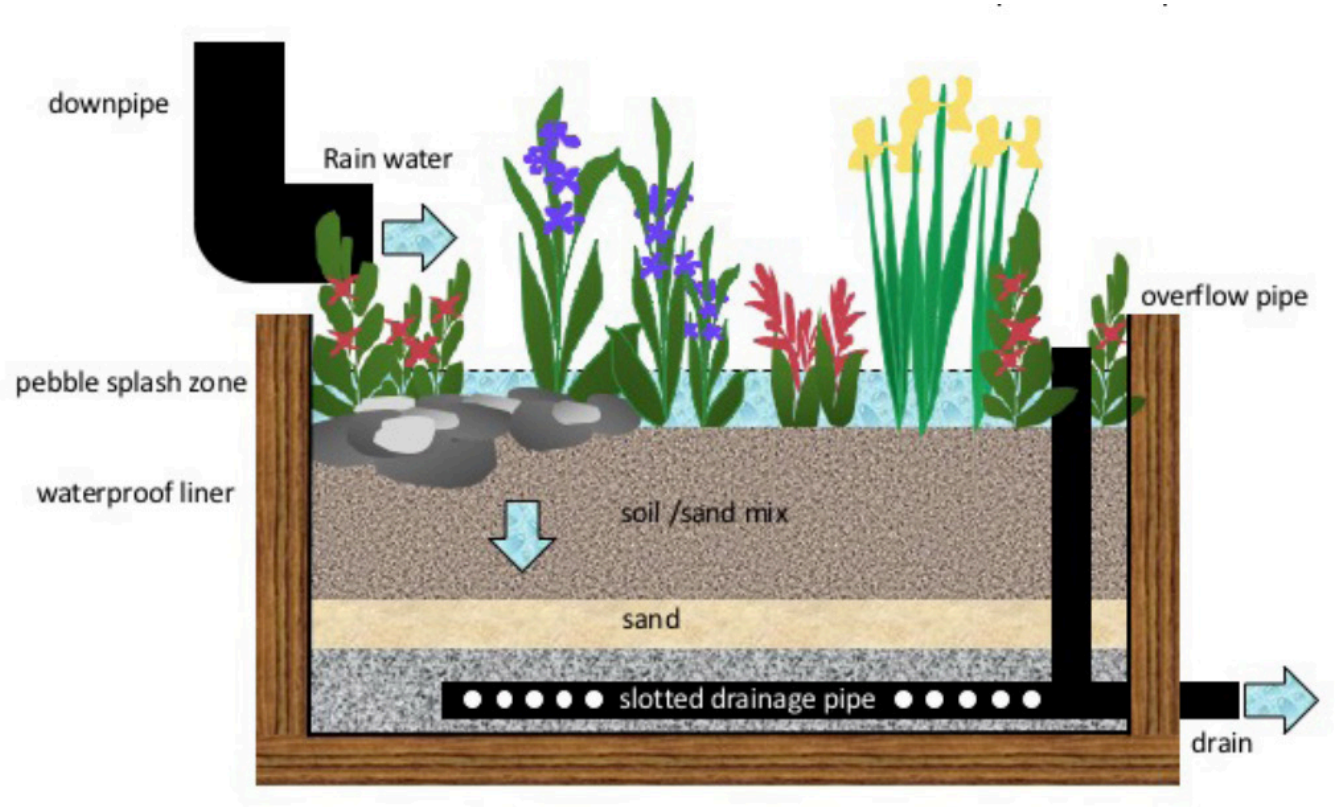
RE SOURCES THE RE STORE

HOW TO MAKE A Rain Garden in a Box!



