Lower Makefield Township’s Native Plant Ordinance
Lower Makefield Township

Bucks County Pennsylvania
Lower Makefield Township

1692 - Makefield Township Established
1693 - Population 100
1737 - Makefield split into two Townships
        Lower and Upper Makefield
1784 - Population 748 - 101 Dwellings
1939 - Developed Zoning Ordinance
1954 - Created Master Plan for Township
1945 - 1990 – Agricultural to Suburban
2008 - Population 35,000 – 10500 Dwellings
Benefits Of Native Plants

- **Localized** – Adapted to Soils and Climate
- **Insect and Disease Resistant**
- **Less Water and Fertilizer** than Non-Natives
- **Wildlife Co-evolved** – Use Plants for Food, Cover and Rearing Young
- **Hardy** – Lower Mtce. and Replacement Costs
The Idea

Where Did It Come From?
What We Hope To Achieve – Our Goals

• Redress Natural Balance lost Through Development
  - An Environmental Ordinance
  - Plants Used for Ecological Value

• Encourage Residents to “Go Native”
  - Natural Beauty, Diversity and Benefits of Native Vegetation
  - Educate
    - Seminars
    - Website
    - Articles, Local Papers
Low Impact Development Stormwater Management Ordinance - (L.I.D.)

- Works Hand in Glove with Native Plant Ord.
- Water – An Asset, Not a Liability
- Rain Stays on Property Where it Falls
- Reliance on Natural Recharge Systems
- Requires Comprehensive Environmental Impact Assessment Report (E.I.A.)

The Result ----- Responsible Development
What The Ordinance Does

• Defines Native Plants
• Goal – Preserve Native Flora by Mimicking Localized Native Plant Communities
• Mandates Usage in Development Buffers - Street Trees and Township Facilities
• Buy Local when Possible
• Vegetation Study Required
• Preserve Existing Natives when Possible
• Plans Signed by Developer’s RLA or CPH and Approved by Township’s Plant Expert
What the Ordinance Does Not Do

• It is Not a Restoration Project

• It Does Not Apply to New Home Foundation Plantings (Natives are Encouraged)

• It Does Not Apply to Individual Homeowners
What We Did Along the Way

- New List of Definitions
- Revised Planting Standards (A.S.N.S. Spec.s)
- Tree Guidelines - Overhead and Underground Utilities
- Tree Replacement and Protection Standards
The Native Plant Selections

- Piedmont and Coastal Plain

- The Selection Process
  - Native Plants, U.S. F.&W.
  - Various Other Publications

- The Vetting Process
  - Hightshoe – Native T.S.&V.
  - Twp. Plant Expert
  - Bowman’s Hill W.P. Staff
  - L.M.T. Envir. Council
The Final Native Plant list

- List of Over 400 Native Trees, Shrubs, Vines and Herbaceous Plants
- Cultivars are Acceptable
- Categorized by Growing Conditions (Light and Moisture)
- Homeowner List – Future Envir. Council Project
So – You Like the Idea

And You Want One for Your Town
What Worked For Us

• Establish Timeframe for Completion of Ordinance
• Communicate Goals in Clear Fashion
• Work From Within the System
• Get right People in Your Corner
• Educate and Publicize
  - Local Govt. – Members of Community
  - Newspapers
• Enlist Professional Help When Required
  - Legal – Environmental and Plant Experts
• Bring the Experts to the Hearings
How the Ordinance Works

- Review Process
  - Developer Submits Landscape Plans Signed by RLA or CPH
  - Reviewed by Twp. Engineer and Plant Expert
  - Reviewed by Envir. Council
  - Reviewed by Local and County Planning Commissions
- Recommendations Reviewed by Twp. Bd. of Supervisors
- Approved or Not by Bd. Of Supervisors
Lower Makefield’s Experience

- Review Process Ensures Conformity
- Native Plants Available Locally
- No Problems With Developers
Invasive Plants

• New Definition in Ordinance
• No Specific Prohibitions in Ordinance
• Developer’s Encouraged to Remove
• Possibly Addressed in Future Ordinance
Lessons Learned

• Take Nothing for Granted Along the Way
• Education is Key Component
• Time Up Front Saves Agony at the Finish Line
• Seek Expert Advice – Legal, Environmental, Botanical
I.M.T. E.A.C. Project Highlights

- L.I.D. Stormwater Management Ordinance
- Native Plant Ordinance
- Cool Cities – Sierra Club and I.C.L.E.I – First in Bucks
- Farmer’s Market – Get Fresh on Thursday
- Open Space Inventory – 15 Million Bond Referendum
- Smart Power - Alternative Energy Competition – First in Bucks – Rcvd $10,000 Grant for Solar System
- Comprehensive Energy Audit - Municipal Facilities
- Environmental Lecture Series – Climate Change Conf.
- Basin Naturalization Program – Rcvd. $200,000 Grant
- Municipal Green Building Code – First in State
- Pervious Pavement Ordinance – First in State
- Tree Bank Ordinance – Developer’s Pay Up-Front
L.M.T. Recipient of U.S.E.P.A Achievement Award
Harrisburg PA – April 22, 2009

L.M.T. Recipient of Governor’s Environmental Excellence Award
- Thank You -

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References and Credits

Publications
- Native Trees, Shrubs and Vines for Urban and Rural America – Gary L. Hightshoe
- Native Plants of the Northeast – Donald Leopold
- Botanica North America – Marjorie Harris
- Native Trees for N. A. Landscapes – Sternberg and Wilson
- Trees of Pennsylvania – Rhoads and Block
- Native Plants for Wildlife Habitat and Conservation Landscaping – U.S. Fish and Wildlife Service
- Plant Invaders of Mid-Atlantic Natural Areas – U.S.F.&W.S.

Photographs
- Rob Cardillo and James J. Bray

Other
- L.M.T. Envir. Council esp. Laura Brandt
- Bowman’s Hill Wildflower Preserve esp. Miles Arnott
- Curtin and Heefner Attorneys at Law esp. Ernest Closser
- Birdsall Envir. Engineers esp. Rick Picatage
- CMX Engineering esp. James Majewski
- L.M.T. Bd. Of Spvr.’s and Various Other Local and County Commissions
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