: waynet.org

A variety of tree species are found in the planning area. Tree species found in floodplains of the Whitewater River include box elder, sycamore, green ash, willow, hackberry, buckeye, honey locust and silver maple. Beech, maples, cherry and redbud are more commonly seen in tributary ravines. Red oaks, other oaks, walnut, hickory and sugar maple appear on better-drained uplands. In developed portions of the planning area, some reaches of wooded river corridor show extensive growth of bush honeysuckle, a non-indigenous species.

Forest buffers are found along portions of the Whitewater and its tributaries. These buffers are extremely important for providing wildlife habitat, filtering sediment from storm water, and moderating water temperatures. Scattered woodlots are found throughout the planning area. These are typically wet areas that were not drained for farming because of seasonal ponding. Often developers find these to be attractive sites for homes, but building within them can irreparably damage the woodlots.

A qualitative analysis of tree stands should be considered to determine whether development is appropriate at all. In those cases, a mechanism will be necessary to ensure economic impacts are considered. Also, tree protection during construction activities may require additional policy attention.

Wooded areas are classified into 5 different types as classified by the National Land Cover Data. These are areas characterized by tree cover; tree canopy accounts for 25-100 percent of the cover with the last 2 classifications considered more as wetlands. They are deciduous forest, evergreen forest, mixed forest, woody wetlands, and emergent herbaceous wetlands.

The majority of the woodlands found in the planning area are classified as deciduous forest that is areas dominated by trees where 75 percent or more of the tree species shed foliage simultaneously in response to season change. The most prominent deciduous forest areas are the Hayes Arboretum, 801 Elks Road in the northern part of the Northeast quadrant just south of the East Fork Whitewater River and an area just southwest of the southwest quadrant west of Salisbury and Airport Road. Evergreen forests are areas dominated by trees where 75 percent or more of the tree species maintain their leaves all year. This is the second largest classification in the area that is located mostly in the Hayes Arboretum area, west of Salisbury and Airport Road, and east of the Middle Fork Whitewater River just north of Smyrna Road. Mixed forests are areas dominated by trees where neither deciduous nor evergreen species represent more than 75 percent of the cover present. Mixed forests are located sparingly in deciduous forest areas. Woody wetlands are areas where forest or shrub land vegetation accounts for 25-100 percent of the cover and the soil or substrate is periodically saturated with or covered with water. This classification is located by existing wetland areas along rivers and creeks. The last classification is emergent herbaceous wetlands that are areas where perennial herbaceous vegetation accounts for 75-100 percent of the cover and the soil or substrate is periodically saturated with or covered with water.

## Strategies and Recommendations

### N R I. Adopt Stronger Measures to improve the Quality and Control of Stormwater

- The City of Richmond should preserve and/or maintain forest buffers along streams and tributaries which improve water quality by removing silt and dissolved chemicals that pollute surface water.
- Where forest cover has been removed it should be replanted.
- Impervious surfaces, such as parking lots should be kept to a minimum to reduce the amount of stormwater that is generated following development. The city will adopt standards that allow for alternative surface treatments and/or reduction in parking lot requirements.

## Program Resources

### Stormwater and Sediment Control

Stormwater and Sediment Control Program initiatives and activities are specifically targeted to construction and land disturbing activities associated with residential, commercial, institutional, industrial, public, and special land uses. Staff advises and works with land users to develop and apply workable solutions to address stormwater quality resource issues. Working primarily through Soil and Water Conservation Districts, and often in cooperation with other local, state, and federal agencies, the Division provides assistance to planners, developers, builders, contractors, engineers, surveyors, realtors, business owners, organizations, governmental entities, educational institutions, and the public.

Initiatives of the program are divided into three distinct categories:

- Education, Technical Assistance, and Public Outreach
- Technical Resources and Information
- Construction Site Permit

The Program is comprised of three Stormwater Specialists. In addition, Division Resource Specialists (County based) assist in implementing program objectives at the local level.

#### **N R 2. Conserve Wetlands**

Wetlands are critical components of the natural environment and play an important part in managing stormwater. Several wetlands areas are contained within the planning area. The following policies should be implemented:

- Site Designers should avoid wetlands in designing sites and locating buildings and roads.
- Wherever feasible wetlands should be conserved, unless approved by the U.S Army Corps of Engineers consistent with a required wetland mitigation plan, but the City will strongly stress avoidance of wetlands for development.

#### **Program Resources**

The following agencies and organizations can provide more information about wetlands and associated wildlife. The type of available assistance is listed as bulleted items for each group.

##### **U.S.D.A. Natural Resources Conservation Service**

Offices are located at the USDA Service Center in each county and are listed in the telephone book under *U.S. Department of Agriculture*. Also see Indiana Field Service Centers at:  
<http://www.in.nrcs.usda.gov/>

Assistance includes:

- Providing funding for wetland restoration programs
- Providing technical assistance on wetland management
- Making wetland determinations on agricultural land

##### **U.S. Environmental Protection Agency (EPA)**

<http://www.epa.gov/owow/wetlands/>

Assistance includes:

- Providing wetland information regarding education, regulations, and protection

##### **U.S. Fish and Wildlife Service**

620 South Walker Street

Bloomington, IN 47403-2121

Phone: 812-334-4261

<http://midwest.fws.gov/Bloomington/>

Assistance includes:

- Providing technical assistance on wetland and wildlife management
- Providing technical guidance regarding threatened and endangered species

### N R 3. Promote Urban Reforestation

Urban Forestry is the planting and maintenance of trees within a city or community. It is an important strategy for reducing both carbon emissions and energy expenditures for urban heating and cooling. An article in the August/September 1991 issue of *Urban Forests* magazine reported that "as much as 15 times the amount of carbon can be prevented from entering the atmosphere through the energy-conservation effects of an urban tree as can be retained through carbon storage alone." Furthermore, the studies cited in *Urban Forests* indicate that energy savings from trees planted near homes and buildings range from 10 to 50 percent for cooling and from 4 to 22 percent for heating.

The following policies are recommended:

- The City of Richmond will reforest City Property.
- The City will implement tree preservation requirements which require a qualitative analysis of existing forest resources, and mandate a full replacement. Code changes can be prepared that encourage management practices during site construction to ensure that trees designated for preservation will survive the construction process.
- The City will prepare a brochure for property owners promoting the benefits of urban reforestation.

### Program Resources

**American Forests** is the nation's oldest citizen-based conservation organization and a leader in the urban forestry movement. American Forests sponsors several programs including Urban Ecological Analysis, Global ReLeaf, and Cool Communities. The organization also convenes National Urban Forest Conferences and maintains the National Urban Forest Council, a national network of individual active in the development of urban forests.

**City Green 5.0** software is available for download from the American Forests website. This GIS application calculates dollar benefits based on natural systems, including the economic value of tree growth.

**National Arbor Day Foundation** helps promote tree care and conservation and educates people on tree issues. Sponsors the following programs: Celebrate Arbor Day, Trees for America, Rain Forest Rescue, Conservation Trees, Arbor Day Farm, Conferences for Knowledge and Growth, Tree City USA.

Several cities have developed urban forest programs that train citizen volunteers to help care for trees and educate the public about the value of urban forests. One example is the **Citizen Forester Program** in Washington, D.C.

The **Society of Municipal Arborists** produces the magazine *City Trees*, as well as conferences and a website that create networking and educational opportunities for urban tree professionals and students.

**TreeLink.org** is a site created to provide information, research, and networking for people working in urban and community forestry.

#### **N R 4. Species Habitat Protection**

The City's development process currently does not address the location, conservation and mitigation of species habitat. Species habitat protection should be considered as an integral part of open space preservation. This could include outright purchase of undeveloped, public open space.

#### **N R 5. Conservation of Natural Underground Resources**

The aquifer, soils and rock resources found within the planning area are to be conserved for future use by applying the following recommendations:

- Soil conservation as an aim in itself should be the subject of special concern regarding future development especially in the two-mile fringe area.
- A program for the reduction of ground water pollution from agricultural and industrial sources should be developed and implemented. The program should also provide for effective mechanisms for the dissemination of information on the use of pesticides to all farmers.
- The City Council will approve the proposed east and west aquifer protection districts as defined by the Wellhead Protection Committee.
- Farm management practices should systematically be aligned with soil conservation targets, primarily by changing crop patterns and production techniques, and by promoting organic farming methods.
- The long-term protection of Richmond's major underground resources should be adequately provided for in the future land use plan, on the basis of a realistic costing exercise.

