

This presentation premiered at WaterSmart Innovations

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THE FUTURE OF BLUE IS GREEN:

Using pre-designed
gardens to jumpstart
landscape change

Presented by:

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CENTER FOR
ReSource Conservation



PRESENTATION OVERVIEW

The Future of Blue Is Green: Using pre-designed gardens to jumpstart landscape change

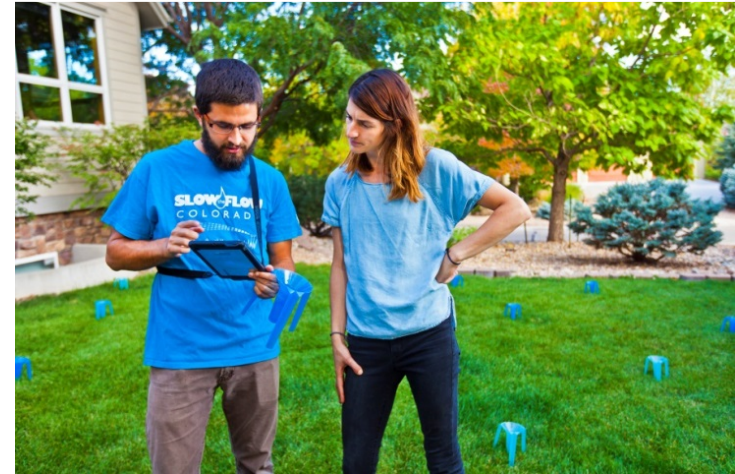
- **Center for ReSource Conservation (CRC)**
- **Garden In A Box Program**
- **Garden In A Box inspires the Turf Removal Program**
- **Turf Removal Program – utilizing CRC’s strengths**
 - **Structure and impact**
 - **Sample turf removal projects**
 - **Survey results, lessons learned, and conclusion**

CENTER FOR RESOURCE CONSERVATION

CRC Mission: Putting conservation into action

CRC History: 501(c)(3) nonprofit social enterprise; founded in 1976 by a group of citizens concerned about our dependence on non-renewable resources

Program Areas: Waste Diversion, Energy, & **Water Conservation**





CRC'S WATER PROGRAMS

- Putting **WATER** conservation into action
- Program areas: Landscape Change, Turf Removal, Fixture Retrofits, Indoor/Outdoor Audits, Education
- **30** utility partners
- **5,000** customer interactions per year
- **Over 206 million gallons** of expected lifetime savings from 2017 programs





GARDEN IN A BOX:

Water conservation
via landscape change

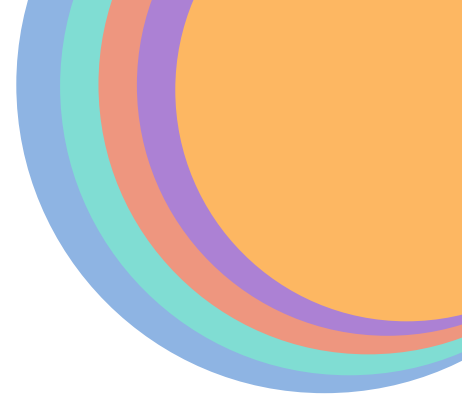


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WHAT IS:

GARDEN IN A BOX

An easy and affordable way for community members to save water and beautify their landscapes with professionally designed Xeric (low water) perennial gardens



WHAT IS:

GARDEN IN A BOX

Do it yourself garden kits that come with 15 to 30 starter plants, a comprehensive planting and care guide, and 1 to 3 plant by number maps

