Sustainable Development
Ordinances: Issues and
Opportunities

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Issue Statement

• We’ve made a lot of progress on ordinances:
  – Notable improvements in Kane countywide stormwater ordinance and some local ordinances
  – Illinois EPA requires BMPs through NPDES Phase II for construction sites and via municipal ordinances
    • New emphasis on runoff infiltration and green infrastructure
  – Corps of Engineers wetland permitting addresses BMP “treatment train approach”
  – Holistic BMPs designs are becoming the norm in a few communities

• But...
Issue Statement

- Relatively few new developments incorporate comprehensive BMP designs
- Or meet the ambitious goals of:
  - Preserving natural hydrology
    - E.g., fen habitats
  - Protecting water quality
  - Preserving natural resources
  - Enhancing community assets and livability
Why?

• Most local zoning, subdivision and landscaping codes don’t echo the innovative requirements of comprehensive stormwater ordinances
  – Prescriptive development codes may not allow or encourage non-traditional designs such as permeable paving or parking lot bio-swales
Why?

- Developers are given mixed signals: innovative designs require variances or risky planned development approaches
  - Developers are risk averse and most will take the path of least resistance
Why?

• Provisions for performance criteria and long-term stewardship often are inadequate
  – Even a few failed or unattractive designs can cause a backlash against innovative BMPs
Why?

- Environment and “livability” aren’t integrated
- Low Impact Development (LID) proponents and New Urbanism/Smart Growth proponents haven’t reached common ground
Elements of a Comprehensive Ordinance Approach

- Comprehensive Stormwater Standards
  - Stormwater drainage and detention
  - Soil erosion and sediment control
  - Floodplain management
  - Stream and wetland protection

- Impervious Area Reduction: Street and Parking Requirements

- Natural Area Protection and Management

- Landscaping Standards

- Conservation Design: Zoning/Subdivision Codes
Ordinance References

- NIPC Facility Planning Area Nonpoint Source Management ordinance checklist
- Progressive provisions of local municipal ordinances, countywide stormwater ordinances, and other conservation design ordinances
- NIPC/CMAP Ecological Planning and Design Directory
- Blackberry Creek Watershed: Zoning Code analysis and Ordinance Language Recommendation report (Kane County, 2004)
- U.S. EPA Water Quality Scorecard
- Center for Watershed Protection, Better Site Design (Code and Ordinance Worksheet and related publications)
Recommendations for Kane County and Fox River Watershed Communities
Comprehensive Stormwater Standards

- Adopt provisions that go beyond a core emphasis on stormwater rate and quantity to also emphasize holistic protection of water quality, natural hydrology, and aquatic habitat.
- Coordinate with other counties re. evolving standards for runoff volume reduction and water quality BMPs.
Encourage a Holistic BMP Approach

- Impervious area reduction
- Green roofs
- Permeable paving
- Natural landscaping
- Bio-infiltration
  - Rain gardens
  - Bioswales
- Filter strips/level spreaders
- Naturalized detention
Impervious Area Reduction

- Encourage narrower street widths
- Revise parking standards to allow for shared parking, parking credit programs, preferred parking for compact cars and non-motorized vehicles, smaller stall size.
- Allow/encourage permeable paving for parking, driveways, and (possibly) streets
Warrenville Road
Aurora Police Headquarters – Permeable Paving
Aurora Police HQ - Parking Deck

- 545 Parking Spaces in a 2.4 acre Parking Deck -- 35% reduction in impervious surface area
Natural Area and Open Space Standards

• Develop/map a green infrastructure network that identifies natural resources to be protected, along with appropriate buffers.

• Protect natural resources through:
  – strict development prohibitions or
  – through flexible zoning that allows for clustering around sensitive natural areas.
Natural Area and Open Space Standards (contd.)