MATERIALS

(Items in **blue** can be found frequently at The RE Store)
Makes a planter **36in long x 16in wide x 24in high**

LUMBER*

- **8 short sides 2x6 x 15in**
- **8 long sides 2x6 x 32in**
- **3 bottom boards 2x4 x 32in**
- **2 bottom stringer boards 2x2 x 15in**
- **4 corner boards 2x2 20.5in**
- **2 short side top decking boards mitered 2x4 x 36in**
- **2 long side top decking boards mitered 2x4 x 16in**

***Any type of dimensional lumber can be used for this project. These plans utilize lumber similar in size to 1x2, 2x2, 2x4, and 2x6 lumber. Cedar is ideal for this project due to its natural resistance to rot, decay, and bug infestation but fir can also be used.

HARDWARE

- **80 single thread wood screws, 3in**

OTHER SUPPLIES

- **Plastic liner (72in x 96in - 6ml or comparable)**
- **PVC Pipe 2in - 3 pieces cut at 4in, 20in, and 28in (approx. 52inches total)**
- **1 x PVC equal tee connector 2in**
- **Silicon sealant**
- **Waterproof tape**
- **Mesh screen (with rubber band or coupling)**
- **4 bags soil / compost**
- **2-3 bags sand**
- **3-4 bags gravel (broken solar panel glass or oyster shells)**
- **Plants (See attached list and link to resources)**

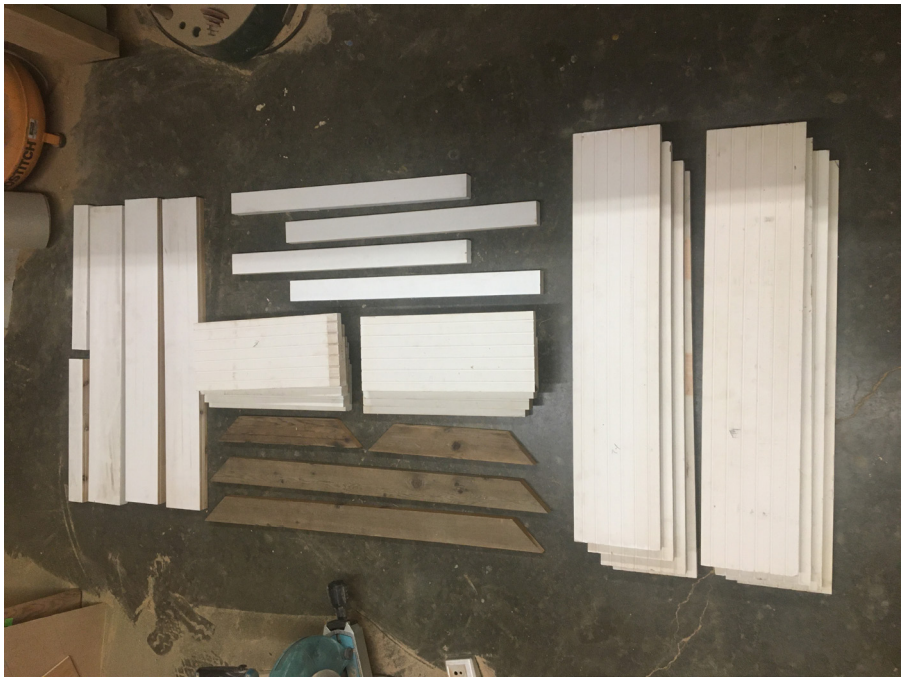
EQUIPMENT

- Drill and driver set with bits
- Chop saw, circular saw, or hand saw
- Hack saw
- Staple gun
- Caulk gun
- Sand paper
- Tape measure
- Pencil
- Speed square
- Knife / scissors
- Safety glasses
- Ear protection
- Dust mask
- **OPTIONAL:** paint, stain