2015 GARDEN IN A BOX: PLANT AND CARE GUIDE

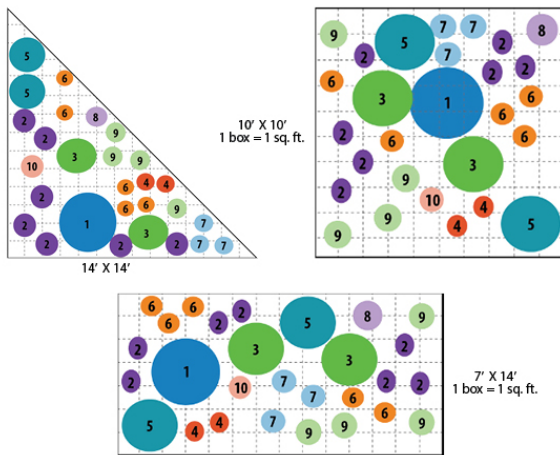
NATIVE ROOTS

Designed by Kenton Seth, Landscape Designer



- | | | | |
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| <p>1 Torch Lily
Latin Name: <i>Kniphofia uvaria</i>'Stark's Early Hybrids'
Mature Height: 30"
Mature Spread: 24"
Hardy To: 8,500°
Water: Low to Medium
Exposure: Full to Part Sun
Flower Color: Yellow/Orange/Red
Flower Season: Early to Late Summer
Care: The Torch Lily needs extra water when its blooms are forming. Deadhead to prolong the growing period. In spring, cut all foliage back to about 3" from the ground. Divide clumps in the spring - unless it's flowering, then wait until flowering is complete. In the fall, once flowering has finished, remove unsightly looking leaves and dead flower stalks that remain. Foliage can be tied up over the crown in the fall to prevent water from settling there and freezing.</p> | <p>2 Blue Grama Grass
Latin Name: <i>Bouteloua gracilis</i>
Mature Height: 6-24"
Mature Spread: 6-18"
Hardy To: 9,000°
Water: Low to None (10-15" per year)
Exposure: Full to Part Sun
Flower Color: Green/Black/Blonde
Flower Season: Summer to Fall
Care: Blue Grama Grass likes a sunny, well-drained site. It is very adaptable in almost any soil, except for heavy, wet clay. Its foliage greens up in the spring after its winter dormancy, and it will stay green until the first frost. Cut the dried plant to the ground in early to mid-spring just as before new growth emerges.</p> | <p>3 Sulphur Flower
Latin Name: <i>Eriogonum umbellatum</i>'Kannah Creek'
Mature Height: 6-12"
Mature Spread: 6-12"
Hardy To: 9,000°
Water: Low
Exposure: Full to Part Sun
Flower Color: Yellow to Rust
Flower Season: Early Summer
Care: Cut back old flowers in winter/spring.</p> | <p>4 Fringed Sage
Latin Name: <i>Artemisia frigida</i>
Mature Height: 18" in bloom
Mature Spread: 18-24"
Hardy To: 9,000°
Water: Low
Exposure: Full to Part Sun
Flower Color: Yellow
Flower Season: Late Summer
Care: Cut off the foamy flower stems after blooming, or even while blooming, to keep it tidy and living much longer.</p> |
| <p>5 Palmer's Beardtongue
Latin Name: <i>Penstemon palmeri</i>
Mature Height: 4-6"
Mature Spread: 1-4"
Hardy To: 7,000°
Water: Low to None
Exposure: Full to Part Sun
Flower Color: Satin Pink
Flower Season: Late Spring to Early Summer
Attracts: Bees
Resistant To: Grazers
Care: Cut off spent flowers after bloom, leaving the bold, blue-holly like evergreen leaves for winter. Allow at least a few flowers to go to seed so that it can self-sow. Although Palmer's Beardtongue has a short lifespan of only 4-5 years, it has a true gift for self-perpetuation. Once established, it produces an abundance of seeds that remain dormant until conditions are favorable for germination.</p> | <p>6 Dotted Blazing Star
Latin Name: <i>Listis punctata</i>
Mature Height: 12-18"
Mature Spread: 8-12"
Hardy To: 8,000°
Water: Low to None (14 to 16 inches per year)
Exposure: Full to Part Sun
Flower Color: Magenta-Purple, Pink
Flower Season: Summer to Fall
Attracts: Butterflies
Care: Clean-up in spring; leave the seed heads for winter foraging. A bushier plant will form if it is cut back during the growing season. Will self-seed, but not aggressively. To limit volunteers, cut the stalks to the ground after the bloom fades. Stems can be staked to keep the flower spikes from falling over. Keeping the plant dry in July and August can sometimes prevent it from falling over as well.</p> | <p>7 Scarlet Bugler
Latin Name: <i>Penstemon barbatus</i>
Mature Height: 2-4"
Mature Spread: 1-4"
Hardy To: 8,000°
Water: Low to Medium
Exposure: Full to Part Sun
Flower Color: Red/Carmine
Flower Season: Early Summer, sometimes again in Early Fall
Care: Cut/clean up after bloom or in early spring. Divide these plants in the spring.</p> | <p>8 Missouri Evening Primrose
Latin Name: <i>Oenothera macrocarpa</i>
Mature Height: 10"
Mature Spread: 24-48"
Hardy To: 8,000°
Water: Low to Medium
Exposure: Full to Part Sun
Flower Color: Cool Yellow
Flower Season: Late Spring-Summer
Resistant To: Deer, Rabbits
Care: Clean up/cut back dry stems in late fall or early spring. Remove faded flowers to encourage more buds to form. The Missouri Evening Primrose requires irrigation in areas which receive under 15" annual precipitation. Prevent complete soil dryness, and maintain a mulch layer.</p> |
| <p>9 James' Buckwheat
Latin Name: <i>Eriogonum jamesii</i>
Mature Height: 6-12"
Mature Spread: 12"
Hardy To: 9,000°
Water: Low to None
Exposure: Full to Part Sun
Flower Color: Creamy White to Yellow
Flower Season: Early Summer
Care: Deadhead after bloom to improve appearance. Clean up old flowers and stems in late fall/early spring.</p> | <p>10 Munro's Globemallow
Latin Name: <i>Sphaeralcea munroana</i>
Mature Height: 24-36"
Mature Spread: 36"
Hardy To: 7,500°
Water: Low to None
Exposure: Full to Part Sun
Flower Color: Orange
Flower Season: Summer
Attracts: Bees
Care: Clean up/cut back dead stems in late fall/spring to encourage extended blooming. To establish, water at planting and 2-3 times deeply the first summer. After that, do not overwater.</p> | | |

