Community Planning For Agriculture And Natural Resources

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www.purdue.edu/fnr/extension/scep
Outline

- Introduction – Sustainable Communities Extension and Community Planning
- Definitions and Framework
- Project Overview – Community Planning for Agriculture and Natural Resources: A Guide for Local Government
- Community Applications
- Summary and Ideas
Sustainable Communities Extension

Program efforts support community planning and sustainable development strategies in communities across Indiana and Great Lakes states.

Illinois – Indiana Sea Grant
• Resilient Communities and Economies

Purdue Extension
• Fostering Responsible Land Use and Conservation of Resources
• Creating Quality Communities

• Annually work with an average of 30 community programs and 900 participants
Extension Community Planning Programs
Asset Based Community Development

Framework for communities to organize and strategically plan, implement strategies, and measure progress, emphasizing:

- Community organizing and engagement
  - Public participation
  - Community visioning
  - Leadership from community development professionals and public decision makers

- Planning
  - Long term planning with attention to:
    - Place and scale (city, town, watershed, region)
    - Local assets
  - Data collection and analysis, asset mapping, community surveys

- Implementation and Evaluation
Community Engagement

Stakeholders / Partners

**Political**
- Local government staff
- Local elected officials
- Government (state, fed) agency staff

**Environmental**
- Non-governmental organization

**Social**
- Residents
- Institutions (hospitals, higher ed, K-12 schools, faith based)

**Technological**
- Institutions (higher ed, K-12 schools)
- Private industry

**Legal**
- City attorney
- Law enforcement

**Economic**
- Community foundations
- Private industry
Community Action Planning

1. Community Visioning
2. Goals Identification
3. Issue Analysis
4. Identifying Objectives and Strategies
5. Action Planning Tools
6. Monitoring and Evaluation Tools
7. Communications Strategy
8. Final Action Plan
Community Planning for Agriculture and Natural Resources: A Guide for Local Government
Project Scope

• Collaboration between Purdue Extension and Indiana Land Resources Council

• Integrate materials into Purdue Extension and ISDA programming efforts

• Create a series of guidance documents and education and training resources to support counties and local government with comprehensive plan updates and strategic planning for economic development
Project Scope

• Nothing within project should be construed as legal advice

• Information intended to be educational and informational in nature for informed decision-making on current and emerging land use issues

• State government provides the authority to city and county government units to pursue self-determined goals through comprehensive planning
  – Each body can develop plans that achieve community goals
Target Audiences

• Elected officials
• Government staff
• Parks board members
• Plan commission members
• Nonprofit organizations
• Watershed managers
• Working group members (volunteers, local residents) interested in the planning process
Purdue Land Use Team

• Purpose
  – Develop and deliver training and education resources to assist Plan Commissions with land use planning decisions
  – Support County Extension Educators serving on Plan Commissions
  – Formed as collaboration between PU Extension Community Development and Ag and Natural Resources Program Areas

• Indiana Code 36-7-4-208
  – Advisory (County) agricultural educator is one of nine members
  – Area agricultural educator is optional as one of the six county members.
  – Metropolitan no requirement for ANR educator

cdext.purdue.edu/collaborative-projects/land-use
IN Land Resources Council

- Created in state law (I.C. 15-12-5) to assist local and state decision-makers with land use tools and policies

- Managed by Indiana State Department of Agriculture

- Composed of representatives from county and municipal governments, home building and land development, business, environmental interests, soil and water conservation districts, forestry, land use, and agriculture

- Mission to evaluate all types of land use, not just agricultural land use
IN Land Resources Council Members

• Steve Eberly, Warren County LEDO and Eberly Family Farms
• Jeff Healy, Banning Engineering and Hendricks County SWCD
• David Kovich, Komark LTD
• Jeff Page, Tri-State Timber, LLC and Indiana Hardwood Lumbermen's Association
• Mayor Michael Pavey, City of Rushville
• Kara Salazar, Purdue University Extension & IL-IN Sea Grant
• Tom Slater, Timberland Lumber Company and Association of Home Builders
• Beth Tharp, Legan Livestock and Grain
• Matt Williams, The Nature Conservancy

Managers

• Jeffrey Cummins, General Counsel and Director of Public Affairs, ISDA
• Katie Nelson, Program Manager, ISDA
Guidance Document Project Team