### **Program Resources**

#### **Division of Soil Conservation**

Indiana State Department of Agriculture  
150 W. Market Street, Suite 414  
Indianapolis, IN 46204  
317/232-8770  
317/232-1362 FAX

#### **Mission**

*To facilitate the protection and enhancement  
of Indiana's land and water.*

The Division of Soil Conservation belongs to the Indiana Conservation Partnership. Working together, the Partnership provides technical, educational, and financial assistance to citizens to solve erosion and sediment-related problems occurring on the land or impacting public waters. One of the broad goals of the Division of Soil Conservation is to reduce erosion occurring on agricultural land, along with associated nutrient transport. The objectives of the Division's agricultural conservation efforts include:

- Reducing soil erosion on each acre of agricultural land to "T" or below.
- Controlling all off-site sedimentation from agricultural land by the application of best management practices (BMPs), as well as reducing off-site movement of nutrients that could adversely affect surface water quality.

**Services available to agricultural land users:**

- Assembly of information required for creating or revising resource conservation management plans.
- Generation of on-site evaluations that determine type and extent of erosion and nutrient problems present.
- Assistance in the selection, design, and location of specific conservation practices.
- Supervision of installation and subsequent maintenance of practices selected.
- Assistance to land users in the utilization of local, state, and federal erosion and nutrient control cost-share programs and application processes.

**Indiana Conservation Partnership Business Plan 2003 – 2008**

For each of the priority statewide resource concerns identified, the plan provides background information followed by a vision for the future of that respective natural resource. The plan also provides statements of intent that in essence spell out goals for the Indiana Conservation Partnership to accomplish over the next five years to address each of the statewide resource concerns. They are followed by specific action steps that will be taken over the next 18 to 24 months toward fulfilling the respective statements of intent. At least one of the partners of the Indiana Conservation Partnership has been designated to take the lead on each of the respective action steps and a date has been established for the action to be underway and/or completed as appropriate. The lead partner of course will need full cooperation and assistance from the other partners to accomplish the task. Other agencies and organizations that are mentioned in specific statements of intent or action steps are there because the Indiana Conservation Partnership has identified them as agencies and/or organizations that the partnership will need to seek input and cooperation from in order to accomplish the respective statements of intent or actions.

**USDA Natural Resources Conservation Service (NRCS)**

Indiana State Office  
6013 Lakeside Boulevard  
Indianapolis, IN 46278-2933

Soils data for Indiana is found at the Web Soil Survey and the Soil Data Mart web sites. At the Web Soil Survey site the user can view soils information from anywhere in the United States that has digital soils information. The user can also make thematic maps, run tables, view Soil Survey manuscripts (where available), etc. On the Soil Data Mart the user can download soils data or view and print reports. Other information is found at the Indiana Online Soil Surveys site.

## D. Historic Preservation

### Issues and Findings

Historic preservation helps make the City of Richmond a beautiful and desirable city in which to live, work, and visit. The architecture, scale, and uniqueness of the city's old buildings have a broad appeal. The future of the city will be determined by the ability to successfully revitalize residential communities and the downtown area, and thereby capitalize on the unique assets of the past. Unfortunately unwise public policies and a lack of information have threatened the livability and "sense of place" that makes Richmond's older neighborhoods unique. The following list identifies several historic preservation key issues:

1. Economic resurgence must be encouraged by developing resources that address specific problems now facing Richmond's historic heritage.
2. Preservation of existing housing stock will be a key element in solving the need for urban sprawl, providing better places to live and creating lively communities because:
  - It takes advantage of existing resources.
  - It makes financial sense: rehabilitation is generally cost-competitive with new construction and puts older buildings back on the tax rolls.
  - It prevents further sprawl, since people live where buildings already are, rather than where on land that was once open, green space.
  - It keeps existing neighborhoods vital and attractive.
  - It protects the buildings that tell Richmond's story.
3. Through implementing smart growth principles and controlling sprawl Richmond can recycle buildings, protect the historic downtown and neighborhoods, preserve farmland, maintain character, and promote a sense of place.
  - Sprawl has drained the life out of Richmond's downtown and residential neighborhoods where historic buildings are concentrated, leaving them vulnerable to under use, neglect, and demolition.
  - Left unchecked, sprawl will eliminate all Richmond's transportation choices except driving, thus adding to pressures to create or widen roads that often destroy historic resources or degrade their settings.
4. Understanding the effects of transportation decisions, particularly road building helps elected officials and planners protect historic sites and landscapes.

### Design Guidelines

Government standards for road design can have a tremendous impact on historic places. Insensitive roads and bridges destroy sidewalks, trees, and other features that make communities and landscapes; thoughtful projects protect community character and scenic landscapes.

The U.S. Department of Transportation (DOT) is now trying to create a better balance between improved highways and the natural and human environments that surrounds them. DOT has encouraged states to adopt a more flexible approach to road design, one that protects and enhances the livability and special features of communities. Known as "Context Sensitive Design", these methods can help preservationists and planners work together to improve the quality of life for people in cities, suburbs, and rural areas.

### The National Register of Historic Places

The National Register's standards for evaluating the significance of properties were developed to recognize the accomplishments of all peoples who have made a significant contribution to our country's history and heritage. The criteria are designed to guide State and local governments, Federal agencies, and others in evaluating potential entries in the National Register.

#### Criteria for Evaluation

The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

- That are associated with events that have made a significant contribution to the broad patterns of our history; or
- That are associated with the lives of persons significant in our past; or
- That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- That have yielded or may be likely to yield, information important in prehistory or history.

### Richmond's Historic Buildings

**Starr Piano Company Warehouse and Administration Building (added 1995 - Building - #81000024)**

300 S. 1st St., Richmond

**National Register of Historic Places description:** Historic Significance: Event Area of Significance: Performing Arts, Industry Period of Significance: 1850-1874, 1875-1899, 1900-1924, 1925-1949 Owner: Local Gov't Historic Function: Industry/Processing/Extraction Historic Sub-function: Manufacturing Facility Current Function: Vacant/Not In Use

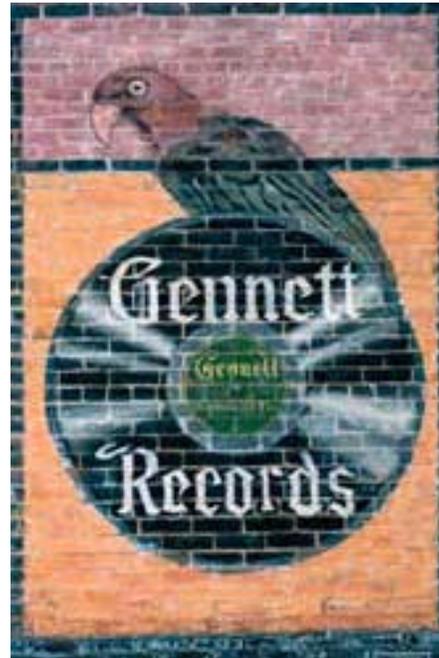
Of all the activity the Whitewater Valley gorge supported, the Starr Piano Company was the most significant. When the first piano craftsmen arrived in Richmond, Indiana in 1872, the city had two banks, a public library, and gas lighting. The next year, when the first piano was produced, Richmond became the county seat of Wayne County and had a population of 10,000.

The piano factory was known under several names in its early years, but the Starr family backed the enterprise from its inception. By 1878, James and Benjamin Starr, together with a piano craftsman and creative genius named Chase, had incorporated their piano works. In that year, the company purchased the present site, on the finest waterpower on the Whitewater River.

### Gennett Family Becomes Part of Company

In 1893, the Starr Piano received national recognition at the Colombian Exposition in Chicago. The same year the Company was incorporated anew, with Benjamin Starr as president and Henry Gennett as the secretary-treasurer. The arrival of Gennett and his entrepreneurial skill gave a much-needed spark (boost) to the Company. By 1906, the Starr Piano Company had 600 employees.

In 1916, a six-story building for the manufacture of phonographs and records was erected. Over the years, the Starr Piano, Phonograph and Gennett Records were joined by Starr Refrigerators and freezers, synchronizer units designed for use with talking picture projection machines, wooden propellers and a valve for barrage balloons during World War I, wooden cabinets for radios and even wooden billy clubs to quiet a local factory strike. No such labor disputes occurred at the Starr, as most of the craftsmen considered themselves employed for life. By the 1920's, the Starr was a broad based musical empire flourishing in the gorge on South 1st Street.



