Ohio Balanced Growth Program

Big Creek Watershed Planning Partnership

March 10, 2016

Kirby Date, AICP, Cleveland State University

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Ohio Balanced Growth: Water and Economics

- Our state's aquifers, rivers, streams, ponds, lakes wetlands, groundwater: business, commerce, recreation, tourism, drinking water

- *Ohio's greatest asset: Fresh Water Resources*
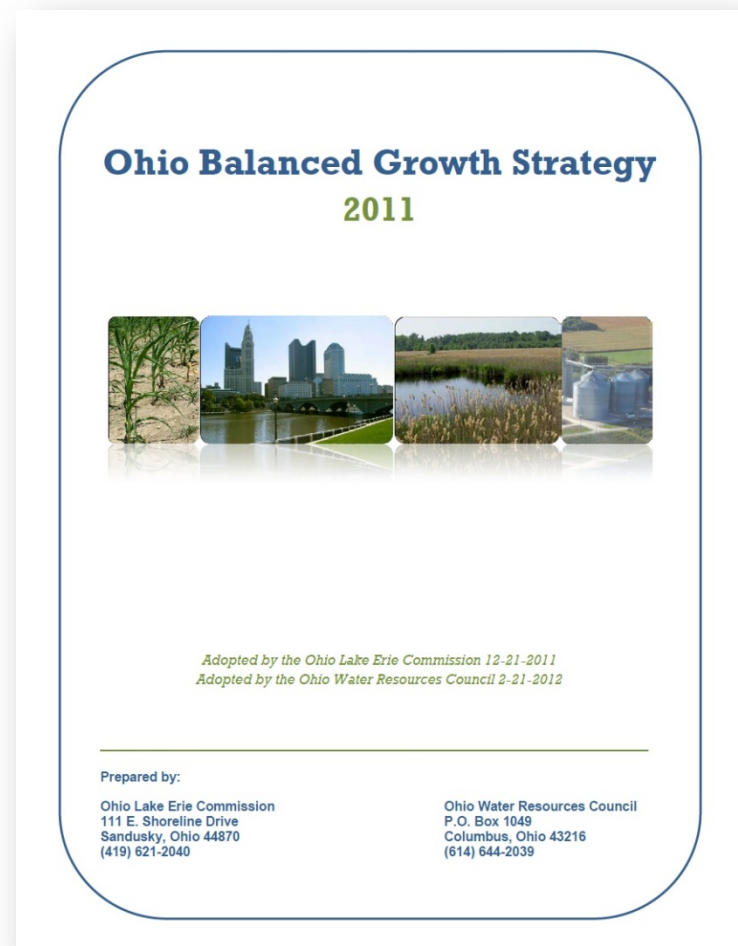
Balanced Growth Watershed Plans

A complement to local Land Use plans: Linking PDAs, PCAs, PAAs to incentives

Extra points on applications
Special consideration in review process
Percentage point discounts
Priority technical assistance
Grant programs

Ohio Balanced Growth Strategy
2011

Adopted by the Ohio Lake Erie Commission 12-21-2011
Adopted by the Ohio Water Resources Council 2-21-2012

Prepared by:

Ohio Lake Erie Commission
111 E. Shoreline Drive
Sandusky, Ohio 44870
(419) 621-2040

Ohio Water Resources Council
P.O. Box 1049
Columbus, Ohio 43216
(614) 644-2039

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Balanced Growth Planning Partnership Watersheds

