WaterSmart Gardens
Converting Thirsty Lawns to Beautiful Beds
Presentations & Handouts at www.ecolandscape.org
How to Remove Your Lawn

Presented by
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- Type of Lawn Removal Methods
- Steps for Various Methods
- Pros, Cons, Time, Cost Comparison
- Converting Sprinklers to Low-volume Drip
What type of lawn (turf, grass) do you have?

- Cool season
  - Green in winter
  - Dwarf & tall Fescues, Ryegrass, Kentucky Bluegrass

- Warm season
  - Brown in winter
  - Bermudagrass, St. Augustine

- Combination - Grass with weeds
Lower Soil Grade Away from Hardscape
Square Footage Area & Coverage

- Area = Length x Width
  - 20 ft. long x 5 ft. wide = 100 sq. ft.
- 1 sq. yd. of material = 3’x3’x3’ = 327 sq. ft. @ 1” deep
  - 100 sq. ft. @ 3” (Example: mulch) = 300 sq. ft. = 1 yard of material (approx.)
Removal Methods - Manually (Shovel)

- Most cost-effective
- Great for small areas
- Most labor intensive
- Environmentally friendly
Steps to Removing Lawn Manually

- Cut grass into long strips width of spade or edge cutter, depth depends on conditions
- Cut into pieces
  - Add cool-season grass to compost pile or turn over and leave in place
  - Warm-season grass dispose
Removal Methods - Sod Cutting

- Good for large areas & Cool-season grass
  - Warm-season grass can regrow from deeper roots
- More uniform cutting depth
- Faster than removing by shovel
- Challenging to maneuver equipment & air pollution
- Allows you to create contoured shapes
Steps to Sod Cutting

- Water grass one or two days before cutting
- Soil moist to 4 inches deep
- Mark sprinkler heads
- Roll cut strips for removal
Removal Methods - Chemicals

- Consider other options first
- Herbicides are pesticides used to kill plants
- Identify target vegetation for product selection
- Use when grass is actively growing
- Easy and effective
- Expensive, can require 3 applications
- NOT environmentally sound
  - Kills soil biology
  - Waterways polluted from runoff
Steps to Chemical Removal

- Water grass well for about 2 weeks prior to application for longer grass blades
- Wear PPE (Personal Protective Equipment) = Cover skin, goggles, gloves, etc.
- Do not apply when windy and within 24 hours of predicted rain
Steps to Chemical Removal

- Apply chemical
- Leave area undisturbed for 1 week
- After 2 weeks, mow, water, and wait 2 weeks
- If new growth appears, reapply chemical to actively growing grass and/or weeds
- Remember: Consider other methods before using chemicals!
Removal Methods - Solarization
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- Plastic traps heat to sterilize grass
- Kills beneficial soil biology in top 3 – 4 inches
- Relatively quick (1 – 2 months) - High temperatures needed to be effective
- Less effective on deep rooting grass and weeds, e.g., Bermudagrass, Nutsedge
- Does not require heavy equipment or chemicals
Steps to Solarization

- Remove any materials that can puncture plastic
- Mow lawn short, leave grass on lawn, & water to speed heating process once covered
- Mark sprinkler heads
- Dig out edges of grass approx. 6 inches deep & wide to make a trench
- Apply clear plastic (not black) 1.5 - 2 mil thick over lawn and into the trench at the edges
Steps to Solarization

- Add soil, sand, or rocks on plastic in trench
- If using more than one piece of plastic, overlap edges 6 inches at seams
- Monitor
  - Avoid activity on plastic
  - Repair holes & tears
  - Keep edges secure
Removal Methods - Sheet Mulching

- Minimizes weeds
- Improves soil
- Increases plant health
- No emissions from equipment
- No hauling
- Can do any time of year
- A process of layering
Steps to Sheet Mulching

- Mow grass short
- Leave cut grass in place
- Water lawn so moist, not soggy
- Next to sidewalks, driveway - Create 12” wide strip, removing soil several inches down to avoid overflow of material
Irrigation System Considerations when Sheet Mulching

- Convert sprinkler system to low-volume drip
- Considerations include:
  - Installing irrigation on top of the sheet mulch
    - Exposed lines, aesthetically unappealing
  - Installing irrigation on the bottom of the sheet mulch
    - Future planting, you have to work around lines
Steps to Sheet Mulching

