



## Raingardens/Bio-retention for Local Decision Makers

### Objectives

- 1) Participants would understand what NEMO is and has to offer.
- 2) Participants will have a basic understanding of stormwater runoff
  - a. How runoff happens, problems, and costs to communities.
- 3) Participants will understand the functions and benefits of raingardens as part of a stormwater management system.
- 4) Participants will understand what policy and programming actions they can take to promote and install raingardens in their city.

PLEASE NOTE: highlighted areas are where we are currently in need of information.

### Content of the presentation

- 1) Introduction
- 2) NEMO background & Stormwater Runoff
- 3) Raingardens as one of many BMPS practices
  - a. How do they work
    - i. Infiltration, evapo-transpiration and filtration (soils).
    - ii. Raingarden demo slide
    - iii. Root demonstration
  - b. Case Study: Story of the Burnsville Raingarden (function and benefits)
  - c. What about tight soils?
    1. Soil amendment
    2. Bigger more shallow garden
    3. Root systems make soil less tight over time
    4. Under drain system/ engineered
  - d. What about Mosquitoes?
  - e. What about weeds?
  - f. What about cost?
    - i. Mark Doneaux P8 study to estimate \$/lb P removal- (NEED)
  - g. What about maintenance?
    - i. Briefly discuss, silt over, etc. More on maintenance later.
  - h. What about water quality? - H.B. Fuller Parking lot example.

- 4) How could a City set up a raingarden program?
  - a. City Policies
    - i. Street reconstruction/road improvements. Examples: Maplewood, Sartell, Plymouth, Stillwater/Lake Elmo – (NEED) EXAMPLE CITY POLICY LANGUAGE
    - ii. City Parks
    - iii. City Buildings
  - b. Development & Redevelopment – Ordinance and Code
    - 1. Require in stormwater ordinance for subdivision or redevelopment, including SFH additions.
    - 2. Subdivision / street code
    - 3. Shoreland ordinance – require as mitigation for hardcover exceedence (see DNR info)
  - c. Incentives for landowners – Programs
    - i. RWMWD study & Browns Creek– TMDL projects and load reduction
    - ii. Education
      - 1. Become a Blue Thumb Partner
      - 2. Sponsor workshops
      - 3. Promote raingardens in city newsletters, website, utility bill mailers, etc.
      - 4. City raingardens as demonstrations
    - iii. Incentives
      - 1. Stormwater utility credit – Minneapolis/ {Contact Leslie – she might know}
      - 2. Cost share program – Woodbury ‘plant grant’ /Plymouth provides design assistance/Hennepin Co. native plant reimbursement
      - 3. Partner with/promote Watershed District cost share program
- 5) Summary Slide
- 6) End
- 7) Additional Slides:
  - a. Maintenance/ Monitoring /Inspection
  - b. Access and Easements