3 Plant by Number Design Options:





GARDEN IN A BOX: **IMPACT**

2017 at a glance

- **Over 4,200** gardens sold! • **20** partner cities
- Xeric landscapes use up to **60% less water** than traditional turf lawns
- 2017 gardens = a lifetime savings of **20.5 million gallons of water!**
- Through 2017, nearly **1.4 million square feet** of landscape converted to low-water gardens



GARDEN IN A BOX:

An impetus for turf
removal and
landscape change



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THE CHALLENGE

- City of Lafayette
- Increasing water rates
- Concerned customers
- How can CRC solve this problem for us?



THE SOLUTION

 Utilize **Garden In A Box** to incentivize residents to remove turf via the **Turf Removal and Replacement Program** model



GARDEN IN A BOX:

An impetus for turf removal and landscape change

- Solves and gets to the core of residents' struggles



46% of survey respondents said that design help and plant materials would be the #1 incentive to remove turf

- Offers a practical, easy to implement solution
- Removes stress & complication of plant selection and landscape design
- More time to focus on other landscape elements (hardscape, irrigation, etc.)
- It looks good!
- Allows CRC to capitalize on our strengths (Garden In A Box, Slow the Flow)



TURF REMOVAL AND REPLACEMENT PROGRAM

2016 Pilot Program



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TURF REMOVAL PROGRAM: 1) INCENTIVES

GARDEN IN A BOX



FREE 200 sq. ft. garden

RAIN BIRD RETRO 1800



FREE spray to
drip irrigation
conversion kit

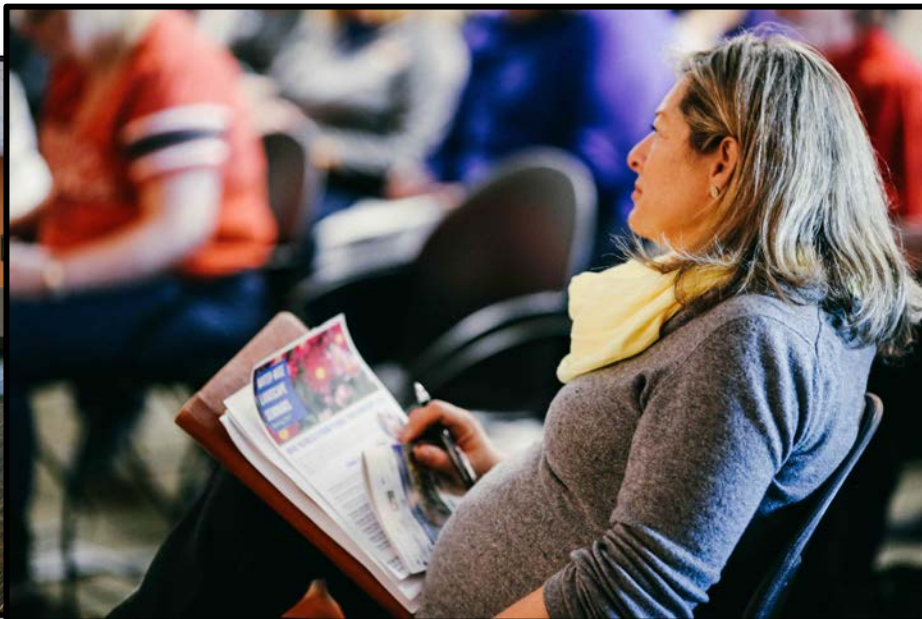
HARDSCAPE CREDIT



\$1/sq. ft. with a 1,000 sq. ft. max

TURF REMOVAL PROGRAM: 2) EDUCATION

- MUST attend 2 hr. *expert-led* seminar
- Topic: “Transforming Your Lawn into a Xeriscape Garden”
- **Seminars FILL UP!!**
 - **2 seminars per year per city**
 - **Attendance ~100 to 130 people!!**



