The Farmington River Enhancement Grants: A tale of two towns and the path to Low Impact Development

2011 LID Symposium
Philadelphia, PA
Farmington River Enhancement Grants

- CT DEP provided grants to towns in the Farmington River Watershed to evaluate the ability to incorporate Low Impact Development into their land use regulations.
- Grant monies came from fines for violations of clean water act.
The Grant Process

- Communities issued RFQ for a planner and technical expert to evaluate their land use regulations,
- Statements of Qualifications were submitted, followed by short personal interviews with short listed firms
The Grant Process

- Team of Trinkaus Engineering and Planimetrics were chosen by the Towns of Harwinton and Plainville to perform this work under the grants
The Town of Harwinton

- Land Area = 31.1 square miles
- Population = 5,300
- Mostly low density residential (2 acre)
- Some small, low intensity commercial uses along Route 118 (east/west road through center of town)
Harwinton Natural Resources

- Large forested areas
- Significant wetland/watercourse corridors which are headwaters to the Farmington and Naugatuck Rivers
- Harwinton Lake
- Moderate to steep slopes with variable soil conditions
Majority of town consists of Hydrologic Soil Groups A & B - B & C soils groups are mostly associated with steep slopes and drumlins.

Map prepared by Planimetrics
5/23/2011
Land Use Concerns

- Maintaining good water quality for surface water & groundwater in town
- Maintaining water quality in Harwinton Lake
- Reduce reliance of stormwater detention basins
- General protection of natural resources
The Town of Plainville

- Land Area = 9.6 square miles
- Population = 17,800
- Almost fully built out residential development on 0.5 acre to 0.12 acre lots
- Large commercial/industrial land uses with significant extents of impervious coverage
- Majority of soils in developed area consist of Urban lands underlain by Class A soils (Green areas)
- Red areas are basalt ridges or wetland corridors
Land Use Concerns

- Flooding issues associated with Conventional drainage systems
- Water quality issues associated with new & redevelopment projects, particularly commercial/industrial sites
- Increases of impervious areas on small residential lots
The Steps to LID

- Audit of existing land use regulations (zoning, subdivision, inland wetlands):
- Audit of existing land use ordinances (road & drainage standards)
  - Identify inconsistencies in regulations
  - Identify impediments to LID
  - Identify barriers to LID
Inconsistencies in Regulations and Ordinances (H)

- Subdivision regulations vs. Road Ordinance
  - Horizontal & vertical geometry was different
  - Drainage standards were defined in regulations, but open ended in Ordinance
Common Issues in Zoning Regulations

- Standards for lots were extremely prescriptive & inflexible
  - Rear lots twice as large as front lots
  - No common driveways permitted
  - No Impervious coverage limitations on residential lots (Plainville), 15% IC (Harwinton) with no definition on what was included
  - Parking standards required excessive number of spaces
Common Issues in Zoning Regulations

- Standards for lots were extremely prescriptive & inflexible
  - Language about alternative surfaces for parking areas, but no requirement to use them
  - Large frontage buffer zones for commercial uses, but prohibited stormwater systems in these areas
Common Issues in Zoning Regulations

- Inconsistent language in regulations for:
  - Erosion control
  - Stormwater Management
  - Preservation of certain natural features
Common Issues in Subdivision Regulations

- Excessive pavement widths for residential roads (26’)

- No provisions for curbless roads on flat grades

- Large paved cul-de-sacs (80’ paved circle)
Common Issues in Subdivision Regulations

- Vague drainage standards

- Minimal design specifications, may require peak rate control for large storm events only

- Only structural drainage permitted

- All runoff “must be” discharged to receiving waterway or wetland, yet pollution in runoff was to be “addressed”
Common Issues in Subdivision Regulations

- Regulations required mapping of wetlands, steep slopes, but no consideration of these resources in the design of a subdivision

- Flexible development patterns, such as Open Space developments not permitted
Common Issues in Inland Wetland Regulations

- No barriers to LID in the regulations, but the barrier to use of LID concepts resided with the commission.