Source: waynet.org

### Pennsylvania Railroad Station

Designed by famed architect Daniel Burnham, Richmond's Pennsylvania Railroad Station was completed in 1902, a combined passenger station and freight depot that boasts a massive entrance portico with unique brick columns and terra cotta ornamentation. The station remains one of Indiana's best unaltered examples of his work. Burnham's design and construction of the Chicago World's Fair/Columbian Exposition in 1893 was an immensely influential development in the history of American architecture. Aside from Frank Lloyd Wright, few American architects have achieved great fame outside the profession. Burnham's combination of talent, charisma and accomplishment put his name on a park and hotel, among other forms of



Source: waynet.org

recognition, in Chicago where his legacy is revered. The Pennsylvania Railroad Company was clearly pursuing excellence in 1899 when it chose Burnham's office to design its station on North E Street in Richmond. At the peak of railroad travel more than 25 passenger trains a day passed through the station. Presidents Franklin Roosevelt, Harry Truman and Dwight Eisenhower made whistle stops and a parade of legendary jazz musicians who recorded at Richmond's Starr recording studio, Hoagy Carmichael, Cole Porter, Louis Armstrong and Tommy Dorsey, came through "the Depot," as it is locally known.

**The threat:** Richmond's vacant Pennsylvania Railroad Station appeared on the 10 Most Endangered list in 1996 and was erroneously considered safe when a redevelopment deal that seemed poised for success was unsuccessful. Time and weather have exacted their toll: roof damage and water infiltration have led to a partial collapse of interior floors. Finding an alternative use for the building must occur soon or the building will not survive.



*Railroad Station Interior*  
 Source: waynet.org

**Miller Brothers Building**

The Miller Brothers Building on Fort Wayne Avenue in Richmond is being renovated. The windows have been re-exposed in preparation for the opening of a new furniture business by Roger Richert.



Source: waynet.org

The Depot district building's three floors once housed one of the largest wholesale hardware firms in the country. The 95,000-square-foot building occupies most of the block between North Eighth and Seventh streets on Fort Wayne Avenue. The original portion was constructed in 1890, with expansions in 1900 and 1913.

**Gaar Mansion and Farm Museum**

Listed on the National Register of Historic Places, the Gaar Mansion was built in 1876 for Abram and Agnes Gaar.

Original cost to build the mansion was \$20,000. It was completed in 8 months. Complete interior/exterior restoration of this Victorian style mansion boasts hand-painted ceilings, parquet wood floors, and features many original furnishings with their actual bills of sale.

Advanced for its day, the home has many unique features, including central heating, indoor plumbing, gas, electricity, and an intercom system throughout the residence.



Source: waynet.org

Jonas Gaar and his sons, Abram and John Milton Gaar, and Jonas' son-in-law, William G. Scott were founders of Gaar-Scott and Company, the leading manufacturer of threshing machines and steam engines from 1842 to 1911.

**Bethel A.M.E. Church (added 1975 - Building - #75000032)**



Source: waynet.org

200 S. 6th St., Richmond

**National Register of Historic Places description:**  
 Historic Significance: Event,  
 Architecture/Engineering Architectural Style:  
 Classical Revival, Romanesque Area of Significance:  
 Education, Politics/Government, Architecture,  
 Religion Period of Significance: 1850-1874, 1875-  
 1899 Owner: Private Historic Function:  
 Education, Religion, Social Historic Sub-function:  
 Civic, Religious Structure, School Current  
 Function: Religion Current Sub-function:  
 Religious Structure

**Birdsall, Mary, House (added 1999 - Building - #99001155)**

Also known as Lauramoore Friends House 504 North West Fifth St., Richmond

**National Register of Historic Places description:** Historic Significance: Event, Person,  
 Architecture/Engineering Architectural Style: Italianate Historic Person: Birdsall, Mary  
 Thirstlewaite. Significant Year: 1860. Area of Significance: Architecture, Social History,  
 Politics/Government Period of Significance: 1850-1874, 1875-1899 Owner: Private Historic  
 Function: Domestic Historic Sub-function: Single Dwelling, Current Function: Domestic  
 Current Sub-function: Hotel

**Dennis, David Worth, House (added 2001 - Building - #01000404)**

610 W. Main St., Richmond

**National Register of Historic Places description:** Historic Significance: Person,  
 Architecture/Engineering Architect, builder, or engineer: Hasecoster, John A. Architectural  
 Style: Queen Anne, Classical Revival Historic Person: Dennis, David Worth, Dennis, William  
 Cullen Significant Year: 1909, 1904, 1895 Area of Significance: Education, Architecture Period  
 of Significance: 1875-1899, 1900-1924, 1925-1949, 1950-1974 Owner: Private Historic Function:  
 Domestic Historic Sub-function: Single Dwelling2 Current Function: Domestic Current Sub-  
 function: Single Dwelling2

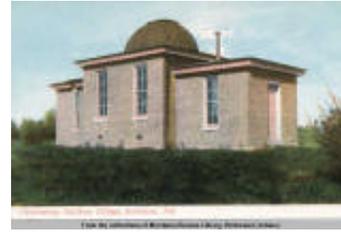
**Earlham College Observatory (added 1975 - Building - #75000034)**

National Rd., Earlham College campus, Richmond

**National Register of Historic Places description:** Historic Significance: Event, Architecture/Engineering

Architectural Style: Late Victorian Area of Significance: Education, Science, Architecture Period of Significance:

1850-1874 Owner: Private Historic Function: Education Historic Sub-function: Research Facility Current Function: Education Current Sub-function: Research Facility



Source: waynet.org

**Gennett, Henry and Alice, House (added 1983 - Building - #83000043)**



Source: waynet.org

1829 E. Main St., Richmond

**National Register of Historic Places description:** Historic Significance: Event, Architecture/Engineering Architectural Style: Colonial Revival Area of Significance: Architecture, Performing Arts Period of Significance: 1900-1924, 1925-1949 Owner: Private Historic Function: Domestic Historic Sub-function: Multiple Dwelling, Single Dwelling2 Current Function: Commerce/Trade Current Sub-function: Business

**Hicksite Friends Meetinghouse (Wayne County Museum) (added 1975 - Building - #75000036)**

N. A St., Richmond

**National Register of Historic Places description:** Historic Significance: Event, Architecture/Engineering Architect, builder, or engineer: Mathews, William N., Hoover, George Architectural Style: No Style Listed Area of Significance: Architecture, Religion Period of Significance: 1850-1874 Owner: Private Historic Function: Religion Historic Sub-function: Religious Structure Current Function: Education, Recreation And Culture Current Sub-function: Museum

**Leland Hotel (added 1985 - Building - #85000362)**

900 S. A St., Richmond  
Also known as Leland Motor Inn

**National Register of Historic Places description:**

Historic Significance: Event, Architecture/Engineering Architect, builder, or engineer: Nichols, Charles Wheeler Architectural Style: Mission/Spanish Revival

Area of Significance: Community Planning And Development, Commerce, Transportation,

Architecture, Social History Period of Significance: 1925-1949 Owner: Private Historic

Function: Commerce/Trade, Domestic Historic Sub-function: Hotel, Restaurant Current Function: Commerce/Trade



Source: waynet.org

**Murray Theater (added 1982 - Building - #82000053)**



Source: waynet.org

1003 Main St., Richmond  
 Also known as Richmond Civic Theater-Norbert Silbiger Theater

**National Register of Historic Places description:** Historic Significance: Event, Architecture/Engineering Architect, builder, or engineer: Elliott, Fred W. Architectural Style: Chicago, Pueblo Area of Significance: Entertainment/Recreation, Architecture Period of Significance: 1900-1924 Owner: Private Historic Function:

Recreation and Culture Historic Sub-function: Theater Current Function: Recreation and Culture Current Sub-function: Theater

**Richmond Gas Company Building (added 1981 - Building - #81000023)**

100 E. Main St., Richmond

**National Register of Historic Places description:** Historic Significance: Event, Architecture/Engineering Architect, builder, or engineer: Collier, Charles. Architectural Style: Late Victorian. Area of Significance: Industry, Commerce, Architecture Period of Significance: 1850-1874, 1875-1899 Owner: Local Government Historic Function:



Source: wayne.org

Industry/Processing/Extraction Historic Sub-function: Energy Facility Current Function: Work In Progress