- Spread 2” layer of compost over lawn
- Install layer(s) of cardboard, overlapping edges by 6”
- Important: Moisten each layer during installation
- Final layer - 4” organic mulch
- Keep layers moist throughout decomposition process
<table>
<thead>
<tr>
<th>Type</th>
<th>Pro</th>
<th>Con</th>
<th>Time to Do*</th>
<th>Cost</th>
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</thead>
<tbody>
<tr>
<td>Shovel</td>
<td>Inexpensive</td>
<td>Labor intensive</td>
<td>Days/Weeks</td>
<td>$</td>
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<tr>
<td>Sod Cutter</td>
<td>Fast</td>
<td>Rent equipment, hauling</td>
<td>Hours</td>
<td>$$</td>
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<tr>
<td>Sheet Mulching</td>
<td>Organic, Improves soil</td>
<td>Difficult on slopes</td>
<td>Weeks</td>
<td>$$$</td>
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<td></td>
<td>biology</td>
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<tr>
<td>Chemicals</td>
<td>Effective</td>
<td>Environmental impacts</td>
<td>Weeks</td>
<td>$$</td>
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<tr>
<td>Solarization</td>
<td>No Equipment or Chemicals</td>
<td>Time constraints</td>
<td>Months</td>
<td>$</td>
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* Time to do depends on conditions of project and whether a combination of methods is used
Irrigation Infrastructure
Convert Traditional Sprinklers to Low-Volume Drip Irrigation

- Planning efficient irrigation system
- System components / equipment
- Irrigation system considerations when sheet mulching
- WaterSmart irrigation techniques and tips
Planning an Efficient Irrigation System: Water pressure & Flow Rate
Low-Volume Drip Assembly

- Anti-Siphon Valve
- Filter
- Pressure Regulator
- Flexible Tubing
System Components / Equipment

Pressure Regulators

Filters
Spray-to-Drip Conversions

Spray-to-Drip Retrofit Kits

Convert Any Spray Zone to a Drip Zone!
The easiest and fastest way to convert a conventional spray zone to a low-volume irrigation zone.

1800-Retro
1800 Series Spray Body that contains a filter, pressure regulator, and 1/2” male threaded outlet

Installation
- Simply remove the top of any 1800 and remove the internal assembly (On the 1806 and 1812 leave the spring in the body)
- Remove the internal assembly of the retro kit and drop into the existing body
- Tighten the cap
- Use Easy Fit Fittings or a female adapter to connect to drip tubing or other 1/2” FPT devices

Features
- Can be installed above or below grade
- Provides 30 psi (2.1 bar) pressure regulation and 200-mesh (75 micron) screen
- Flow rate 0.50 to 4.00 GPM (1.9 to 15.1 l/m)
Spray-to-Drip Conversions

**RBY Pressure-Regulating Filter**
Unique, compact unit that combines filtration and pressure regulation in one compact piece for protection of downstream components

**Installation**
- Simply connect the RBY Pressure-Regulating Filter into the water line
- Use Easy Fit Fittings or a female adapter to connect to drip tubing
- Install a valve or emitter box over the filter for easy access during cleaning

**Features**
- Comes in 3/4" MPT (model PRF-075-RBY, not shown) or 1" versions (model PRF-100-RBY)
- 3/4" MPT (PRF-075-RBY) regulates pressure at 30 psi (2.1 bar) and flows 0.20 to 5.0 GPM (0.8 to 18.9 l/m)
- 1" MPT (PRF-100-RBY) regulates pressure at 40 psi (2.8 bar) and flows 3.0 to 15.0 GPM (11.4 to 56.8 l/m)
- Can be installed above or below grade
- Robust body and cap are made of glass-filled polypropylene and provide 150 psi (10.3 bar) pressure rating
- 200 mesh stainless steel filter (75 micron)
Two Types of Drip

Emitters placed at the plants - **Point Source** for sparse plantings

Built-in emitters in a grid formation - **Line Source** for dense plantings
System Components / Equipment
WaterSmart Irrigation Tips

- Whatever system you use, know and understand it.
  - How much water does it apply?
  - How long does it take to apply it?
- Use weather-based controllers to adjust for seasonal changes.
- Ask questions
  - After years in the irrigation business, there’s always more to learn!
WaterSmart Irrigation Tips

► Begin with the end in mind.
► To select the best drip system for your situation and conditions, learn how to select, group, and place plants.
► That’s next!
After Next Presentations, Outside Demonstrations

Efficient Irrigation Systems
- Regulating water pressure
- Checking flow rate
- Outfitting conventional sprinklers with efficient nozzles
- Converting spray to low-volume drip
- Placing and spacing emitters
- Q & A