- CT permits wetland agencies to establish “upland review areas” outside delineated wetland boundaries. Agency makes this review area a ‘defacto setback’ and prevents work in this area.
The Regulatory Approach to LID

- Provide copy of regulations with identified problem areas highlighted for commission review
- Correct conflicts between regulations & Ordinances
- Provide suggested language to address problem areas
Language and Standards Changes

- Create stand alone LID & Stormwater Design Manual
- Remove all stormwater language & requirements to stormwater in the regulations and replace with simple reference to Design Manual
- Add language permitting flexible development concepts and/or density factor
- Apply Environmental Site Design Strategies to residential subdivisions
Language and Standards Changes

- Suggest reductions in road width for residential applications
- Increase flexibility for horizontal & vertical geometry of roads
- Reduction of required parking spaces for commercial/industrial uses
- Permit the use of alternative, permeable surfaces for parking areas
LID & Stormwater Design Manual

- Overview of stormwater & development issues
- Discussion of Low Impact Development
- LID Hydrologic Performance Standards
- Design Specifications for LID systems
- References/Definitions
What did Plainville do?

- **Initial Reaction:**
  - Overall was very much in favor of this approach
  - Town Engineer initially expressed concerns about being able to enforce provisions in LID manual
  - After reviewing LID manual in detail, town engineer realized the approach made sense, was clear and concise, got on board
  - Planning & Zoning was concerned about applying LID to building additions on existing residential lots (burden on existing residents, increased costs$$)
What did Plainville do?

- Solutions to initial concerns:
  - Meeting with local engineers & developers to discuss LID and their concerns. This meeting was instrumental in getting a degree of buy in from the developers.
  - Planning & Zoning opted to include LID requirements for building additions, but delayed implementation for present time.
  - Required commercial/industrial redevelopment projects to fully comply with volumetric and water quality issues.
What did Plainville do?

- **Road to Adoption:**
  - Referral made to regional planning agency, planning agency fully endorsed approach of Plainville
  - Scheduled public hearing was held on one evening, with commission adopting LID regulations and Design Manual at the same meeting.
  - Became second town in CT to fully mandate LID for all development projects
What did Harwinton do?

- **Initial Reaction:**
  - LID committee and Board of Selectman endorsed Design Manual concept and suggested to each land use agency to adopt individual regulatory changes

- **The Bumps in the Road:**
  - DPW was not in favor of narrower roads, or depressed islands in cul-de-sacs
Bumps in the Road (cont)

- DPW was concerned with snow plowing. How do you plow a road without curbs?

- Planning did not like flexible development concepts as they feared they would increase residential densities, even though it was shown that this was not the case.

- This regulatory aspect was removed from consideration and Planning got back on board with the other LID changes.
Bumps in the Road (cont)

- Zoning got very cold feet very quickly. A regulation change to require a minimum "buildable Area" on all new lots a year before the LID grants was not widely supported and the commission was widely vilified over this change by property owners.

- A rationale for their concerns was never provided to the consultants, it was our consensus that zoning was fearful of another rough public hearing over the consideration of LID.
After zoning got stuck in the proverbial mud, then planning also got cold feet and verbalized that LID seemed like such a major change and were concerned about the public reaction.

BOS was still very much in favor, but was concerned about the attitude in planning & zoning.
What Now?

- The adoption of a full suite of LID standards almost came to a standstill.

- Regulations were revised to only require a Groundwater Recharge & Water Quality Volume requirement per the CT Stormwater Quality Manual.
What Now?

- LID Manual was shorten to provide design specifications for “recommended LID treatment systems”.

- Environmental Site Design approaches, Open Space Development Concepts, & performance standards for pollutant removal were not provided.
Next Step

- All land use boards signed on to this approach.
- Public hearings were held on regulatory changes and adopted.
- Both land use staff and BOS were disappointed in this approach as they had hoped for the complete application of LID in their town.
Conclusion

- Real or non-technical concerns and issues can derail the adoption of LID

- Change is hard to effect in some towns, even though everyone acknowledges that the current system does not work and they “want” to do better
Contact Information

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QUESTIONS??