- Jeffrey Cummins, ISDA
- Paul Ebner, Purdue University Extension
- Jodee Ellett, Purdue University Extension (former)
- Lenny Farlee, Purdue University Extension
- Jeffry W. Healy, Banning Engineering, PC
- Liz Jackson, Purdue University Extension
- Chad Martin, Purdue University Extension (former)
- Kaitlyn McClain, Indiana Department of Natural Resources (former)
- Katie Nelson, ISDA
- Tamara Ogle, Purdue University Extension
- Rhonda Phillips, Purdue University
- Lindsey Purcell, Purdue University Extension
- Kwamena K. Quagrainie, Purdue University Extension / IL-IN Sea Grant
- Kara Salazar, Purdue University Extension / IL-IN Sea Grant
- Emily Toner, Purdue University Extension
- Daniel Walker, Purdue University Extension / IL-IN Sea Grant
- Michael Wilcox, Purdue University Extension
- Molly Woloszyn, NOAA / IL-IN Sea Grant
Advisors and Reviewers

- David Bausman, Indiana Department of Natural Resources
- Amy Cornell, Bose Public Affairs
- Chris Gonso, Indiana State Department of Agriculture
- Ryan Heater, Indiana Lieutenant Governor’s Office
- Steve Howell, Indiana Corn and Soybean
- Kenneth Hughes, American Planning Association – Indiana Chapter
- Deb Luzier, American Planning Association – Indiana Chapter
- Mark McCormack, American Planning Association – Indiana Chapter and the Dearborn County Plan Commission
- Connie Neinenger, Indiana State Department of Agriculture
- Justin Schneider, Indiana Farm Bureau
- Greg Slipher, Indiana Farm Bureau
- Josh Trenary, Indiana Pork
- Julia Wickard, Indiana Department of Environmental Management
Guidance Document Series Overview

Introduction and overview

Economic development policy tools for local government land use planning

Built environment and natural resources

Food and agriculture

Agritourism

Forestry and natural resources

Water resources management
Guidance Document Chapter Outline

- Overview of the topic
- Economic development considerations
- Community examples
- Resources to make connections for local efforts
Economic development policy tools for local government land use planning

- Economic development - sustained actions of decision makers that foster community and economic vitality
  - Consider community capitals, actions of individuals, and policies determined by institutions
  - Place-based assets in a land use context
- Economic growth - increase a community’s level of economic activity
  - focused on metrics you can count

Primary Goals of the Community:
- Financial
- Built
- Natural
- Cultural
- Human
- Political
- Social

cdext.purdue.edu
Economic development policy tools for local government land use planning

Goal 1: Support the Landscape

Create an economic climate that enhances the viability of working lands and conserves natural lands.

<table>
<thead>
<tr>
<th>STRATEGY</th>
<th>TOOLS AND POLICIES</th>
</tr>
</thead>
</table>
| 1.a. Ensure the viability of the resource economy in the region | • Market Value-In-Use taxation (*State-level policy in Indiana*)  
• Tax credits for conservation (*State level policy in Indiana*)  
• Policies supporting resource-related industries. | • Renewable energy development  
• Value-added farm and forest products processing  
• Ecosystem services markets |
| 1.b. Cultivate economic development strategies that rely on traditional rural landscapes | • Conservation easements  
• Policies supporting resource-related industries | • Fee simple acquisition (*May not be available in Indiana*)  
• Agritourism and ecotourism |
Built Environment and Natural Resources

Photo: US EPA Smart Growth
Natural resources and community health: Planning for the built environment

• Focus on natural resource assets and active living opportunities to leverage economic development
• Outlines goals and objectives for comprehensive plan
• Principles of active living for site improvement:
  – Accessibility: Identify all forms
  – Connectivity: Identify linkages between other assets and gaps
  – Shared use: Prioritize assets that have more than one use

cdext.purdue.edu/signature-programs/quality-places
Renewable energy for sustainable communities

- Distributed energy generation (personal property)
  - small-grid connected systems (wind, solar, methane turbines)
  - one megawatt (MW) or less
- Community projects (cooperatives)
  - overcome barriers, lock in price certainty, provide resiliency to power grids susceptible to electricity loss due to long-distance transmission

ag.purdue.edu/extension/renewable-energy/Pages/default.aspx
Renewable energy for sustainable communities

• Utilities
  – generates more than 1 megawatt (MW) and more than annual average electricity consumption = Power Purchase Agreement (PPA) to enter into a contractual supply to a utility company
  – large-scale projects require approval by local government ordinances and zoning
  – communities recommended to be proactive in having a renewable energy ordinance in place prior to project proposals
  – considerations for wind, solar, and biodigester ordinances outlined in document

ag.purdue.edu/extension/renewable-energy/Pages/default.aspx
Food and Agriculture
Local food systems