Map created with the assistance of ODNR - Office of Coastal Management and ODNR - Division of Soil and Water Resources. June 2015.
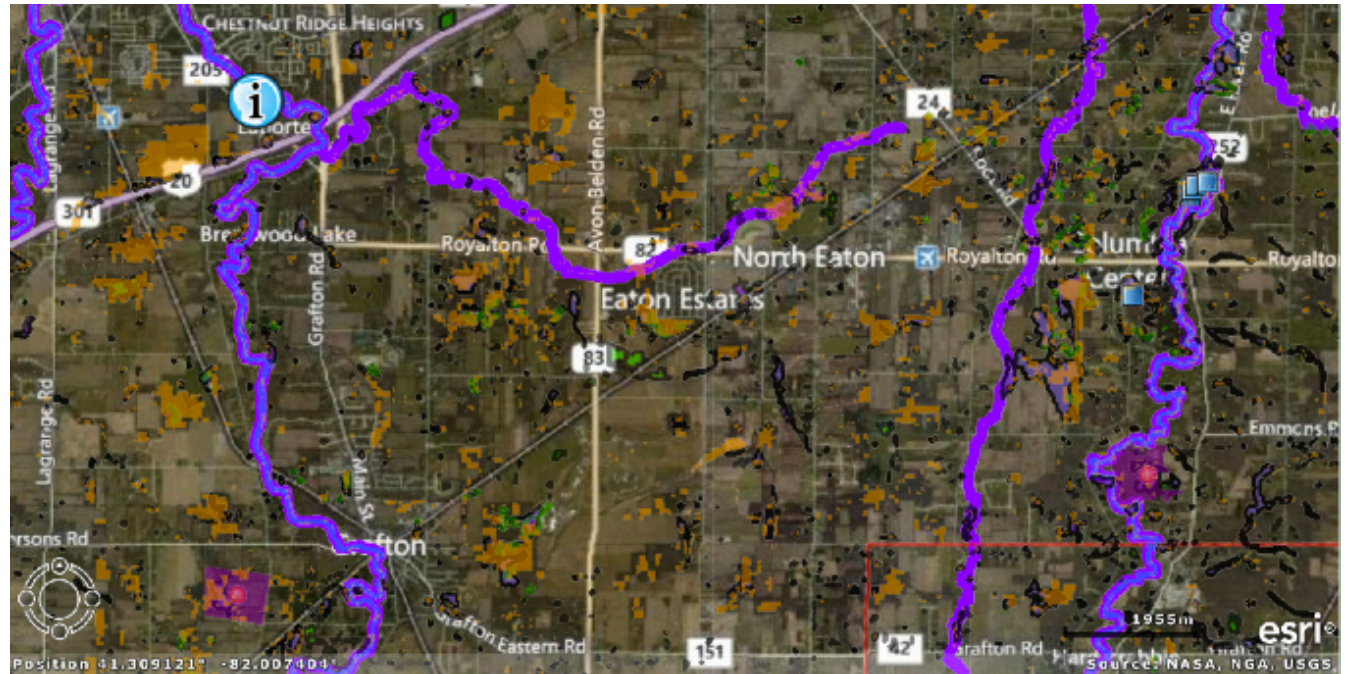
balancedgrowth.ohio.gov

Lower Black River Restoration Plan

- $10 million in improvements/ mitigation leveraged across the restoration area

Eaton Township Stream Setback

- 25-foot setback adopted for both streams and ditches

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Medina Township Comprehensive Plan Review

- New plan emphasizes open space protection

Note: Upper West Branch Rocky River Watershed Balanced Growth Plan participating community

Balanced Growth Implementation: Chagrin River Watershed Partners

- Six communities are updating local codes based on Best Local Land Use Practices and 10 SWIF grants have been awarded for projects in the Chagrin River watershed.