**Scott, Andrew F., House (added 1975 - Building - #75000039)**



Source: waynet.org

126 N. 10th St., Richmond

**National Register of Historic Places description:** Historic Significance: Architecture/Engineering, Person Architectural Style: Italianate Historic Person: Scott, Andrew F. Significant Year: 1858 Area of Significance: Commerce, Art, Politics/Government, Architecture, Religion, Social History Period of Significance: 1850-1874, 1875-1899 Owner: Private Historic Function: Domestic Historic Sub-function: Single Dwelling2 Current Function: Domestic Current Sub-function: Single Dwelling2

**Smith, Samuel G., Farm (added 1983 - Building - #83000044)**

W of Richmond at 3431 Crowe Rd., Richmond

**National Register of Historic Places description:** Historic Significance: Architecture/Engineering Architect, builder, or engineer: Powel & Co., Edward, Bryant, Edward B. Architectural Style: Italianate, Queen Anne Area of Significance: Architecture, Agriculture Period of Significance: 1875-1899 Owner: Private Historic Function: Agriculture/Subsistence, Domestic Historic Sub-function: Agricultural Fields, Processing, Single Dwelling2, Storage Current Function: Agriculture/Subsistence, Domestic Current Sub-function: Agricultural Outbuildings, Single Dwelling2



Source: waynet.org

**Wayne County Courthouse (added 1978 - Building - #78000042)**

Bounded by 3rd, 4th, Main and S. A Sts., Richmond

**National Register of Historic Places description:** Historic Significance: Architecture/Engineering Architect, builder, or engineer: McLaughlin Architectural Style: Other, Romanesque Area of Significance: Architecture Period of Significance: 1875-1899 Owner: Local Gov't Historic Function:

Government Historic Sub-function: Courthouse Current Function: Government Current Sub-function: Courthouse

**Historic Districts**

**East Main Street--Glen Miller Park Historic District (added 1986 - Wayne County - #86000612)**

**National Register of Historic Places description:** Both sides of E. Main St. from N. Eighteenth to N. Thirtieth Sts. and Glen Miller Pk. E of Thirtieth St., Richmond (2160 acres, 84 buildings, 11 structures, 5 objects)

Historic Significance: Event, Architecture/Engineering Architect, builder, or engineer: Hasecoeter, John A., Et al. Architectural Style: Mixed (More Than 2 Styles From Different Periods) Area of Significance: Community Planning And Development, Landscape Architecture, Architecture Period of Significance: 1825-1849, 1850-1874, 1875-1899, 1900-1924, 1925-1949 Owner: Private, Local Gov't Historic Function: Domestic, Landscape Historic Sub-function: Park, Single Dwelling2 Current Function: Domestic, Landscape Current Sub-function: Park, Single Dwelling2

**Old Richmond Historic District (added 1974 - Wayne County - #74000025)**

**National Register of Historic Places description:** Roughly bounded by C & O Railroad, S. 11th, South A, and alley S of South E St., Richmond

(2500 acres, 212 buildings) Historic Significance: Event, Architecture/Engineering, Person Architect, builder, or engineer: Multiple Architectural Style: Mixed (More Than 2 Styles From Different Periods) Historic Person: Quinn, William Paul; et al. Significant Year: 1840, 1818 Area of Significance: Commerce, Transportation, Black, Education, Politics/Government, Architecture, Religion, Social History Period of Significance: 1800-1824, 1825-1849, 1850-1874 Owner: Private, Local Government Historic Function: Commerce/Trade, Domestic, Religion Historic Sub-function: Business, Religious Structure, Single Dwelling2

Current Function: Commerce/Trade, Domestic, Religion  
 Current Sub-function: Business, Religious Structure, Single Dwelling2

The Old Richmond Historic District dates back to 1816 and covers more than 250 acres. This district includes South 4<sup>th</sup> Street formerly called Front Street was Richmond's first street and the main street until the National Road came through. This area contains a large amount of Federal and Greek Revival style homes as well as some Victorian and early 20<sup>th</sup> century structures too. Also included in this district are Richmond's first public square, first park and the city's public cemetery. Originally settled by the Quakers this area later became occupied by free blacks and German immigrants.

**Reeveston Place Historic District (added 2003 - Wayne County - #02001171)**

**National Register of Historic Places description:** Bounded by South B, South E, South 16th and South 23rd Sts., Richmond

(910 acres, 218 buildings, 2 objects) Historic Significance: Architecture/Engineering  
 Architect, builder, or engineer: Werking, Charles and Paul, Spielman, Henry  
 Architectural Style: Greek Revival, Second Empire Area of Significance: Architecture, Community Planning And Development, Landscape Architecture  
 Period of Significance: 1850-1874, 1875-1899, 1900-1924, 1925-1949 Owner: Private  
 Historic Function: Domestic Historic Sub-function: Single Dwelling2  
 Current Function: Domestic Current Sub-function: Single Dwelling2

**Richmond Railroad Station Historic District "Hoosier Bowery" (added 1987 - Wayne County - #87001808)**

**National Register of Historic Places description:** Roughly bounded by Norfolk & Southern RR tracks, N. Tenth St., Elm Pl., N. D St., & Ft. Wayne Ave., Richmond

(110 acres, 22 buildings)  
 Historic Significance: Event, Architecture/Engineering  
 Architect, builder, or engineer: Multiple  
 Architectural Style: Chicago, Classical Revival, Late Victorian  
 Area of Significance: Industry, Commerce, Transportation, Architecture  
 Period of Significance: 1850-1874, 1875-1899, 1900-1924  
 Owner: Private , Local Gov't  
 Historic Function: Commerce/Trade, Industry/Processing/Extraction  
 Historic Sub-function: Manufacturing Facility  
 Current Function: Commerce/Trade, Vacant/Not in Use

The Depot District, as many residents call it, encompasses four city blocks and the Pennsylvania Railroad Station is the focal point. Designed by famous architect Daniel Burnham the building was built in 1902 as Neo-Classical style. This District showcases the history of Richmond being a railroad center and home to many industries. The majority of the structures date back to 1875 to 1910 with a few from the mid-1860s.

**Starr Historic District "Gas Light District" (added 1974 - Wayne County - #74000026)**

**National Register of Historic Places description:** Roughly bounded by N. 16th, E and A Sts., and alley W of N. 10th St., Richmond

(1600 acres, 102 buildings) Historic Significance: Architecture/Engineering, Person  
 Architect, builder, or engineer: Multiple Architectural Style: Italianate, Italian Villa  
 Historic Person: Multiple  
 Area of Significance: Industry, Commerce, Engineering, Architecture, Religion, Social History, Invention  
 Period of Significance: 1800-1824, 1825-1849, 1850-1874, 1875-1899



Source: waynet.org

Owner: Private, Local Gov't Historic Function: Domestic Historic Sub-function: Single Dwelling2 Function: Domestic Current Sub-function: Single Dwelling2

The Starr Historic District is located near the north side of Richmond and is occupied by large townhouses and mansions that are of Italianate, Second Empire, Greek Revival, and Queen Anne style. The district has developed by Charles and Elizabeth Starr and later influenced much of Richmond's early development and

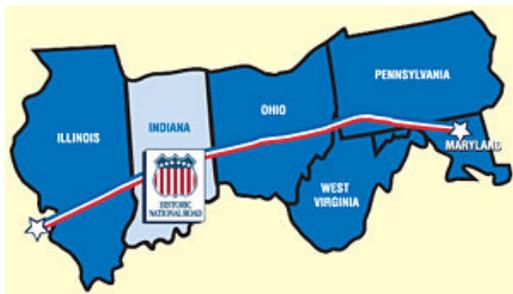
went on to own Starr Piano. A good portion of the residents were leaders in business and industry in the 19<sup>th</sup> century. This area has always been a residential district.

**Starr East Main Street-Glen Miller Park Historic District – “Millionaires Row”**

East Main Street is the major entrance into Richmond and is known for being a broad tree-lined residential street. Many of the residences on this street were owned by some of the wealthiest people in the area such as architect John Hasecoaster, piano and phonographer Henry Gennett, and lawn mower manufacturer Elwood W. McGuire. There are also several brick houses that were built before 1880 when the National Road first went through. The Glen Miller Park has been around for over 100 years and was plotted by Pennsylvania Railroad executive John F. Miller. It has been owned by the city since 1880. There is a distinct relationship between the residences and the park and the access to the center of town.