• Preparation of management plans should be required for designated natural areas and buffers, addressing:
  – performance criteria
  – qualified ownership and management entities
  – secure revenue sources for management
Green Infrastructure Planning -- Local Examples: Kane County, Campton Hills, Hickory Creek

Exhibit 10
Green Infrastructure Map
Village of Campton Hills & Campton Township

Legend
- Green Infrastructure Study Area
- Village Boundary (Oct 2009)
- Campton Twp
- Regulated Green Infrastructure Boundary
- Green Infrastructure Evaluation Zone
- Hydric Soils

Updated March 20, 2010

Data Sources: Kane County, Trotter & Associates, Inc.

Green Infrastructure Network for Hickory Creek Watershed
- Hickory Creek Watershed
- Stream
- Green Infrastructure Network
- Example Opportunity Areas
  - Conservation Development
  - Conservation Development/Restoration
  - Conservation Development/Easements
  - Conservation Easements
  - Stormwater Retrofits
  - Natural Area Restoration
Landscaping Ordinance Recommendations

• Encourage use of deep-rooted native vegetation
  – Applications include stormwater facilities, natural area buffers, and common areas
• Encourage/require that runoff be routed through landscaped areas
• Adopt provisions for long-term maintenance and performance criteria
“Green” Parking Lot Landscaping
“Green Streets” - Infiltration Planters and Rain Gardens
Conservation Design Ordinances

• Conservation design should be encouraged or required in zoning and/or subdivision codes.

• Consider existing ordinances as models:
  – Conservation development by right: Will County, Plainfield
  – Mandatory conservation development on sensitive sites: Algonquin, Crystal Lake, Woodstock, and McHenry County
Settlers Ridge - Sugar Grove

- Features traditional neighborhood design and conservation design
- 40% open space
- Natural landscaping throughout
Considerations for Updating Community Ordinances

• Identify existing *barriers* to innovative designs
• Provide *incentives*
• Emphasize *cost-effectiveness*
• *Borrow* from your neighbors -- don’t reinvent the wheel
• Be *role models* for developers
• Emphasize community *livability*
Eliminate Barriers to Developer Creativity

- Most codes – subdivision and zoning -- are relatively prescriptive, typically requiring conventional “grey infrastructure” designs
- Create flexibility for “green infrastructure” approaches
- Reduce the need for variances
- Provide options:
  - Allow
  - Encourage/incentivize
  - Require
Provide Incentives for Innovation

- Offer density bonuses for designs that provide community benefits
  - E.g., conservation designs w/community trails or open space
- Provide detention credits for stormwater practices that store/reduce runoff
Emphasize Cost-effectiveness of New Approaches

- Elected officials need this information
  - Green infrastructure – such as permeable paving
    - may have a longer lifespan than conventional designs
  - Natural landscaping is more economical to maintain than turf
  - Conservation developments require less infrastructure and may reduce future municipal maintenance burdens
National Association of Home Builders documented an estimated 34% savings in infrastructure costs for cluster development.
Be a Role Model for Developers

- Lead via example with municipal projects and public works investments
- Work with business owners and residents to identify retrofit opportunities
- Pursue grant funding for green infrastructure demonstration projects
  - Illinois Green Infrastructure Grants Program
  - IEPA Section 319 Grants
Consider Retrofit Opportunities:
Burnsville, MN Example

- In a neighborhood where rain gardens were retrofitted, stormwater volume was reduced by almost 90 percent.
Borrow from Your Neighbors -- Don’t Reinvent the Wheel

- Municipalities should model their ordinances on the most progressive elements of their neighbors’ ordinances
- Revise ordinances to support comprehensive plans
- Look to regional guidelines of CMAP and Chicago Wilderness
  - E.g., Conservation Design Resource Manual
Emphasize Community Livability

- Preservation of natural resources enhances property values and creates a “sense of place”
- Green infrastructure can enhance aesthetic appeal
- Can attract businesses and sustainable residential development
Additional Resources:

Chicago Metropolitan Agency for Planning (CMAP)
The Ecological Planning and Design Directory.
http://www.nipc.org/environment/sustainable/.

Chicago Wilderness
“Conservation Development in Practice,” 2004

Low Impact Development (LID) Center,
www.lowimpactdevelopment.org.

Leadership in Energy and Environmental Design (LEED)

Sustainable Sites Initiative
http://www.sustainablesites.org/
Questions?