Chester Township Hall Parking Lot
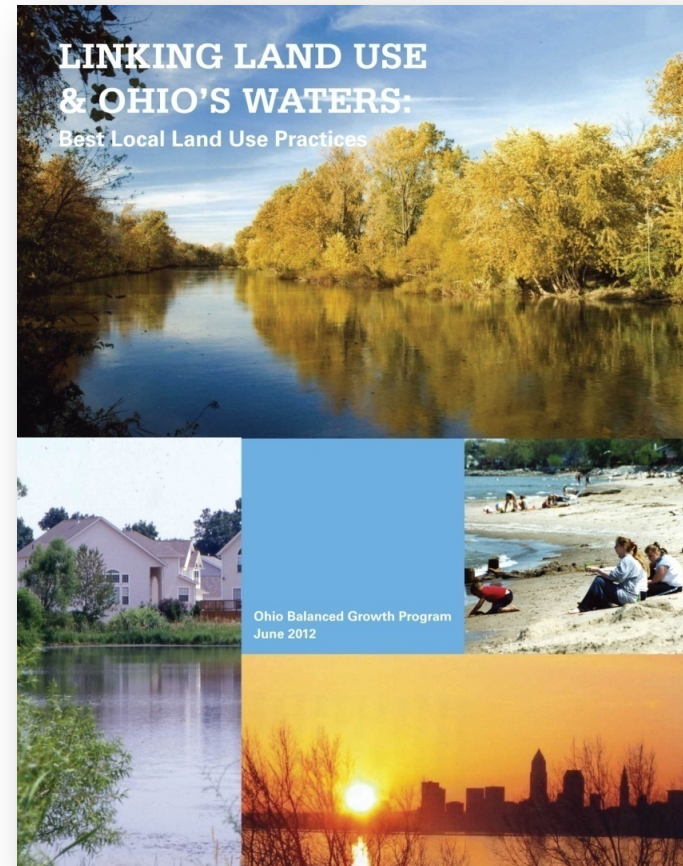Bioretention & Permeable Pavers
$77,295 SWIF grant

Before

After

Balanced Growth Implementation: UPDATING YOUR CODES for WATERSHED PROTECTION

Ohio

- Checklist for Code Review
- Model regulations
- "Toolkit":

http://balancedgrowth.ohio.gov

- "Model Regulations":

http://crwp.org

LINKING LAND USE & OHIO'S WATERS: Best Local Land Use Practices

Ohio Balanced Growth Program June 2012

Checklist for Code Review

- Development Regulations
- Parking Lot Design
- Minor Subdivisions
- Flood Damage Reduction Regulations
- Stream and Wetland Protection
- Flexible Subdivision Design

- Compact Development
- Tree and Woodland Protection
- Steep Slope Protection
- Natural Areas Establishment and Management
- Land Conservation Incentives

Updating Codes: Managing Storm Water

- Conserve natural features
- Minimize impervious surfaces
- Infiltrate, evapotranspirate and slow down runoff
- Treat stormwater close to the source
- Use pervious areas for more effective stormwater treatment
- Achieve a marketable, cost-effective product

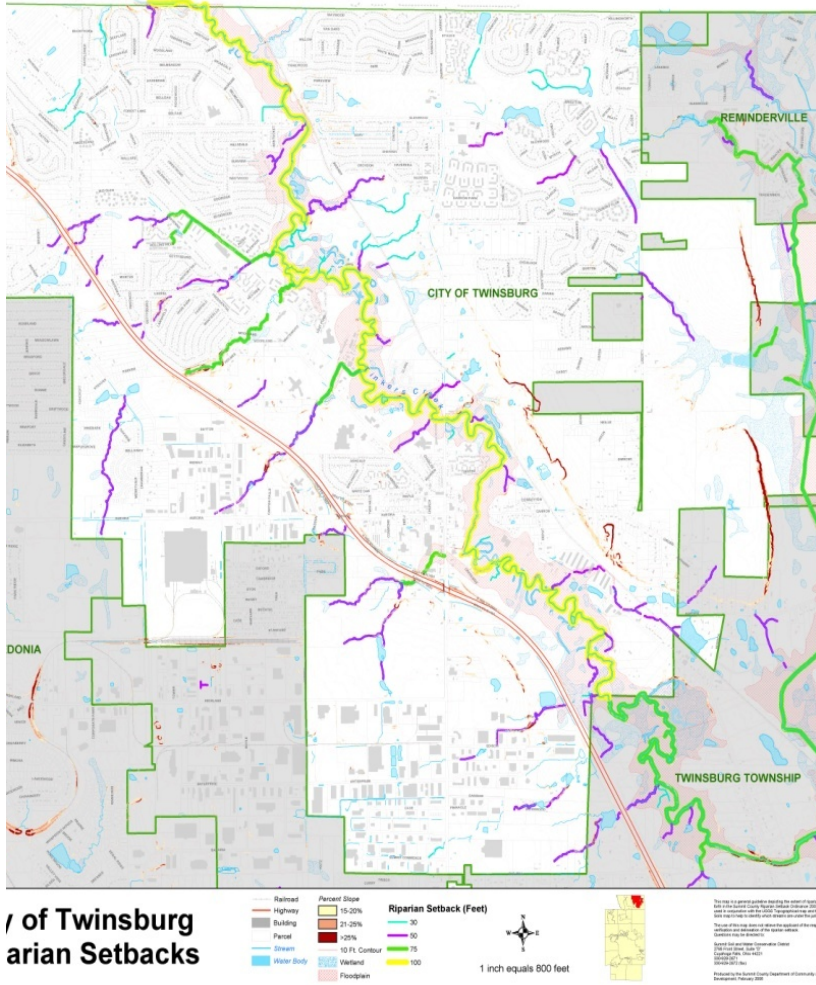Source: J. Zielinski, Center for Watershed Protection