**The Historic National Road**

The Historic National Road was America's first interstate highway established by an act of Congress in 1806. The Indiana portion was built between 1829 and 1834, linking the eastern seashore with the western interior. In 1996, the Historic National Road was designated as a state scenic route. And in 2002, The Historic National Road from Maryland to St. Louis was designated as an All-American Road. Driving the route evokes a sense of traveling through the passageways of history from historic architecture and early 19th century farms to nostalgic gas stations, historic monuments and genuine Midwestern scenic beauty.



Source: Waynet.org

**History of the National Road**

The construction of the nation's first highway, built with federal funds in the early nineteenth century, was not without government mandates. For citizens' own protection, legislators prohibited any tree stump in the National Road to exceed 15 " in height.

Carved through dense forest, the National Road preceded most Indiana cities, and was, literally, the road to civilization. Before the National Road made its way westward from Maryland in 1811,

Centerville was the only town besides Indianapolis between Richmond and Terre Haute. The crude highway completed its journey in 1832, with its last stop in western Illinois. As many as 200 wagons a day passed through towns along the route.

The nickname "Main Street of America" was honestly earned as towns such as Centerville sprang up from enterprising pioneers who recognized the need for inns, blacksmith shops and grocers. In fact, settlers keen on cashing in on National Road traffic often offered their land to the government for free.

To maximize National Road frontage, Centerville folks, whose homes or businesses lined the 100' Main Street, narrowed the road to its present 65' by building onto the fronts of their buildings. Archways between Federal style row-houses allowed access to the rear of buildings and backyards. New homes were built almost flush with the sidewalk, and porches were built on the side of homes instead of in front so that residents could sit out without being smothered in dust (the first section of Indiana's National Road to be paved, however, was Centerville's Main Street). Today, more than 100 buildings in Centerville's Historic District are listed on the National Register of Historic Places.

## Strategies and Recommendations

The preservation of Richmond's rich historic heritage can be further achieved by implementing the following policies:

### **H P 1. Historic Preservation Commission**

- The City of Richmond will utilize the Historic Preservation Commission to be a city-wide historic preservation agency. As such, it performs many functions. These include identifying and preserving historic properties, reviewing development and demolition activities proposed in the city, providing public information and assistance on preservation practices, and providing staff support to neighborhood historic district commissions. Specific functions are recommended in these areas:
  - The Historic Preservation Commission will assist the Historical Society and other allied groups to develop local museums showcasing the history and heritage of the Richmond area, encouraging the preservation of the material evidence of the community's important role in America's growth and development.
  - The Historic Preservation Commission will provide National Register nomination information to businesses, schools, and libraries in the county to promote expansion of citizen support for historic preservation, and to encourage formation of a County Landmarks Commission with which the City's Commission could cooperate.
  - The Historic Preservation Commission will coordinate the efforts of various organizations concerned with community history and preservation.

### **H P 2. Preservation of Historic Districts that Recognize the Historic Resources of the City, Whether They be National Register Class or Locally Designated**

The preservation of Richmond's historic districts will be furthered by implementing the following recommendations:

- Continue to inventory historical events, sites, buildings and related resources.
- Extend and enrich the inventory of historical sites and buildings, and implement design review guidelines for historic districts and properties.
- Identify, preserve, and use the historical resources for future generations, including structures, artifacts, sites, and oral tradition.

- Establish a review process for proposed remodeling or demolition of structures and artifacts in the historic district, wherein the Historic Preservation Commission would be involved in approving required permits.
- In the City's process of reviewing plans for development/redevelopment, the Historic Preservation Commission shall be informed and given opportunity to ascertain the relative historic preservation concerns.
- Achieve historic district status for all of Richmond's historic areas, and adopt zoning overlay districts that incorporate design/rehabilitation/restoration/preservation criteria.
- Strengthen the Historic Preservation Commission's capabilities by having staff and/or consultant resources.

## **Program Resources**

### **Historic Landmarks Foundation of Indiana**

The organization established by volunteers, now ranks as the largest private statewide preservation group in the United States, with an Indianapolis headquarters and nine regional offices staffed by professionals who help save and restore Indiana's old buildings. The Foundation promotes preservation and education about the techniques and benefits of saving and restoring historic places through, tours, publications, meetings and workshops. In addition the foundation will provide assistance in forming local preservation groups and may provide grants and loans to aid with a specific preservation effort.

### **Indiana Historical Society**

Since 1830, the Indiana Historical Society has been connecting people to the past by collecting, preserving, interpreting and disseminating Indiana history. The independent, nonprofit organization also publishes books and periodicals; sponsors teacher workshops; provides youth, adult and family programming; assists local historical groups throughout the state; and maintains one of the largest collections of material on the history of Indiana and the Old Northwest. The Indiana Historical Society is one of the oldest historical societies in the United States, and one of the largest with more than 10,000 members. The Society opened a new 165,000-square-foot headquarters in downtown Indianapolis in July 1999.

### **The National Trust for Historic Preservation**

The National Trust for Historic Preservation is a private, nonprofit membership organization dedicated to saving historic places and revitalizing America's communities. Recipient of the National Humanities Medal, the Trust was founded in 1949 and provides leadership, education, advocacy, and resources to protect the irreplaceable places that tell America's story. Staff at the Washington, D.C., headquarters, six regional offices and 28 historic sites work with the Trust's 270,000 members and thousands of preservation groups in all 50 states. The National Trust offers many programs and educational opportunities in historic preservation the most relevant being:

- Preservation Grants
- Heritage Tourism program provides training, technical, and marketing services to communities to develop their heritage tourism opportunities, including the sensitive use of historic and cultural resources.
- The Statewide and Local Partnerships Program strengthens the capacity of statewide nonprofit preservation organizations through mentor relationships, workshops, technical assistance, and other support.

### **Federal Historic Preservation Tax Incentives Program**

The Federal Historic Preservation Tax Incentives program is one of the nation's most successful and cost-effective community revitalization programs. The program fosters private sector rehabilitation of historic buildings and promotes economic revitalization. It also provides a strong alternative to government ownership and management of such historic properties. The Federal Historic Preservation Tax Incentives are available for buildings that are National Historic Landmarks, that are listed in the National Register, and that contribute to National Register Historic Districts and certain local historic districts. Properties must be income-producing and must be rehabilitated according to standards set by the Secretary of the Interior.

### **Save America's Treasures Grants**

*Federal Agencies:* National Park Service and National Endowment for the Arts

*Recipients:* Department of Interior agencies and related agencies; Indian tribes; State and local governments; non-profit organizations

[www2.cr.nps.gov/treasures/](http://www2.cr.nps.gov/treasures/)

Since its creation in 1999 in recognition of the approaching new millennium, the Save America's Treasures program has provided \$188 million for preservation of historic properties and cultural artifacts. Historic properties receiving funds must be nationally significant and be threatened, endangered, or otherwise demonstrate an urgent preservation need.

The program has funded projects at properties ranging from the cliff dwellings at Mesa Verde, to buildings on Ellis Island, to San Juan's El Morro fortress. The need continues to outpace available dollars, however. In FY 2001, the program could only fund about 15 percent of the applications received.

Funded by the Federal Historic Preservation Fund and administered by the National Park Service (NPS) in partnership with the National Endowment for the Arts, the grants require a dollar-for-dollar non-Federal match. The maximum grant is \$1 million, and the minimum is \$250,000 for historic property projects and \$50,000 for cultural artifact projects. In FY 2004, the program was funded at \$33 million.

## **E. Environmental Protection**

### **Issues and Findings**

As Richmond's growth and development moves further and further to the urban fringe it competes with open space habitat and prime farmland. The loss of open space impacts the environment in multiple ways:

- Natural landscape features are threatened
- Stormwater runoff prior to development is filtered and captured by natural landscape, is trapped above impervious surfaces and accumulates and runs off into streams picking up pollutants along the way
- Wildlife sanctuaries are lost
- Farmland loss hastens the use of lesser quality soils for production; thereby heightening conversion of forest and wetlands for crop production; and increasing dependency on irrigation, fertilizers and chemicals.

Sustainable development cannot be achieved unless jobs are environmentally "clean" in that they do not contribute to air or water pollution or create toxic wastes. Ecological integrity ensures "that every person enjoys the benefits of clean air, clean water, and a healthy environment at home, at work, and at play" (PCSD, 1996:14). This goal is met, in part, through conserving natural resources and decreasing exposure to toxic substances and environmental hazards.