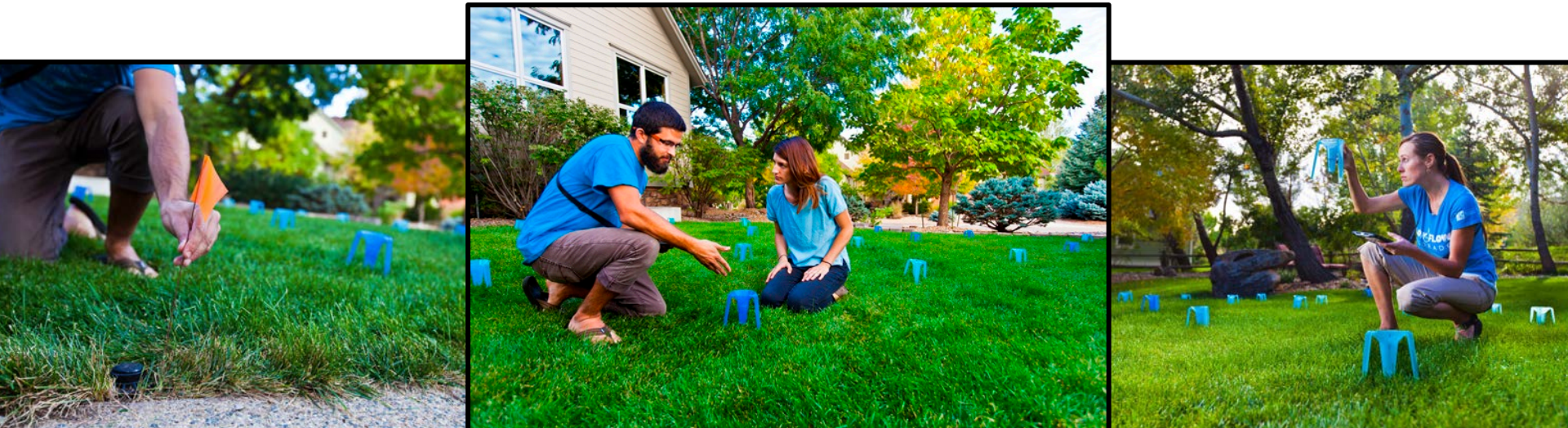
TURF REMOVAL PROGRAM: 3) THE PROJECT

- Participant sends application materials
- Participant completes the work
- Pick up Garden In A Box and Rain Bird Retro 1800



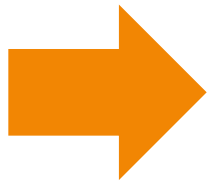
TURF REMOVAL PROGRAM: 4) SLOW THE FLOW

- In addition to a full irrigation assessment, this includes:
 - ✓ Confirming measurements of the turf removal area
 - ✓ Confirming that irrigation has been appropriately changed for the area
 - ✓ Photos of the completed project
- Award hardscape water bill credit based on measurements



TURF REMOVAL PROGRAM: 2017 IMPACT

- 2 partner utilities
- 41 participants removed an average of 350 sq. ft. of turf
- 15,000 total sq. ft. removed