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Updating codes: Parking Lot Design

Ohio

- Reduce number of parking stalls
- Reduce parking lot imperviousness
- Provide storm water treatment within landscaped areas

Updating Codes: Stream and Wetland Setbacks

City of Twinsburg Riparian Setbacks

- Reduces flood event impacts, filters out pollutants

- Adopt a stream and wetland setback code(s)

- Size setback according to established standard methods

- Examine and map appropriate setbacks along community streams and rivers

- Widen stream setback width to accommodate wetlands and/or floodplain

- Prohibit construction of any kind (includes pavements, foundations, walls, stormwater facilities, wastewater facilities)

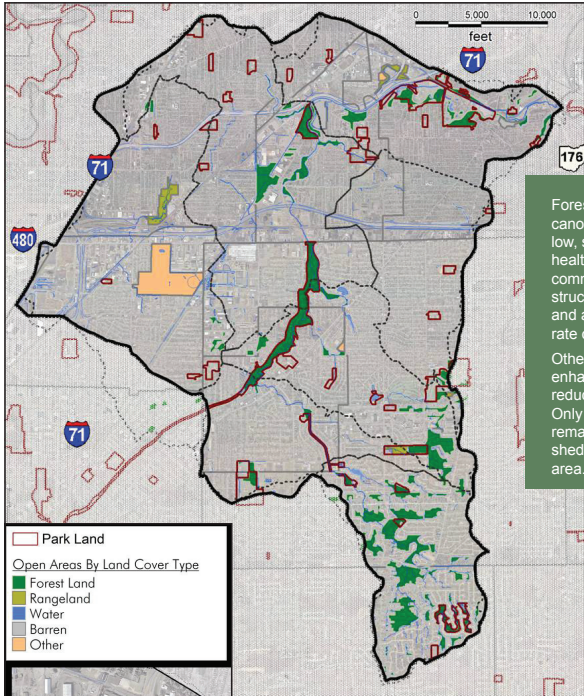# Updating codes: Flexible Subdivision Design (AKA Conservation Development)
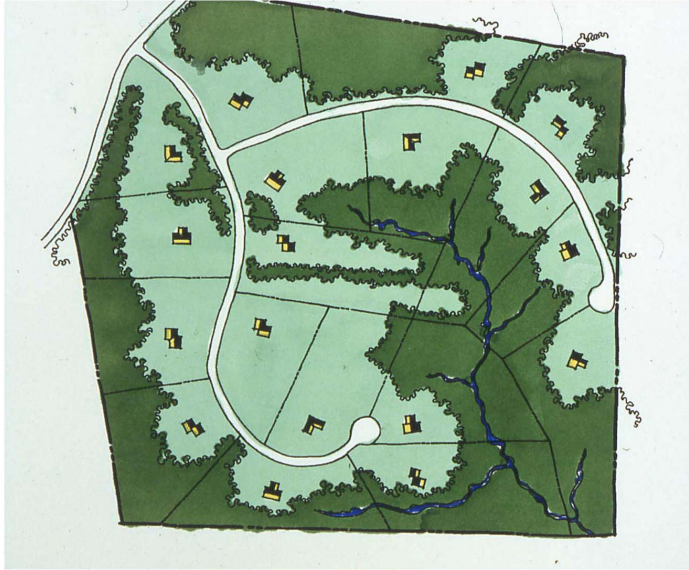
Conventional
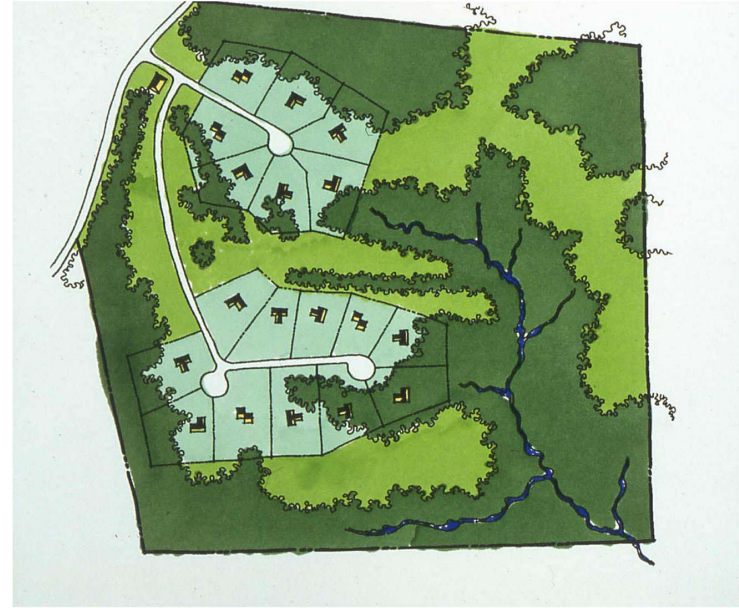
Conservation Development