BUILDING STEPS

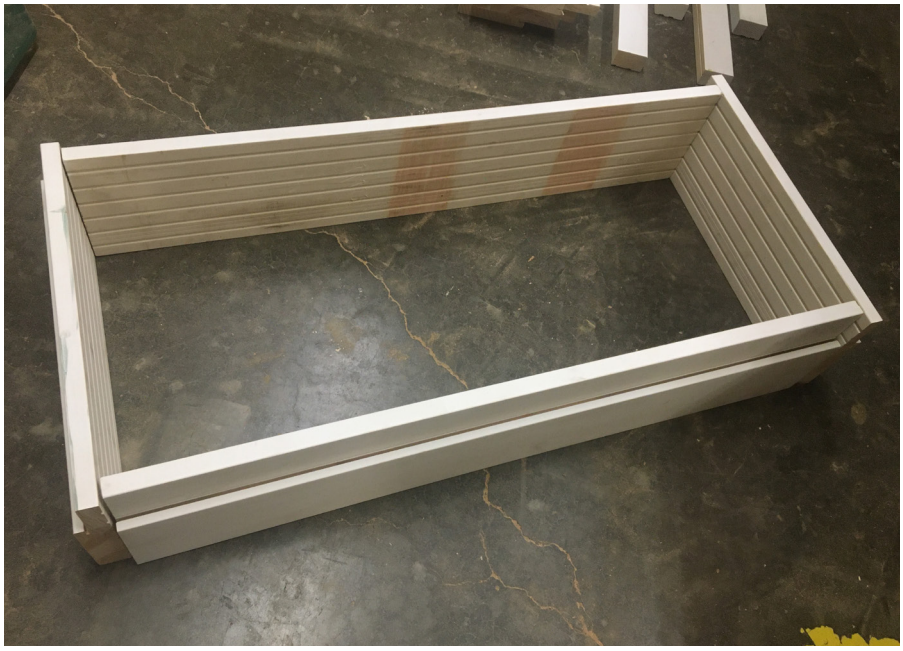
1. CUT LUMBER

- Using a chop saw, circular saw or handsaw, cut the lumber to make the short and long sides of the planter.
- Cut the bottom boards, stringers, corners and battens.
- Finally, cut the top decking lumber at a 450 miter on both ends of the boards.
- Sand any rough edges that might puncture the liner and paint or stain the wood as required to extend the life of your planter (optional).



2. ASSEMBLE SIDES IN LAYERS

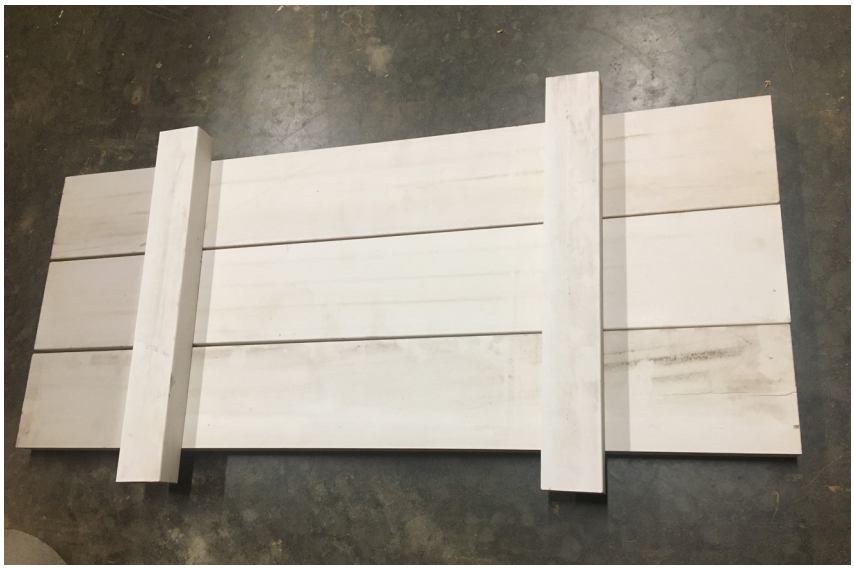
- Drill two evenly spaced holes ¾ in from the end of both sides of the “short side” boards.
- Butt two short sides against two long sides and attach them with screws creating a rectangular frame.
- Repeat this step **until you have 4 equal sized frames.**