Estimated water savings per year from all replaced turf =

166,000 gallons

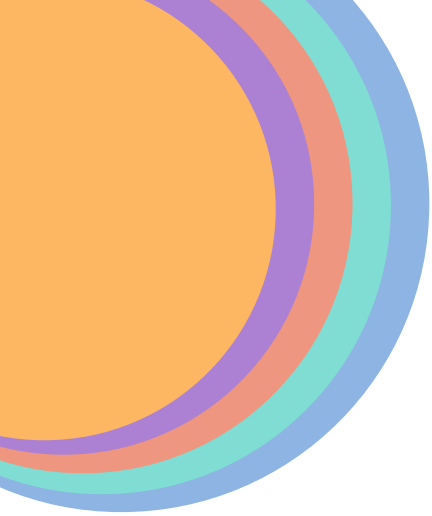




SAMPLE TURF REMOVAL PROJECTS



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MATT'S PROJECT

Lafayette, CO

Removed: **307 sq. ft.**

Cost: ~**\$250**

Potential water savings: **3,200** gallons per year

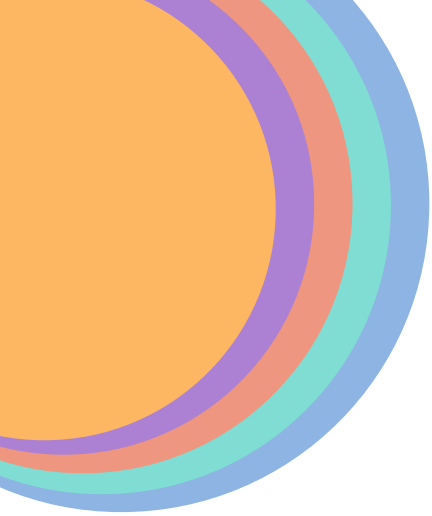
Time: ~**35 hrs.** each for he and his wife

BEFORE



AFTER





SUE'S PROJECT

Lafayette, CO

Removed: **296 sq. ft.**

Cost: ~**\$2,000-\$2,500**

Potential water savings: **5,000** gallons per year

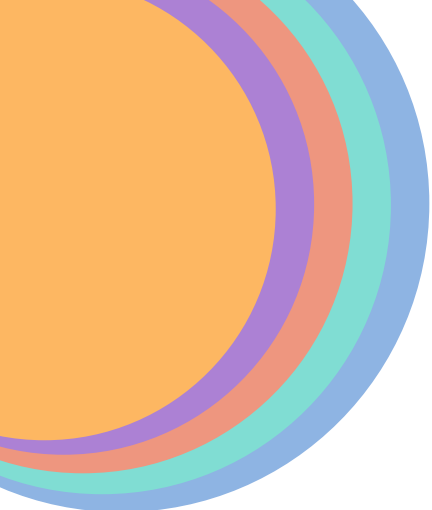
Time: **2.5 days** for landscaper to complete

BEFORE



AFTER





THERESA'S PROJECT

Lafayette, CO

Removed: **655 sq. ft.**

Cost: ~**\$950**

Potential water savings: **6,800** gallons per year

Time: ~**50 hrs.** between April and June

BEFORE



AFTER



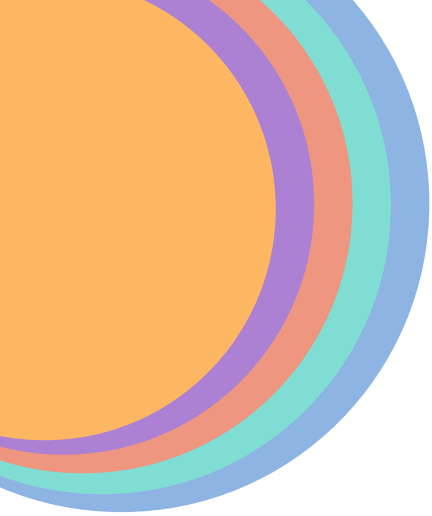


TURF REMOVAL AND REPLACEMENT PROGRAM: 2016 SURVEY RESULTS

“This was an incentive to do what I've wanted to do for a while.” –Lafayette Participant



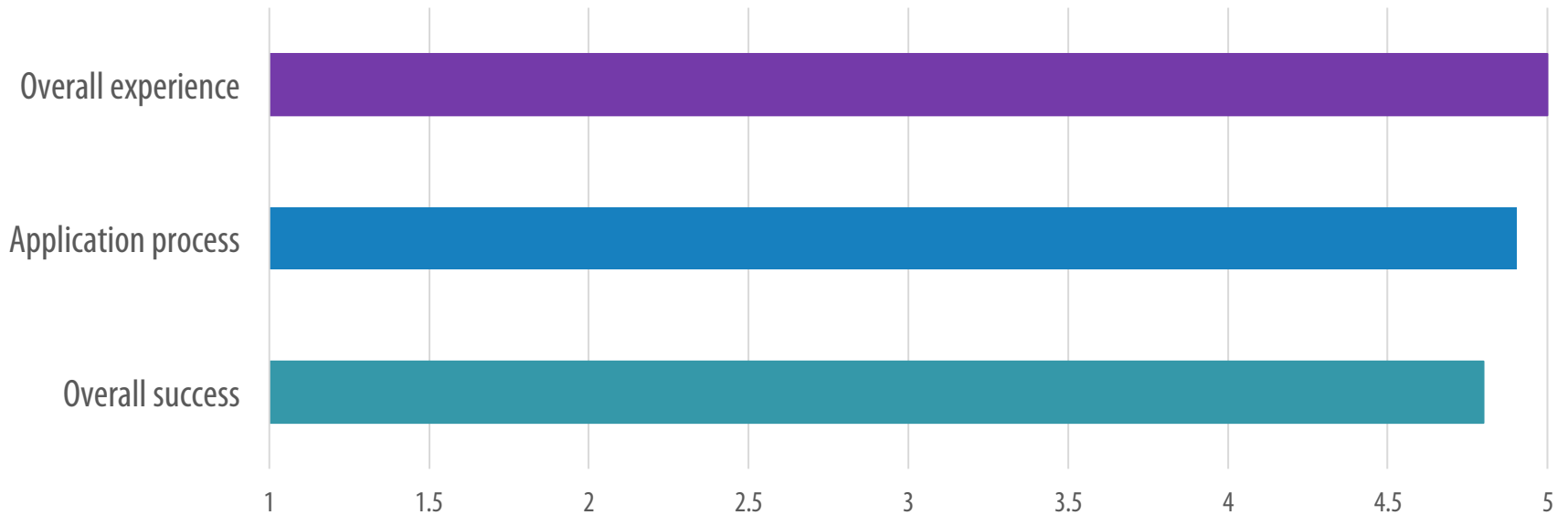
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TURF REMOVAL PROGRAM: 2016 SURVEY RESULTS

