

Code and Ordinance Reviews

Case Studies and Findings

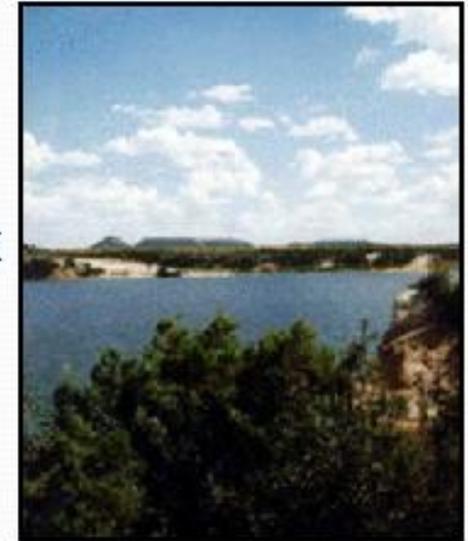


Minnesota

- **The Environmental Sustainability Clinic at the University of Minnesota Law School worked with the Washington Conservation District to review and analyze local ordinances**
- **The law students created an ordinance assessment tool, reviewed 20 local government ordinances in Washington and Chisago Counties, and developed model ordinance language**
- **One element of a Statewide “Minimal Impact Design Standards” project**

Communities Reviewed

- Afton
- Bayport
- Chisago City
- East Bethel
- Forest Lake
- Harris
- Hugo
- Lake Elmo
- Lakeland
- Lakeland Shores
- Lindstrom
- Marine on St. Croix
- North Branch
- Oak Park Heights
- Scandia
- Shafer
- Stacy
- Stillwater
- Taylors Falls
- Wyoming



Current Ordinances – Areas for Improvement

- Performance Goals
- Design Technology
- Erosion and Sedimentation
- Site Design Process
- Impervious Surface Reduction





Types of Ordinances Reviewed

- Zoning Ordinances
- Development Codes
- Erosion and Sediment Control Ordinances
- Stormwater Management Ordinances
- Parks and Open Space Planning

Developed a spreadsheet documenting the results of the review for each city



Primary Resources Used

- Center for Watershed Protection *Better Site Design Handbook's Model Development Principles*
- MPCA's *Model Subdivision Ordinance for Water Quality*
- MPCA's *Model Ordinances for Sustainable Development*
- MIDS Workgroup *memo on performance goals alternatives*
- Other states' model parking ordinances – Massachusetts
- Stormwater Manager's Resource Center's *Open Space Model Ordinance*



Performance Goals - Review

Review questions:

- What is the performance standard for water quality?
- What is the performance standard for rate and/or volume control?



Performance Goals - Review

Results:

- 5 did not specify a standard for quality, rate, or volume
- 4 referred to MPCAs “*Protecting Water Quality in Urban Areas*” as the standard
- 3 referred to no greater runoff than 2, 10, and 100 year storm event
- 3 required no greater than pre-development conditions
- Others required a stormwater management plan to be submitted for review



Design Technology - Review

Review questions:

- Does the ordinance refer to natural drainage or topography?
- Does the Zoning Ordinance allow/promote the location of bioretention, rain gardens, filter strips and swales in the right-of-way?
- Do the regulations address buffer strips?

Design Technology - Review

Results:

- 17 refer to natural drainage
 - Primarily as part of a required stormwater pollution prevention plan
- Only 6 specifically referred to bioretention, rain gardens, filter strips, or swales
- 15 ordinances include buffer requirements:
 - primarily for shoreland
 - a few for wetlands and open space one required
 - buffers on stormwater detention ponds

Site Design Process - Review

Review questions:

- Is there an open space plan?
- Is there a prioritized natural resource inventory?
- Is there a tree conservation plan in place?
- Is there a concept review for subdividing?
- Is conservation design/planned unit development available as an alternative to subdivision?

Site Design - Review

Results:

- 17 communities had an open space plan
- 6 had a natural resource inventory or required natural resource inventory as part of subdivision
- 14 had tree conservation provisions
- Half of the communities required concept review for subdividing?
- 16 allowed planned unit development as an alternative to subdivision; 2 cluster ordinances; 1 “Preservation and Land Conservation Development”

Impervious Surface - Review

Review questions:

SETBACKS –SHORELAND AND NON-SHORELAND

- What are yard/right-of-way setback distances?
- What are the community's impervious area limits?
- What are required dimensions on street width? Right-of-way width? Cul de Sac dimensions?
- Are curb-gutters required?
- Does the community have flexibility to reduce the number of parking spaces constructed?
- Does the community require stormwater treatment for parking lot runoff?
- Are shared parking facilities encouraged?
- Is there a maximum on parking spaces sizes?
- Are sidewalks only allowed to be on one side of the road?
- Are sidewalks eliminated if an alternative path is provided?