• Food systems - elements that combine to provide people with food

• Multiple scales - commercial agricultural enterprises and small farms producing for local markets
  – community supported agriculture (CSA) models, farmers markets, etc

• Tools to encourage additional development of local food efforts - policies, ordinances, zoning and planning processes
  – ISDA site considerations for food processing
  – Indiana Office of Community and Rural Affairs Site Certified program - sites that are well positioned for economic development

purdue.edu/dffs
Urban agriculture

• Scale
  – one-acre for-profit market farm
  – church converting property into a community garden
  – neighbor raising chickens for egg production in backyard

• Motivations
  – build community
  – educate youth
  – address food insecurity

• Provide support to overcome challenges

Photo: Purdue Extension Urban Agriculture Program

purdue.edu/dffs/urbanag
Urban agriculture

Example policy and ordinance language for:

Growing crops

- Use standards that maximize possibilities for urban farmers while minimizing conflict with adjacent land uses
- Mechanisms to sustain land access
- Assisting with access to a water source

Raising livestock

- Well-supported, one-size-fits-all zoning or use standards for urban livestock production are not available
- Consider space, noise, odor, and public health
- Resources available for chickens, llamas, goats

purdue.edu/dffs/urbanag
Livestock production and planning

• Addresses confined feeding operations (CFOs)
  – benefits and challenges associated with integrating livestock production into community planning

• Indiana ranks fifth in swine production, fourteenth in milk production, third in number of egg production and first in duck production (USDA-NASS 2017)

ag.purdue.edu/cfo
Livestock production and planning

• CFOs are regulated by numerous offices and agencies at the state level

• At the time of project development, 64 of Indiana’s 92 counties operate under zoning ordinances containing standards for CFOs

• Purdue University Extension completed a comprehensive analysis of all Indiana county zoning ordinances to compare how CFOs are regulated across counties

ag.purdue.edu/cfo
Aquaculture

- Aquaculture (fish farming)
- Aquaponics (integrated fish and hydroponics farming)
- Resources - vacant farm buildings, open ponds
- Economic impact and consumer preference for local foods

Economics & Marketing Resources

- Permitting and regulations overview for communities
  - DNR, IDEM, ACOE, BOAH, FDA
- Example fish species

ag.purdue.edu/agecon/Pages/Aquabusiness.aspx
Land use tools for preserving farmland

- Farmland preservation as a part of comprehensive plan
  - policies to encourage growth while maintaining prime farmland resources
- Inventory farmland resources
- Zoning districts
  - agricultural, residential, commercial and industrial zones
- Scoring system
  - projects awarded points based on meeting criteria spelled out in zoning ordinance
- Minimum lot sizes
  - target where to build rural residences
  - understand appropriate density for septic systems

cdext.purdue.edu/collaborative-projects/land-use
Agritourism

• Agritourism provides educational experiences to connect visitors with community heritage

• Planning requires attention to possible impacts and competing interests

• Integrate into comprehensive plans
  – Define term and develop standards
  – Zoning - regulating land use, intensity of use, and development standards (i.e. parking, screening, signage)

in.gov/isda/3434.htm
Forestry and Natural Resources

Photo: US EPA Smart Growth
Identify constraints as well as environmental and physical limitations

Recognize social and environmental needs

Create safe spaces for people and enhance the canopy

Sustainable landscapes
Urban forestry and local government guidance

The basic requirements for a healthy, sustainable urban forest are an inventory, management plan, and an ordinance. These are critical attributes to the overall urban forestry management plan. It’s as simple as measuring existing trees, creating a plan to manage those trees, and an ordinance to protect those assets.

purdue.edu/fnr/extension/area-of-interest/urban-forestry
Urban Forestry Planning Tools

- **Management tools**
  - Urban Forestry Management Plan
  - Canopy Coverage Policy

- **Conservation tools**
  - Low-impact strategies
  - Land use decisions

- **Regulatory tools**
  - Tree ordinance
  - Specifications
  - Species lists
Invasive species management

• Invasive species examples and introduction pathways

• Environmental and economic impacts
  • Control costs
  • Agriculture and forestry production
  • Displace native plants
  • Human health

• Overview of federal laws and state rules and statutes

• Example local regulations, ordinances, and policies
  • Weed control boards
  • Zoning ordinances

Community considerations:
• Planting guidelines for public property
• Cooperative Invasive Species Management Areas (CISMAs)

Photo: mc-iris.org

Callery pear

purdue.edu/fnr/extension

ag.purdue.edu/reportinvasive

entm.purdue.edu/iisc
Forest management

- Forestland ~ 1/5 of landscape (~ 4.9 million acres)
- Overview of forest management, forest products industry, state statutes