Overall Program Satisfaction

1 = Very Dissatisfied
5 = Very Satisfied



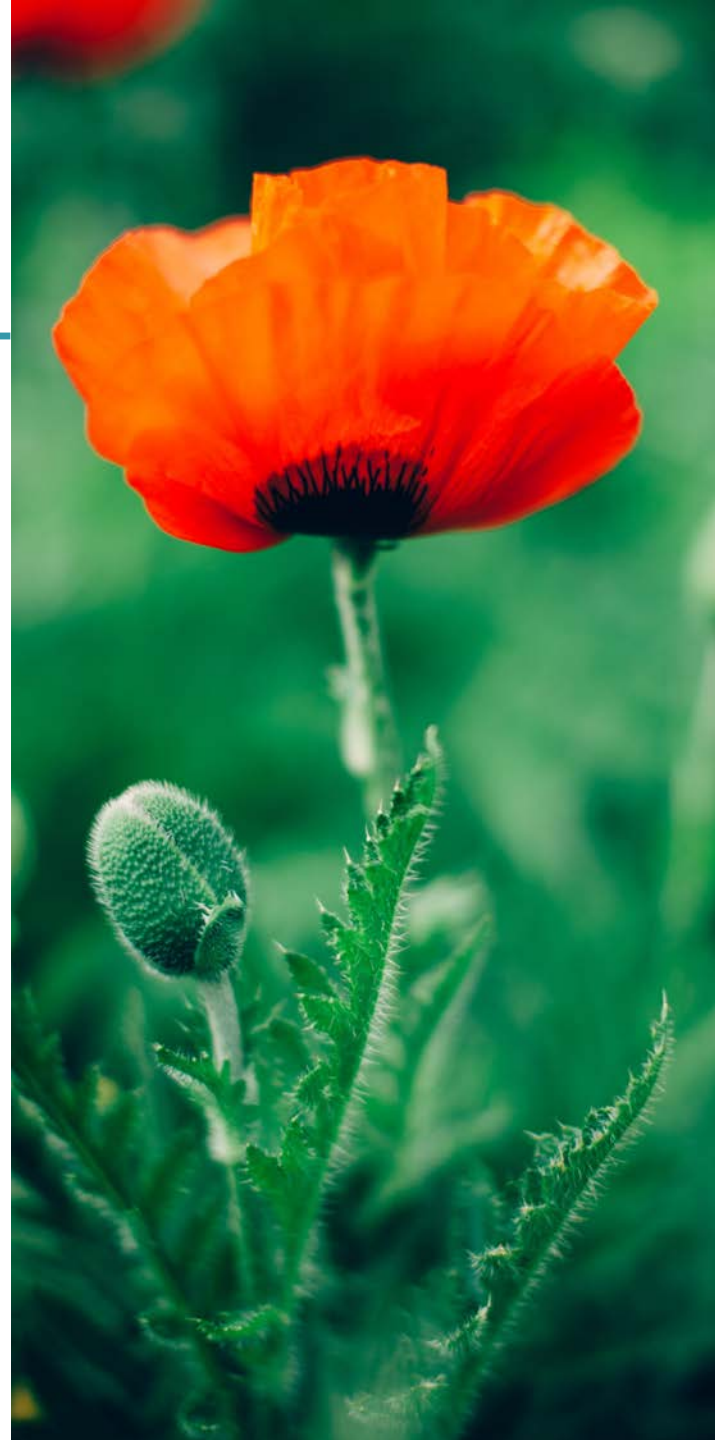
TURF REMOVAL PROGRAM: 2016 SURVEY RESULTS