Impervious Surface - Review

Results:

- All cities regulate roads, sidewalks, driveways and parking lots
- Few met the best practices from The Center for Watershed Protection's *Better Site Design Handbook*
- Improvements can be made across the board in all communities

Sustainable Development Codes: Reviews of Community Codes and Ordinances in Illinois

Dennis Dreher

Geosyntec
consultants

engineers | scientists | innovators

Illinois Code Reviews

- Recent watershed plans for Hickory Creek and the Lower DuPage River emphasized development policies and ordinances
- Ordinances from 16 communities in the watersheds were evaluated to determine the extent to which the codes and ordinances would allow or encourage the sustainable development approaches

Ordinance Review Topics

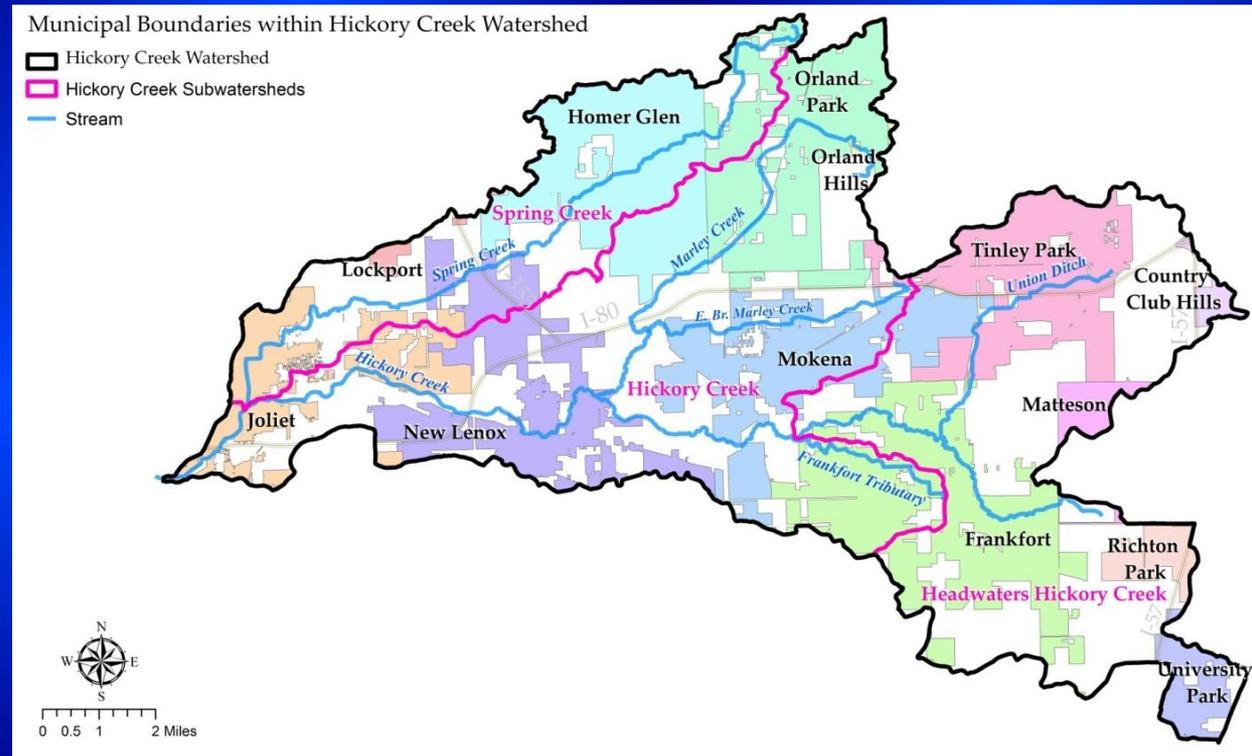
- **Comprehensive Stormwater Standards**
 - Stormwater drainage and detention
 - Soil erosion and sediment control
 - Floodplain management
 - Stream and wetland protection
- **Natural Area Protection and Management**
- **Landscaping Standards**
- **Impervious Area Reduction: Street and Parking Requirements**
- **Conservation Design: Zoning/Subdivision Codes**

Ordinance Checklist References

- *NIPC Facility Planning Area Nonpoint Source Management ordinance checklist*
- *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)*
- *Progressive provisions of local municipal ordinances, countywide stormwater ordinances, and other conservation design ordinances*
- *NIPC/CMAP Ecological Planning and Design Directory*

What Communities Were Reviewed?

