Contractor Skill-Building Webinar:
Building a RainWise Rain Garden

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In This Presentation

- Preliminary planning and design
- Excavation best practices
- How to complete the installation for a rain garden
Preliminary Planning and Design

- General site evaluation
  - Able to capture entire roof (1,715 SF)
  - Two cisterns and a rain garden
  - Rain garden would have been huge, so installed two cisterns to reduce the size
    - Note #1: Adding a cistern to a cistern/RG combo does not increase the rebate, it just reduces the size of the rain garden.
    - Note #2: Also the size of the cistern doesn’t determine the RG size
Preliminary Planning and Design

- Rain garden design
  - Front of house ideal for rain garden
    - Overflow access
    - Nice view from sidewalk
    - Not much going on in area
    - Big open area for rain garden of this size
    - Very shady for summer planting
  - Homeowner sent pictures of what they would like
    - Lush and dramatic
    - A lot of hostas, ferns, heucheras, etc
  - Important specs
    - 35 SF bottom area
    - At least 14’ away from house (basement)
    - Two overflows, 10’ apart
Preliminary Planning and Design: Q&A
Excavation Best Practices

- Trenching
  - Trench to connect cistern overflow to rain garden inlet
  - PROTIP #1: Make sure trench is straight, use a fishing line or marking paint to help with this
  - PROTIP #2: Trench first before you dig out the rain garden, especially if you need to trench a far distance
  - PROTIP #3: Always trench deeper than expected
Excavation Best Practices

- Close-up of cistern overflow connection to trenched underground
Excavation Best Practices

- Digging out bottom area of the rain garden
  - Dig out bottom area first
  - Make sure the depth of the bottom area is 25” from the bottom of the inlet pipe
    - 12” bioretention
    - 3” mulch
    - 6” ponding
    - 4” freeboard

Get at those roots!
Excavation Best Practices

● Building the slope of the rain garden
  ○ Slope of the rain garden needs to be at least 2.5 to 1
  ○ Creating a jig helps with measuring out the slope
  ○ Remember to account for mulch and bioretention soil when creating the 2.5 to 1 slope
  ○ Build a slight berm which will be the top of your rain garden
Excavation Best Practices

- How the rain garden looks after it’s been sloped

Remember to tamp!
Excavation Best Practices

- Creating the Outlet and dispersion trench
  - Outlet needs to lower than the inlet
  - Dispersion trench can be built in the berm itself or outside of it
  - Dispersion trench specs:
    - At least 2’ long
    - At least 6” deep
    - At least 6” wide
    - 4” freeboard
  - Lay landscape fabric
  - This part takes time
Excavation Best Practices

- Dispersion trench and outflow after landscape fabric is laid
Excavation Best Practices: Q&A
How to Complete the Installation for a Rain Garden

- Lay the bioretention soil
  - Layer needs to be 12”
  - Make sure there is room for mulch, ponding, and freeboard below the inlet
  - Be careful to keep 2.5 to 1 slope
  - Remember to tamp some more!
How to Complete the Installation for a Rain Garden

- About the plants in this rain garden
How to Complete the Installation for a Rain Garden

- Planting Time!
How to Complete the Installation for a Rain Garden

- Finally lay cobble for inlet, outlet, and dispersion trench. Mulch
- The rain garden is complete! - *Don’t forget to water after planting!*
How to Complete the Installation for a Rain Garden

- Some important rain garden specs inspectors are looking for:
  - Outlets are lower than the inlets
  - If multiple outlets, they are at the same level
  - 2.5 to 1 slope ratio
  - Flat bottom area
  - 80% plant coverage (when fully grown)
  - If outflowing to sidewalk, the end of outflow meets with sidewalk
  - Cobble armoring inlets and outlets
  - At least 12” of bioretention soil
  - Adequate spacing from inlet to bottom of rain garden
  - Mulch in rain garden
  - **PROTIP:** Always consult the RainWise specifications handbook and take advantage of the free pre-inspection!
How to Complete the Installation for a Rain Garden: Q&A
Thank You!

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