When ranking the difficulty level of their project:

91% rated it as **“Difficult”** or **“Very Difficult”**

8% rated it as **“Neutral”**

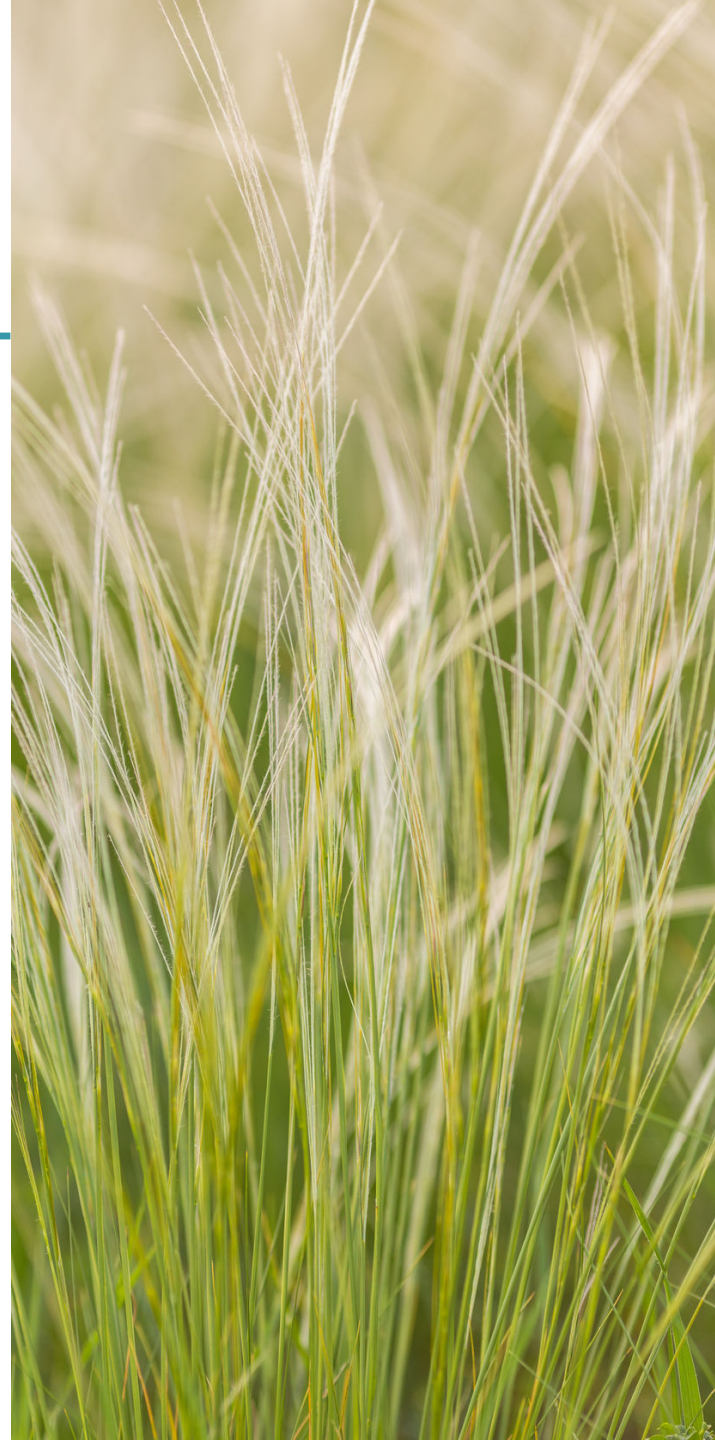
0% rated it as **“Easy”** or **“Very Easy”**