Community planning considerations:

- Economic impacts through forest products and outdoor recreation industries
- 84% private forestland - considerations for private property rights and opportunities for landowners
- 16% public forestland - opportunities for collaboration with agencies

heeforeststudy.org
purdue.edu/fnr/extension/area-of-interest/forests-woodlands-trees
Water Resources Management

Photo: US EPA Smart Growth
Localized flooding & Flood vulnerability assessment tool

- Localized flooding - smaller scale flooding that can occur anywhere in a community
- Emphasis on green infrastructure best management practices
- Structured as a toolkit that contains
  - resource library
  - links to interactive maps via IndianaMAP
  - overview of policy tools

extension.purdue.edu/rainscaping
in.gov/dnr/lakemich/9609.htm
Localized flooding & Flood vulnerability assessment tool

Tool Overview: Flood Vulnerability Assessment for Critical Facilities

• Online tool to help critical facilities evaluate their preparedness for next storm
• Determine a facility’s risk and whether improvements are necessary based on series of modules and questions
• Receive a report with specific recommendations and resources

mrcc.isws.illinois.edu/FVA
Indiana embankment dam hazards

• Dam owners are responsible for the operation, maintenance and safety of their dams (IN code)

• Dams that fall under the jurisdiction of the IDNR, Division of Water meet the following criteria:
  – greater than or equal to 20’ high
  – greater than or equal to 1 square mile drainage area
  – store greater than or equal to 100 acre-feet of water
  – deemed a high-hazard structure

• Many IN municipalities have a multi-hazard mitigation plan in place

• Consider ordinance requirements for dams and levees

http://damsafety.org
http://in.gov/dnr/water/2458.htm
Applications: Extension Community Planning Program Examples
American Citizen Planner – Indiana
Coming Soon!

• Online course in two modules: 101 and 201
  – Covers concepts and regulations that form the framework of planning in Indiana
  – Can earn Master Citizen Planner Certificate

Purdue Land Use Team: www.cdext.purdue.edu/collaborative-projects/land-use
Community Planning

Program tracks:
• Parks and public spaces
• Land use planning – environmental planning at watershed scale
• Invasive species management

Action plan project examples:
• County Cooperative Invasive Species Management Area action plans
• County or municipal comprehensive plan updates
• Fundraising initiatives as part of larger efforts
• Parks and recreation master plans
• Watershed management plans
Team Development

Local leadership team of ~3-5 could include:

- County Soil and Water Conservation District staff
- County Extension Office staff
- Government agency/office staff

Collaborative working group examples:

- Municipal elected officials and staff
- Board and commission members
- Watershed group affiliates
- State government agency staff
- Community groups and Non profit organizations
- Institutions (hospitals, K-12 schools, higher education)
- Residents interested in the planning process
Enable *diverse stakeholder participation* in land use decisions and natural resources management strategies to plan and maintain projects.

| Community Visioning | Education and Working Group Sessions | Goals, Objectives, Strategies Development |

Format follows community development and facilitation best practices for strategic planning and community engagement.

Meeting sessions include the assembly of a steering committee, community visioning workshops, and working group meetings.
Example Community Efforts

Indiana
- Connersville
- Gaston
- Kokomo
- Michigan City
- Owen Co
- Pendleton
- Perry Co
- Terre Haute

Illinois
- Peoria

Michigan
- Au Gres (Saginaw Bay Watershed)

Ohio
- Perrysburg (Maumee River Watershed)
Session 1: Scoping Session

- Planning meeting with local team
- Discuss needs, issues, and local input
- Form agenda and set meeting dates

Building the Team

Use the chart below to compile a list of people who represent each PESTLE category in your community. These invitees will be involved in crafting goals and strategies for your plan, and are the leaders, decision makers, and experts that will drive success.