#### **The Richmond-Wayne County Environmental Awareness Council (RWEAC)**

The Richmond-Wayne County Environmental Awareness Council mission promotes awareness and understanding and encourages sustainable use of local resources. RWEAC sponsors educational events, TV programs, workshops and informational luncheons which focus on various ways that businesses and individuals can improve the environment. The Richmond Wayne County Environmental Awareness Council also serves as the management team for "CLEAN" city activities. RWEAC will work with the City Council to ensure that ordinances and plans are adopted to encourage implementation of this Quality of Life Plan.

The Richmond-Wayne County Environmental Awareness Council is working towards The CLEAN city designation and has issued the following mission statement:

The City of Richmond, Indiana, is committed to providing a safe, clean, and healthy community for its current and future residents. City leaders are committed to continually enhancing quality of life and cleanliness of our local environment. The City will publish a comprehensive "State of Richmond Environment" report every third year, with a brief progress report each intervening year.

1. The City of Richmond will comply with requirements and voluntary commitments set forth by the Indiana Department of Environmental Management to help ensure all residents, visitors and corporations in our community have access to clean water, clean air, and green space.
2. Businesses and organizations will be assisted in making sound environmental decisions in accordance with best available technology and practices at every step of their proceedings.
3. Our commitment to the environment will be made evident through energy efficiency in all city departments, conservation of fossil fuel resources throughout city and community facilities and services, and pollution-prevention plans for our air, soil, and water.

#### **Brownfields**

With certain legal exclusions and additions, the term 'brownfield site' means real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.

Richmond's designated Brownfields sites are listed below.

- Johnson & 2nd St
- 930 North "E" Street
- 214 E Main St
- 50 N. 5th Street
- 1100 Industries Road

**Definition Source:**

The Brownfields Site definition is found in Public Law 107-118 (H.R. 2869) - "Small Business Liability Relief and Brownfields Revitalization Act" signed into law January 11, 2002.

**Brownfield Reclamation**



*Before: View of the Swayne Robinson & Co. Foundry from E. Main St.*

*Source: www.in.gov*



*After: View of the Wayne County Jail from E. Main St.*

*Source: www.in.gov*

Several Brownfield redevelopment projects have already been completed.

The Swayne, Robinson & Co./Wayne County Jail project is an example of a successfully redeveloped Brownfield site; turning an eyesore, a health hazard, and a financially stagnant property into an aesthetically pleasing, useful, income-producing, county-owned facility.

From 1842 until 1997, the Swayne, Robinson & Co. Foundry operated on the near west side of downtown Richmond in Wayne County. A former grey-iron foundry, the facility manufactured farm implements and other machinery, such as wood lathes. At the time of its closing, it was the oldest family-owned foundry in America. Unfortunately, the property quickly became more than just an eyesore; it was an accident waiting to happen. A fire in March 1999 destroyed a large part of the structure. Soon after, the owners declared bankruptcy, leaving behind drums full of unknown liquids in the building. Piles of foundry sand covered much of the property. The deteriorating condition of the building allowed easy access, and signs of trespassers were obvious. The county applied for a Brownfield Environmental Assessment from IDEM in March 1999. IDEM conducted the environmental investigation during the summer of 1999, and the report was completed in October 1999. Analytical results of the samples indicated low levels of contamination, including arsenic, polychlorinated biphenyls (PCBs), and dieldrin in the soil on the site, as well as low levels of ethylbenzene in one ground water sample. Additional sampling and a risk assessment were conducted by a private consulting firm hired by the county. Much of the contaminated soil was removed during redevelopment of the site.

Wayne County acquired the option to purchase the real estate from Swayne, Robinson & Co. for \$15,000 and forgave the taxes owed on the property and the environmental cleanup cost if the cleanup did not exceed \$100,000. If cleanup cost exceeded \$100,000, then the county had the option to back out of the deal. The county took possession of the property in June 2000.

During demolition and cleanup of the site, cooperation between the city of Richmond and the county allowed for foundry sand to be disposed of at the city-owned Richmond Sanitary Landfill at no cost to the county. The city of Richmond viewed the arrangement positively, acknowledging that the city eventually would have been responsible for cleaning up the foundry if the county had not stepped in.

Based on results of the environmental reports and risk assessment, IDEM issued a Comfort Letter to the county in August 2002, indicating that the property was suitable for redevelopment. Today, the site is home to the Wayne County Jail, capable of holding up to 418 inmates. Prisoners were transferred from the old jail, which was designed to hold 108 inmates, to the new one in August of this year. Many local residents were initially opposed to building the new jail at the site, preferring instead that it be developed commercially to bring more people to the downtown area. However, even those who were initially opposed understood the necessity of building a new jail. The site's convenient location to the courthouse and other county offices also made sense, and it is aesthetically pleasing design enhanced the area, rather than detracting from it as originally feared. The increased size of the new jail also will allow the county to rent out cell space to other counties and the state in the future, bringing in additional revenue to the community. Once the county assesses staffing needs at the new facility, there is a potential for additional job creation, adding to the economic benefits of the new jail.

## **The Richmond Sanitary Department**

### **Industrial Pretreatment (Sanitary Labs)**

The Richmond Sanitary District's industrial pretreatment program is mandated as a provision of the District's National Pollutant Discharge Elimination System Permit No. IN 0025615 and regulated through the United States Environmental Protection Agency and Indiana Department of Environmental Management. The goal of the District's industrial pretreatment program is to maintain a non-interfering, biologically treatable influent, to protect the East Fork of the Whitewater River from pass through of toxic chemicals and heavy metals, to create and maintain high quality, land applicable sludge, and to protect the citizens of Richmond from hazardous substances that could be discharged from an industrial setting.

### **The Household Hazardous Waste Program**

The Household Hazardous Waste Program was developed and implemented to provide a service for those residents of Richmond Sanitary District and also protect the environment. This program protects the drinking water, the wastewater treatment plant, and the community. It also saves space in our landfill and assures that hazardous household wastes are disposed of in a safe and environmentally friendly manner at no cost to the residents.

Most household chemicals are accepted by the Richmond Sanitary District for disposal. Common items accepted are: paints, household solvents, motor oil, car batteries, bug and weed killers, etc.

### **Wastewater Treatment Facility**

The Richmond Sanitary District's wastewater treatment facility, the 1988 recipient of the U.S. Environmental Protection Agency's Award of Excellence for outstanding operation and maintenance of a water pollution control facility, reflects the District's commitment to achieving and maintaining the highest standards of water quality.

### Richmond Sanitary District's Material Recycling Facility

This program is on a voluntary basis through the Richmond Sanitary District. The District provides free containers called “Richie Rollers” in which to place all recyclable items. The Richie Rollers are either 32-gallon or 65-gallon containers. The customer may specify which Richie Roller would best fit their needs. There is no additional charge for picking up recyclable material or the use of the Richie Roller. This makes recycling as easy as throwing away garbage.

### Education

#### Cope Environmental Center

##### Mission Statement

“Cope Environmental Center promotes the sustainable use of the earth’s resources through education, demonstration, and research.”

##### Vision Statement

“Cope Environmental Center inspires and challenges individuals and communities to achieve ecologically sustainable lifestyles to secure a sustainable future for all life on earth.”



Source: waynet.org

Cope Environmental Center is the primary project of the Francis Parks Foundation and is organized exclusively for charitable, educational, and scientific purposes. As a not-for-profit organization (501(C)(3)), Cope Environmental Center provides education, research, and demonstrations that promote the sustainable use of the earth's resources. It is governed by a board of directors and supported by membership dues, gifts, donations, bequests, sponsorships, program fees, grants, and a modest endowment.

#### Long-Range Plans

As the importance of environmental issues is realized, it will be necessary for organizations like the Cope Environmental Center to inspire and challenge individuals and communities to achieve ecologically sustainable lifestyles to secure a sustainable future for all life on earth. The long-range plans for the center include increasing the number and variety of educational programs, demonstrations, and research opportunities available on the regional, state, and national level. To accommodate significant growth in program participation, plans are being developed and funds sought for a new education center to replace the existing facility.