- 40-50% Permanent Open Space
- Quality Open Space
- Resource Protection
- Appropriate Development Intensity

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Balanced Growth Implementation:

Big Creek
Natural Feature: Forest Cover

Forest cover consists of tree canopy, understory plants and low, surface vegetative cover. A healthy forest system can save communities storm water infrastructure costs by intercepting and absorbing rain, slowing the rate of runoff and stabilizing soils.

Other community benefits include enhancing property values and reducing household energy costs. Only 1,833 acres of forest cover remain in the Big Creek Watershed – that is 7.5% of the total area.

Park Land

Open Areas By Land Cover Type
- Forest Land
- Rangeland
- Water
- Barren
- Other

Big Creek Watershed Balanced Growth Plan: Forest Cover

Tools & Practices #8
WOODLAND/TREE CANOPY PROTECTION

A Tree Canopy Program helps communities preserve existing canopy (or restore) to maintain a certain percent coverage. The percent coverage often depends on the underlying zoning (ie. residential, commercial) of the community.

Key Benefits
- Stabilizes soils
- Cleanses stormwater helping to improve water quality
- Reduces flooding problems by managing stormwater
- Conserves household energy costs
- Provide wildlife habitat

Trees help support a community's quality of life by maintaining the proper functions of watersheds. A healthy forest system can reduce storm water infrastructure costs by intercepting rain, increasing ground absorption and slowing the rate of runoff. Other community benefits include: protecting drinking water supplies, enhancing property values and reducing household energy costs.

RECOMMENDATIONS:

- Communities should protect woodlands and valuable canopy cover by adopting measures in their codified ordinances. In the ordinances, woodland areas of likely high value to the community should be identified for further attention at the site design level.

- A minimum % coverage of forest cover should be determined for post construction goals for residential, nonresidential and varying densities. Example: The City of Roanoke, Virginia has recently adopted a 40% canopy goal with targets of 20% for commercial and industrial areas, and 50% for residential areas. Urban areas in Maryland have a target of 40% overall coverage.

- Require professional evaluation of blocks of woodland at the preliminary design stage (avoid the requirement for every tree on a site to be identified). The code should require a tree protection plan and its approval prior to permit, and assure that the plan is implemented and monitored during construction. Provisions for monitoring for at least a year after construction should be included.

- Allow applicants to seek variance to reduce lot sizes in order to preserve more natural features (i.e. forest cover, riparian zones etc.)