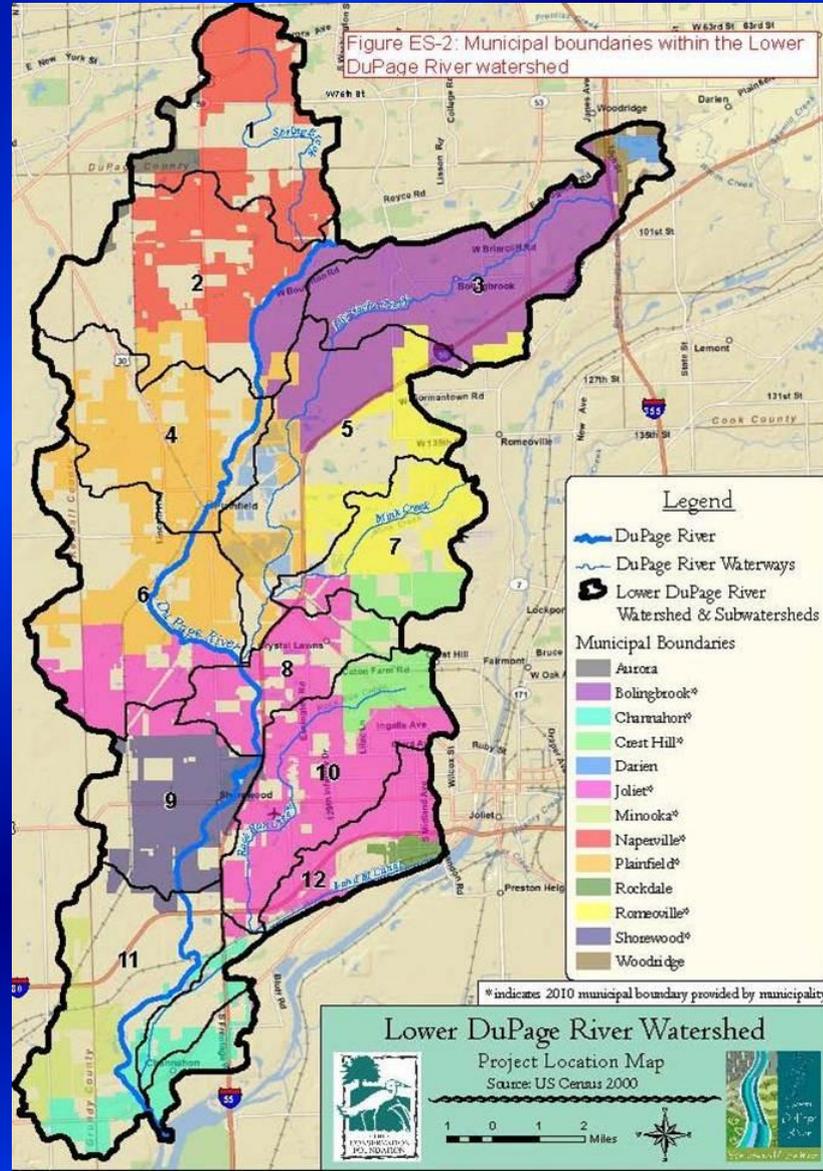
- Frankfort
- Homer Glen
- Joliet
- Mokena
- New Lenox
- Orland Park
- Tinley Park
- Will County



Communities Reviewed

Lower DuPage River Watershed

- Bolingbrook
- Channahon
- Crest Hill
- Joliet
- Minooka
- Naperville
- Plainfield
- Romeoville
- Shorewood
- Will County



Results: Stormwater Drainage and Detention

(11 checklist items)

- Most municipal ordinances require control of the 2- storm and discourage in-stream detention
- Few ordinances mandate naturalized, BMP-based detention designs
- Some ordinances encourage natural drainage practices (e.g., bio-swales), but none require
- Will County ordinance is primarily focused on flooding concerns, not water quality, hydrology, and aquatic habitat

Recommendation: Naturalized Detention Basins

- More effective at removing stormwater pollutants
- Can enhance site aesthetics and habitat
- Discourages nuisance goose populations



Results: Soil Erosion and Sediment Control

(8 checklist items)

- Several ordinances have comprehensive SESC principles and explicit requirements for soil stabilization, sediment control, and conveyance channels



Compost-based BMPs

- Compost Blankets
- Filter Berms
- Compost Filter Socks

Results: Natural Area and Open Space Standards

(9 checklist items)

- Most communities do not require any special protection of natural areas, such as prairies, woodlands, or steep slopes
- Several communities have requirements for protection and management of natural areas in “conservation developments”

Results: Landscaping Standards

(12 checklist items)

- Most communities do not encourage or require native landscaping (except for naturalized detention)
- Most communities require landscaped areas in parking lots, but none encourage/require bio-swales or natural landscaping
- Several communities have tree protection ordinances with tree replacement provisions

Results: Impervious Area Reduction (14 checklist items)

- Most communities don't have provisions for narrow streets (exception: Will County's 24' standard for local streets)
- Parking standards – stall size and number of spaces -- vary significantly among communities
- Permeable paving is NOT explicitly recognized as an option in most communities
- Several communities allow for shared parking to reduce new parking requirements
- A few have flexible parking provisions to encourage downtown re-development
- Detention credit not always provided for stone layers beneath permeable pavement

Results: Conservation Design Standards

(5 checklist items)

- Most communities allow for flexible subdivision designs via “planned development” provisions
- Very few communities have specific provisions for conservation development
 - Will County has specific requirements for percentage of open space, ranging from 30-60 percent, in its conservation subdivisions
- Recommendation: Consider Will County, Plainfield, and Homer Glen ordinances as models

Evaluation Results and Recommendations Can be Found at:

- Hickory Creek Watershed Plan
 - Chapter 3 and Appendix C
 - <http://www.hickorycreekwatershed.org/learn/plan/>
- Lower DuPage River Watershed Plan
 - <http://www.dupagerivers.org/WatershedPlan.htm>