## History

In 1948, Jim and Helen Cope purchased about 30 acres of farm land between Centerville and Richmond and began planting a variety of trees, shrubs, and other plants. They pursued a sustainable lifestyle which involved the use of alternative energy, energy conservation, composting, and organic gardening. During their years of teaching, Jim at Earlham College and Helen at Centerville Junior-Senior High School, the property was the site of many field trips. Over the years, the collections of deciduous trees and conifers have matured and achieved regional significance in size and diversity. Simultaneously, their knowledge and insight regarding the many ways to conserve natural resources and live a sustainable lifestyle grew. In 1992, Jim and Helen partnered with their friend Francis Parks, a dedicated botanist, horticulturist, and conservationist, to create the Francis Parks Foundation and the Cope Environmental Center to give permanent protection to this valuable piece of land and to teach others what they had learned. In 1997, the Center tripled in size with the gift of 70 acres from Gertrude 'Lucky' Ward, a retired biology professor at Earlham College. Lucky was dedicated to the conservation of natural and cultural resources within the region. With the addition of another parcel of land in 1999, the Center increased to its current size of 102 acres.



Source: [www.copeenvironmental.org](http://www.copeenvironmental.org)

## Audience

The Center staff works with children, adults, families, students, educators, and community groups both on-site and through outreach programs. Groups throughout the region utilize the programs and facilities on a regular basis. Public and private schools, colleges, and universities use the Center for guided hikes, research, and custom-designed programs. On a daily basis, casual visitors walk the trails, enjoy the gardens, or view a demonstration. The Center also handles hundreds of telephone calls and personal inquiries concerning

animal and plant identification, local environmental concerns, sustainable living practices, and other issues.

## Strategies and Recommendations

### E N 1. Incorporate an Environmental Planning Division to the Richmond City Planning Department

The Environmental Planning Division would be charged with providing an environmentally oriented review of all the development proposals which are brought before the Plan Commission, Board of Zoning Appeals and the City of Richmond. This Division would provide project management leadership on issues of environmental significance and lend support to the evaluation and implementation of the City's regulations and policies, as they pertain to the environment.

Environmental Planning staff could also write and administer grants for the evaluation of stream and watershed water quality; prepared Brownfield site assessment grants on behalf of local land owners and public agencies; participate in updating the City's Comprehensive Plan; drafting changes to the City's Zoning Ordinances pertaining to the environment; and be responsible for enforcing the environmental sections of the Zoning Ordinance.

**E N 2. Commission an Environmental Quality Indicators Report for the City of Richmond and the Contiguous 2 mile Fringe**

The City of Richmond will commission a report to evaluate the following:

1. Richmond's Energy Consumption
2. Waste Management
3. Solid Waste and Recycling
4. Hazardous Materials and Waste
5. Air Quality in Richmond
6. Water Quality and Quantity
7. Stream and River Water Quality
8. Lake and Reservoir Water Quality
9. Water Use and Treatment
10. Storm Water Runoff
11. Soils, Erosion and Siltation
12. Erosion Prevention and Control
13. Wildlife and Natural Areas and Botanical Resources
14. Wildlife
15. Urban Green space

**E N 3. Promote Healthy Local Food Systems Through Information and Learning Opportunities**

Food is an essential ingredient in a healthy, sustainable community. The City of Richmond will develop a Municipal Food Policy, which provides direction on increasing our safe and local food supply, encouraging community gardens, supporting the farmers' markets, reducing our exposure to hazardous substances in food and improving the nutritional value of our food.

**E N 4. Promote the Use of Green Building Technology in New Building Developments and Building Reuse Strategies**

- Green building technology will be promoted by the city of Richmond through establishing an innovative building design review committee to advise builders on energy-efficient design.
- The City will consider incentives for rewarding energy-efficient building design.
- The City will develop sustainable development guidelines for municipal facilities for energy efficiency, low impact development and conservation landscape requirements.

**Green Building Program**

The first cost of a building represents only 6-8% of its total cost over its lifetime. 92% of a building's cost is devoted to its operation and maintenance. The cost of people working inside that building is between 100 and 150 times that of the building itself. If buildings can be made more energy efficient, easier to operate and maintain, the keep people healthier and more productive and enormous amounts of money can be saved, enough to pay for the cost of the building many times over.

Sustainable design, high performance buildings are those that, through their siting, orientation, design, construction, and operation, are highly energy efficient, have lower operating costs, are better for the environment in broad and specific terms, and promote whole health for their users and occupants with measurable results.

Climate sensitive design using available technologies in the US could cut total energy use by 60% in commercial buildings, reduce material and water use, reduce waste and save owners, companies and the government billions of dollars every year in maintenance and operating costs, assessments, fees and taxes.

## **Program Resources**

### **LEED (Leadership in Energy and Environmental Design)**

LEED provides certification and education on green building techniques.

The LEED Green Building Rating System<sup>R</sup> is a voluntary, consensus-based national standard for developing high-performance, sustainable buildings. Members of the U.S. Green Building Council representing all segments of the building industry developed LEED and continue to contribute to its evolution.

LEED was created to: define "green building" by establishing a common standard of measurement; promote integrated, whole-building design practices; recognize environmental leadership in the building industry; stimulate green competition; raise consumer awareness of green building benefits; and transform the building market. (Information from the U.S. Green Building Council website, [www.usgbc.org](http://www.usgbc.org)). Members of the U.S. Green Building Council representing all segments of the building industry developed LEED and continue to contribute to its evolution. LEED standards are currently available or under development for:

- New commercial construction and major renovation projects (LEED-NC)
- Existing building operations (LEED-EB)
- Commercial interiors projects (LEED-CI)
- Core and shell projects (LEED-CS)
- Homes (LEED-H)
- Neighborhood Development (LEED-ND)

LEED was created to:

1. Define "green building" by establishing a common standard of measurement
2. Promote integrated, whole-building design practices
3. Recognize environmental leadership in the building industry
4. Stimulate green competition
5. Raise consumer awareness of green building benefits
6. Transform the building market

LEED provides a complete framework for assessing building performance and meeting sustainability goals. Based on well-founded scientific standards, LEED emphasizes state of the art strategies for sustainable site development, water savings, energy efficiency, materials selection and indoor environmental quality. LEED recognizes achievements and promotes expertise in green building through a comprehensive system offering project certification, professional accreditation, training and practical resources.

## **Resources and Funding Opportunities for a Sustainable Community**

### **ACHP Historic Preservation Funding**

The Advisory Council on Historic Preservation (ACHP) has created a new online guide that outlines the range of historic preservation funding options that are currently available.

### **Active Living by Design/ The Robert Wood Johnson Foundation**

Recognizing the important role of physical activity in promoting healthier lifestyles, Active Living by Design and The Robert Wood Johnson Foundation (RWJF) offers partnerships across the United States to increase active living, a way of life that integrates physical activity into daily routines. Each partnership will receive a \$200,000 grant to address community design, land use, transportation, architecture, trails, parks and other issues that influence healthier lifestyles.

### **AIA Sustainable Design Assessment Program**

The AIA Center for Communities by Design, with the support of the AIA Committee on the Environment (COTE), the new SDAT focuses on sustainability as the key to quality, balance, and long-term viability.

### **Alcan Prize for Sustainability**

The Alcan Prize for Sustainability identifies and recognizes not-for-profit, civil society and non-governmental organizations for their contributions to economic, environmental and/or social sustainability.

### **Brownfields Assessment Revolving Loan Fund and Cleanup Grants**

The US Environmental Protection Agency solicits applications for its Brownfields Assessment Revolving Loan Fund and Cleanup Grants. Assessment grant funds of up to \$200,000 (up to \$350,000 with waiver) may be used to inventory, characterize, assess and conduct planning and community involvement efforts related to brownfields.

### **Brownfields Federal Programs Guide**

There are nearly two dozen federal programs that can help communities in one way or another to assess, cleanup and reuse Brownfields. Brownfields Federal Programs Guide examines in alphabetical order the resources available in other departments and agencies which could be applied in Brownfields situations. This website from the U.S. Environmental Protection Agency contains information on Brownfields funding for loans, job training, technical assistance, and other items related to brownfield remediation and management.

<http://www.epa.gov/brownfields/pg>

### **Brownfields Funding Indiana**

The Indiana Department of Commerce (IDOC) offers a brownfields redevelopment program funded through federal Community Development Block Grants (CDBG).

### **Building Communities and Entrepreneurs**

The Citigroup Foundation's Building Communities and Entrepreneurs program supports community development corporations, intermediary organizations and community development financial institutions that focus on affordable housing, economic development, welfare-to-work initiatives, community infrastructure improvements, and environmentally sustainable growth to local economies.

### **Community Toolbox for Children's Environmental Health**

Guided by a board comprised primarily of grassroots leaders, Community Toolbox supports community-based initiatives to protect children from environmental health hazards.