In order to establish canopy cover goals, a community must first assess existing tree cover. There is an array of technology to accomplish this including GIS, aerial photographs, satellite images, and/or ground surveys. Using this benchmark data, the community must then decide, "What is a reasonable canopy goal for them to try to attain in a given period of time"? These goals should reflect both conservation efforts and planned restoration activities on public and private lands. Goals may be set for an overall canopy target for the jurisdiction or they may vary by land use—such as residential, industrial/commercial, streets, and/or parks and open spaces. American Forests recommends that urban areas strive for 40% canopy overall, 50% canopy in suburban residential areas, 25% canopy in urban residen-

Updating Codes: Tree Canopy Cover Management

Urban Trees:

- Filter and manage storm water, reduce erosion, protect steep slopes, wetlands and stream areas

- Enhance property values across community and onsite

- Reduce heat island effects and reduce energy costs

- Support wildlife

- *http://www.americanforests.org/ our-programs/urbanforests/ whywecare/*

- *http://forestsforwatersheds.org/*

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Updating Codes: Tree Canopy Cover Management

What we know:

- Measuring urban forest by canopy cover is more effective than counting individual trees

- Communities plan for their canopy: *Urban Forestry Plan*

  – What is existing cover?

  – What is realistic to achieve?

  – Goals set by type of development, public space, street trees, etc

- Soils are critical!!! Quantity and quality

Updating Codes: *Discussion Draft*
Tree Canopy Cover Management

Ohio

1) For development and redevelopment sites over 1 acre

2) Set *% canopy cover* in 30 years on site per community goals

3) Identify *significant trees* only

4) Allow designer to choose what to *save or plant new* to meet overall performance goals

5) Ensure *quality tree protection*

6) Ensure *quality soils* for new planting

7) Allow appropriate variances and exclusions

# Updating codes: Tree canopy cover management

Steps:

Goals set communitywide

1) *Tree Resource Evaluation:* Map, soil samples and memo by arborist

2) *Preliminary Tree Canopy Mgmt Plan:* what, how much, where, how

3) *Final tree canopy management plan:* construction plans

4) *Delineation* of tree protection areas (if any) prior to construction

6) Tree protection, soil preparation and new planting *per national standards*

7) *Monitoring* post-construction for a limited period (1 year typical)

Communitywide monitoring

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BLLUP Technical Assistance

- 24 hours free technical assistance available to individual communities
- Code reviews, code updates, many other applications
- Over 30 assistance areas to date
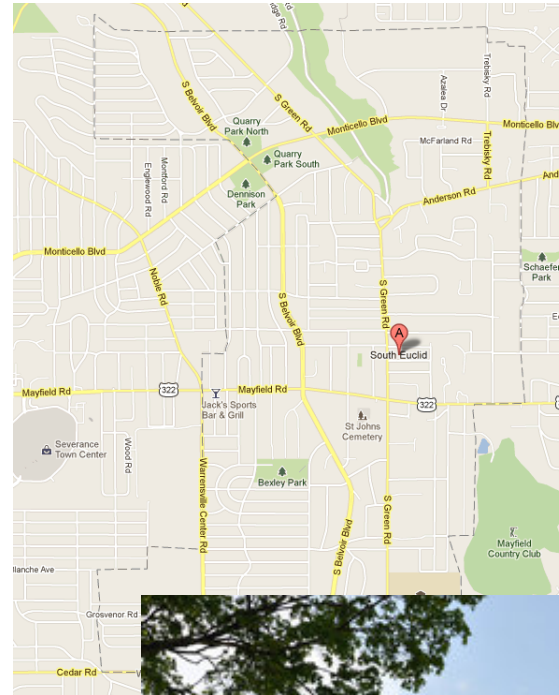
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Gail Hesse
Executive Director
Sandra Kosek-Sills
Environmental Specialist
419-621-2040 (office)
419-357-2775 (cell)
sandra.kosek-sills@lakeerie.ohio.gov

Ohio | Water Resources Council

Brian Hall
Administrator
www.ohiodnr.com/owrc

Cleveland State University
Maxine Goodman Levin College of Urban Affairs

Kirby Date, AICP
Best Local Land Use Practices
Program Manager
216.687.5477
k.date@csuohio.edu