BUILDING STEPS

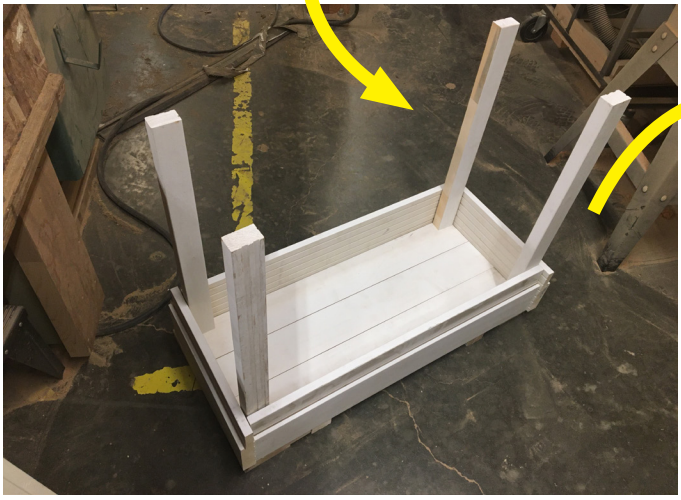
3. ASSEMBLE BASE

- Lay out the three bottom boards parallel to one another.
- Mark a perpendicular line on both sides of all four boards 6 inches from each side.
- Place the two bottom stringers on the lines so that they are perpendicular to the bottom boards. The stringer ends should hang over the edge of the bottom boards by about 1 ½ inches on either side.
- Attach stringers to bottom boards with two screws in each of the bottom boards per stringer.



4. ASSEMBLE THE PLANTER BOX

- Place the assembled base within one of the framed rectangular sides.
- Attach with screws through the stringer and from the sides.
- Flip over the assembly so that the base is on the ground.
- Now stack the remaining three framed sides on top of the base frame and place a corner board in each inside corner.
- Attach each corner board to each layer.
- Attach mitered top decking boards to the top of the planter box with screws.



BUILDING STEPS

5. LINE PLANTER

- Line the planter with some robust plastic sheeting or PVC pond liner, allowing plenty of room for the liner to stretch.
- Fix with staples along the top edge.
- Make a small hole for the drainage pipe in the liner.

6. DRAINAGE PIPE ASSEMBLY

- Cut three pieces of 2in PVC at 4in, 20in, and 28in using a hacksaw.
- Drill several holes in the 28in pipe (smaller than the gravel, glass or oyster shells). Assemble the three pieces of pipe into the “T” connector.

- Connect all pipes with silicon and tape. The 4in and 28in pieces should be in line with one another and the 20in piece will be perpendicular.
- Place a mesh screen with rubber band or coupling over the 20in and 28in pipe ends.
- Drill a 2 inch hole on a short side of the planter, centered from side to side and 1inch up from the base with a hole saw bit.
- Install pipe assembly through the inside of the planter, placing the 4in pipe portion through the liner and cut hole.
- Move the planter into its final location under downspout.

BUILDING STEPS

7. ADD FILTRATION MATERIALS

- Add some gravel to the base and position the slotted pipe so that it drains down towards the outlet and ensure the drainage pipe is through the liner.
- Add the remaining gravel to cover the pipes and top with a permeable membrane to stop the rainwater from washing the soil out.
- Add a layer of sand then fill with a mix of soil/compost to sand in the ratio 4:1.

8. CONNECT UP PLANTER

- Cut off or divert the downpipe from the roof to flow into the rain-box. You may need to add a downpipe shoe to direct the water.
- Place some large stones below the spout to prevent splashing and a debris filter on the overflow pipe. Plant with a variety of suitable perennial plants tolerant of dry conditions and able to withstand short period of immersion, including interest all year, and plants for pollinators.