### **Community Forestry Projects**

Community Forestry Projects grants are awarded in the categories of Promotion of Livable Communities through Urban and Community Forestry, Creative and Innovative Urban and Community Forestry Research and Technology Development is available at <http://www.treelink.org/nucfac>

### **Due Diligence Grants**

The Environmental Due Diligence Pilot Program seeks communities that are proactively pursuing economic development opportunities. The EDD Program will conduct Phase I Environmental Assessments on a property or multiple properties within selected communities. Alternatively, area-wide assessments could be conducted for a main street, industrial district, business park, or other geographic area. The purchase, use, or redevelopment of buildings and commercial sites by business prospects are dependent on those properties being clear of environmental liability issues. Similar concerns by lenders have made environmental due diligence a necessity in today's real estate market. Identifying environmental issues early can enable communities to craft solutions before these issues become deal-breakers.

### **Environmental Education Grants**

The Grant Program sponsored by EPA's Office of Environmental Education supports environmental education projects that enhance the public's awareness, knowledge, and skills to help people make informed decisions that affect environmental quality.

### **Environmental Justice Grants**

The U.S. EPA's Office of Environmental Justice offers grants designed to address environmental justice issues. Examples include grants to community-based organizations that are working on or planning to work on projects to address local environmental and/or public health concerns, and grants to community groups with projects that address environmental justice issues.

### **Environmental Justice Small Grants Program**

The Environmental Protection Agency's Office of Environmental Justice (OEJ) established the Environmental Justice Small Grants Program in FY 1994. The purpose of this grant program is to provide financial assistance that will support and empower community-based organizations that are working on local solutions to local environmental and/or public health problems.

### **Environmental Program Grants**

The Laura Jane Musser Fund encourages communities whether represented by local governments, state agencies or grassroots nonprofit organizations to use a consensus-based approach to environmental decision-making.

### **Five Star Restoration Challenge Grants**

The National Association of Counties, the National Fish and Wildlife Foundation, and the Wildlife Habitat Council, in cooperation with the U.S. Environmental Protection Agency (EPA), the Community-Based Restoration Program within NOAA Fisheries, and other sponsors (e.g., Office of Surface Mining), solicit applications under the Five Star Restoration Challenge Grants Program. The Five Star Restoration Challenge Program brings together students, conservation corps, other youth groups, citizen groups, corporations, landowners and government agencies to provide environmental education and training through projects that restore wetlands and streams.

### **Funding Search Database**

The Red Lodge Clearinghouse Funding Search resource is a searchable database of funding sources. Search options include by State, Interest, Type, or Funder, with subcategories for most options.

### **Funding Sources - Trails and Greenways**

National Trails Training Partnership has added a list of funding sources for trails and greenways proponents to the resources and archives section of its website.

### **Getty Foundation**

Getty Foundation grants support and assist in cultural, arts, and heritage development and can also be sources of preservation funding. One source with information on these organizations is [www.preservenet.cornell.edu/econ.html](http://www.preservenet.cornell.edu/econ.html).

### **Green Building Initiative**

The Kresge Foundation has announced a Green Building Initiative to encourage environmentally sustainable nonprofit organizations.

### **Green Building Tax Credits**

The Apollo Alliance offers a summary of green building tax credit programs and how they have been implemented in state governments. This discussion includes model language for a good general Green Building tax credit bill, and includes a copy of the State of New Jersey's legislation allowing for additional tax credits for developments that adhere to other smart growth principles, such as redeveloping brownfields, locating near public transit, and limiting land use for parking.

### **Green Communities**

Green Communities is a five-year, \$550 million fund to build more than 8,500 homes across the country that provides significant health, economic and environmental benefits to low-income families and communities.

### **Green Communities Grants**

A minimum of \$1 million in grant funds is available to participants in the Green Communities Initiative (GCI) through an application process that is published on The Enterprise Foundation's website. The purpose of the Green Communities Program is to help one community at a time to achieve goals for a healthier, happier and more sustainable future, a future that honors the open spaces people value and dignifies spaces in which people live, work and play.

### **Midwest Assistance Program Loan Fund**

The Midwest Assistance Program is providing low-cost, short and intermediate term loans for community water and wastewater projects through its Community Revolving Loan Fund.

### **Million Solar Roofs Grants**

DOE's National Energy Technology Laboratory (NETL) Million Solar Roofs Initiative (MSRI) Small Grant Program for State and Local MSR Partnerships. Awards under this announcement will be grants with a term of no more than three years.

### **Nathan Cummings Foundation**

The Nathan Cummings Foundation offers the Environment Program, a funding opportunity that seeks to address the root causes of environmental degradation.

### **National 4-H Council Community Tree Planting Grants**

The National 4-H Council offers grants at the community, county, and state level for young people and adults to take action on issues critical to their lives, their families, and their communities. Grant recipients are expected to take the lead in the design of the project, the proposal writing process, implementation, and evaluation of funded projects.

### **National Trails Fund**

National Trails Fund grants help give local organizations the resources they need to secure access, volunteers, tools and materials to protect America's cherished public trails.

### **Native Plant Conservation Initiative**

The National Fish and Wildlife Foundation, in partnership with the Plant Conservation Alliance, offers the Native Plant Conservation Initiative (NPCI). Grants of federal dollars are provided to non-profit organizations and agencies at all levels of government to promote the conservation of native plants.

### **Preservation of Historic Places and Landmarks**

The National Trust for Historic Preservation is offering grants through the Johanna Favrot Fund for Historic Preservation for projects that contribute to the preservation or the recapture of an authentic sense of place. To learn more, visit [www.nthp.org/help/grants.html](http://www.nthp.org/help/grants.html). For contact information on statewide preservation non-profits, access the Statewide Groups information at [www.nationaltrust.org/state\\_and\\_local/partner\\_organizations.asp](http://www.nationaltrust.org/state_and_local/partner_organizations.asp).

### **Rivers, Trails and Conservation Assistance Program**

The U.S. National Park Service (NPS) offers this website on how to apply for rivers and trails conservation assistance.

### **Rockefeller Brothers Fund**

The Rockefeller Brothers Fund (RBF) sustainable development grant making supports environmental stewardship that is ecologically based, economically sound, socially just, culturally appropriate, and consistent with intergenerational equity. The Fund encourages government, business, and civil society to work collaboratively on environmental conservation and to make it an integral part of all development planning and activity.

### **RTC's Trails Funding Guide**

The Rails-to-Trails Conservancy's (RTC's) Trails and Greenways Funding Guide is a searchable database containing information about a variety of federal, state and private funding sources for trails and greenways.

### **Small Scale Farmers Initiative**

The Natural Resources Conservation Service (NRCS), an agency of the U.S. Department of Agriculture, will provide up to \$6 million for a new Small-Scale/Limited Resource Farmers Initiative to help small farmers implement good conservation practices on their land.

### **Smart Growth Funding Resource Guide**

This resource guide is divided into three sections: (1) Funding Categories and Grants Programs; (2) Information on Other Funding Directories; and (3) Tips on the Successful Procurement of Grant Monies.

### **The Association of Collegiate Schools of Planning**

Concerns about sprawl, traffic congestion, and loss of open space have risen to the top of community concerns. In response, universities and colleges are beginning to use their abilities to address growth issues and provide innovative solutions for communities.

### **US EPA State Innovation Grant**

The U.S. Environmental Protection Agency's (EPA's) Office of Policy, Economics and Innovation is requesting proposals for a third round of projects to be funded under its State Innovation Grant Program.

### **USEPA Children's Health Protection Grants**

The U.S. EPA awards to five communities to fund locally based projects that improve and create healthy environments for children. These grants represent the most innovative examples of community development and promotion that link sustainable growth policies with protecting children's health.

### **Wetlands Protection Grants**

The US EPA's Wetland Program Development Grants (WPDGs) provide eligible applicants an opportunity to conduct projects that promote the coordination and acceleration of research, investigations, experiments, training, demonstrations, surveys, and studies relating to the causes, effects, extent, prevention, reduction, and elimination of water pollution.

## **F. Natural Resources Maps**

1. Slope Analysis Quadrant 1
2. Slope Analysis Quadrant 2
3. Slope Analysis Quadrant 4
4. Slope Analysis Quadrant 5
5. Topography
6. Floodplains
7. Soils
8. Hydric Soils
9. Natural Features Quadrant 1
10. Natural Features Quadrant 2
11. Natural Features Quadrant 4
12. Natural Features Quadrant 5
13. Watersheds