<table>
<thead>
<tr>
<th>Political</th>
<th>Economic</th>
<th>Social</th>
<th>Technological</th>
<th>Legal</th>
<th>Environmental</th>
</tr>
</thead>
<tbody>
<tr>
<td>All 3 County Commissioners</td>
<td>Marilyn Jackson, Sweet Owen VB</td>
<td>Friends of MCSP</td>
<td>Robin, County GIS Coordinator</td>
<td>Richard Lorenz, County Attorney</td>
<td>Purdue Extension-Owen County</td>
</tr>
<tr>
<td>All 7 County Council</td>
<td>Gwen Tucker, Chamber of Commerce</td>
<td>Spencer Garden Club</td>
<td>County Highway Dept</td>
<td></td>
<td>NRCS regional staff</td>
</tr>
<tr>
<td>All 3 Town Council</td>
<td>Mark Rogers, Community Foundation</td>
<td>Harriman’s Greenhouse</td>
<td>Larry Parrish, Town Street Dept</td>
<td></td>
<td>ISDA regional staff</td>
</tr>
<tr>
<td>DNR Conservation Officers</td>
<td></td>
<td>TriState Lumber</td>
<td></td>
<td>319 watershed coordinators (Greene and Clay Co)</td>
<td></td>
</tr>
<tr>
<td>Sheriff’s Department</td>
<td></td>
<td>Davisson Hardwood Specialist</td>
<td></td>
<td>DNR Forestry and Nature Preserves Key staff</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Indiana Hardwood Specialists</td>
<td></td>
<td>McCormick’s Creek State Park Key staff</td>
<td></td>
</tr>
</tbody>
</table>
Session 2: Education and Visioning Session

- Present data snapshots and current conditions
- Conduct visioning and feedback activities for community assets and opportunities
Session 3: Taking Action on Natural Resources Issues in Your Community

- Develop objectives and strategies by goals
- Provide supporting information and resources such as sample plans, policies, and recommended strategies
Session 4: Action Planning and Project Implementation

• Roles and responsibilities
• Communication methods
• Funding sources
• Metrics for success
• Ripple Mapping exercise
Ripple Mapping

How did the community change?
What changes are you seeing in the community’s systems, institutions, and organizations? Are everyday ways of thinking and doing changing because of this work? How?

Who benefitted and how?
Document specific information, including numbers where possible. Make notes for follow-up discussions of additional information.

What did you do?
What specific actions or activities were started because of the planning initiative?
### Action Plans

#### Technical Maps and Data Session

*Current Land Use*

The following map displays the land use and land cover during 2010 using the National Land Cover Dataset (NLCD) published in 2011. The land use data is comprised of mainly rural and forested cover types. The forest types make up 60 percent of the land use in this area. As of 2010, just 7.3 percent of the watershed was classified as urban, and 22 percent is comprised of agricultural land uses.

### Goal 1: Reduce and/or Mitigate Impervious Surfaces

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Action Item</th>
<th>Schedule</th>
<th>Responsible Party</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Comprehensive Plan</strong></td>
<td>Collaborate on municipal planning efforts (stormwater assessment)</td>
<td>✓</td>
<td>City of Au Gres, Huron Pines</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Expand or highlight best practices and education efforts</td>
<td></td>
<td>City of Au Gres, Huron Pines, Others</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rain garden project on Au Gres-Sims campus</td>
<td>✓</td>
<td>Au Gres-Sims Schools, NGOs</td>
<td></td>
</tr>
</tbody>
</table>
| | Watershed inventory | ✓ | Huron Pines, Au Gres-Sims, SWCDs, Others | - 319 may not be best fit for two HUC 10 watersheds (not high priority for funding)
| | - Road-stream crossing index
| | - Desktop inventory of agriculture (sent mailing in 2014)
| | - Build relationships with Ag community (create outreach strategy) | ✓ | |
| **Watershed Plan** | Clean Marina practices | ✓ | MI Sea Grant, City of Au Gres, Michigan DNR | |
| | Identify key areas for protection (forested, wetlands, open space, erosion areas, recreation, etc.) | ✓ | |
| | Funding next steps:
| | - 319 implementation plans (is plan development best approach due to time & resources?)
| | - Better to work on actionable projects in logical order?
| | Other funding: GLRI, GLPF, Saginaw WIN, Great Lakes Commission, CZM program | ✓ |
Takeaways for Community Planning

• Importance of onboarding and scoping meetings
  • Understand local political landscape, structure, community projects, team expectations, roles and responsibilities

• Process should support collaboration and minimize conflict
  • Framework provides opportunity for diverse engagement
  • Follow best practices for facilitation and community meetings

• Delineate roles of team
  • Education, facilitation, coaching through planning process, team engagement and work in between sessions

• Provide support for implementation follow up through additional training or meeting facilitation
Save the Date

Indiana Land Use Summit
Wed, August 28, 2019
Hendricks Co
Conference Center

Purdue Land Use Team:
cdext.purdue.edu/collaborative-projects/land-use
Ideas - Community Planning For Agriculture And Natural Resources

- What applications, policies, or approaches do you see in your communities?
- What is working well in your communities?
- What types of resources or assistance would you like to have?
Thank you!

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