TURF REMOVAL PROGRAM: 2016 SURVEY RESULTS

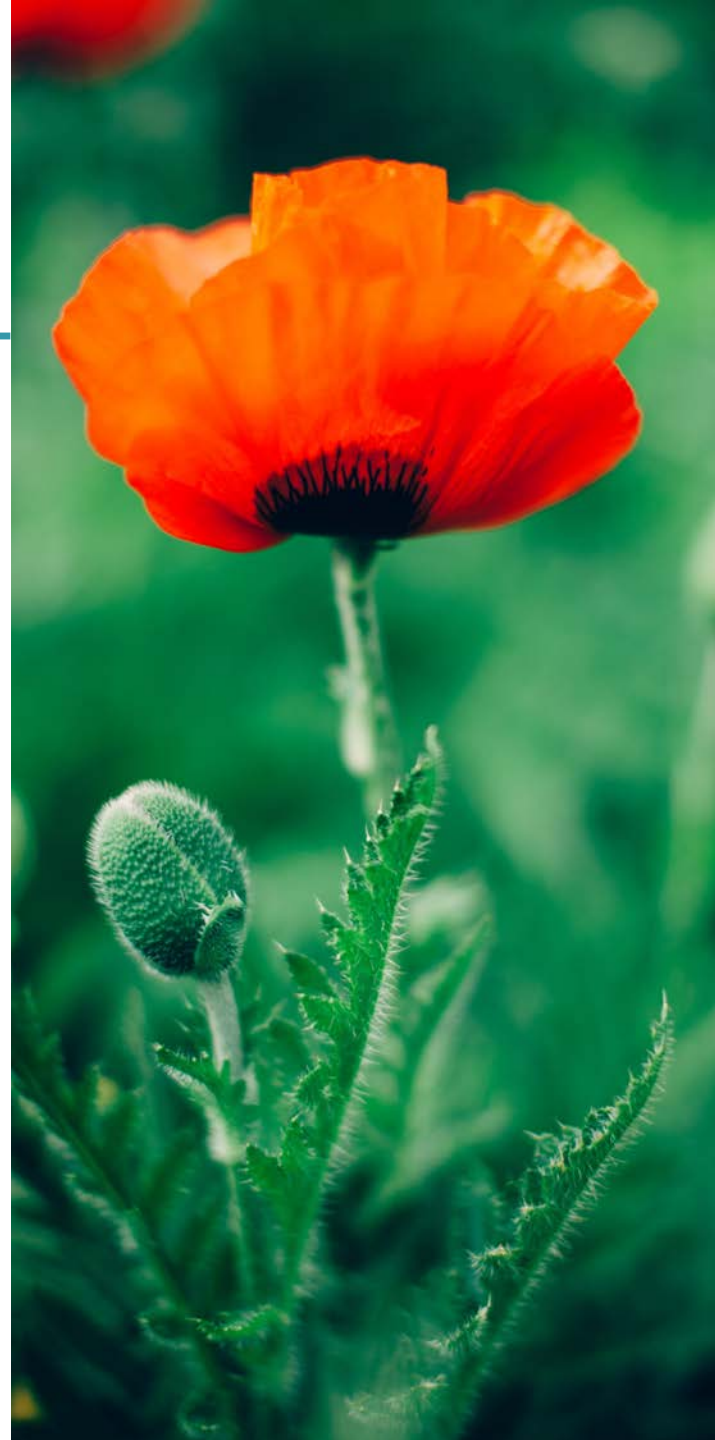
How likely would you have been to complete the Turf Removal and Replacement program without the structure and support of this program (i.e. education, monetary support and free garden)?

66% responded **“Unlikely”** or **“Very Unlikely”**



TURF REMOVAL PROGRAM: 2016 CUSTOMER COMMENTS

- “I think this program is terrific. I did most of it myself, renting a sod cutter, designing the new layout, running the drip lines from the conversion kit. Your program is very well designed and gave me the courage to attempt to do it.”
- “We have been wanting to do this. The support of the program helped push it forward and helped us justify the changes to our HOA.”





LESSONS LEARNED



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LESSONS LEARNED

- Barriers to participation:
 - Insufficient time for project completion (1.5-2 month minimum; fall seminar)
 - Seminar attendance (For every 100 attendees, 8-20 will actually participate in full program)
 - Requiring turf removal to be in the front lawn
 - HOA approval
- Softscape is more popular than hardscape option
- Time stamped photos work well as pre-qualifier



LESSONS LEARNED

- Slow the Flow is perfect way to follow up and verify that irrigation has been changed
- Clear expectations need to be set or people will take advantage: Reiterate steps and requirements to prevent information overload
- Ongoing lesson: Appropriately quantifying water savings
 - The area will need 1-3 years of higher water use to establish
 - Year to year precipitation variance
 - New homeowners vs. previous homeowner's water use
 - When did they stop watering the area?



CONCLUSION

- Water rates and demand are on the rise
- Utilities are seeking ways to make turf removal more appealing and accessible to customers
- Residents are interested in easy ways to remove turf and beautify their landscape
- **THE FUTURE OF BLUE IS GREEN!
Pre-designed Gardens In A Box
jumpstart landscape change**



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